**Report of the committee on the organization of the new Presbyterian Hospital on university lines.**

COLUMBIA UNIVERSITY

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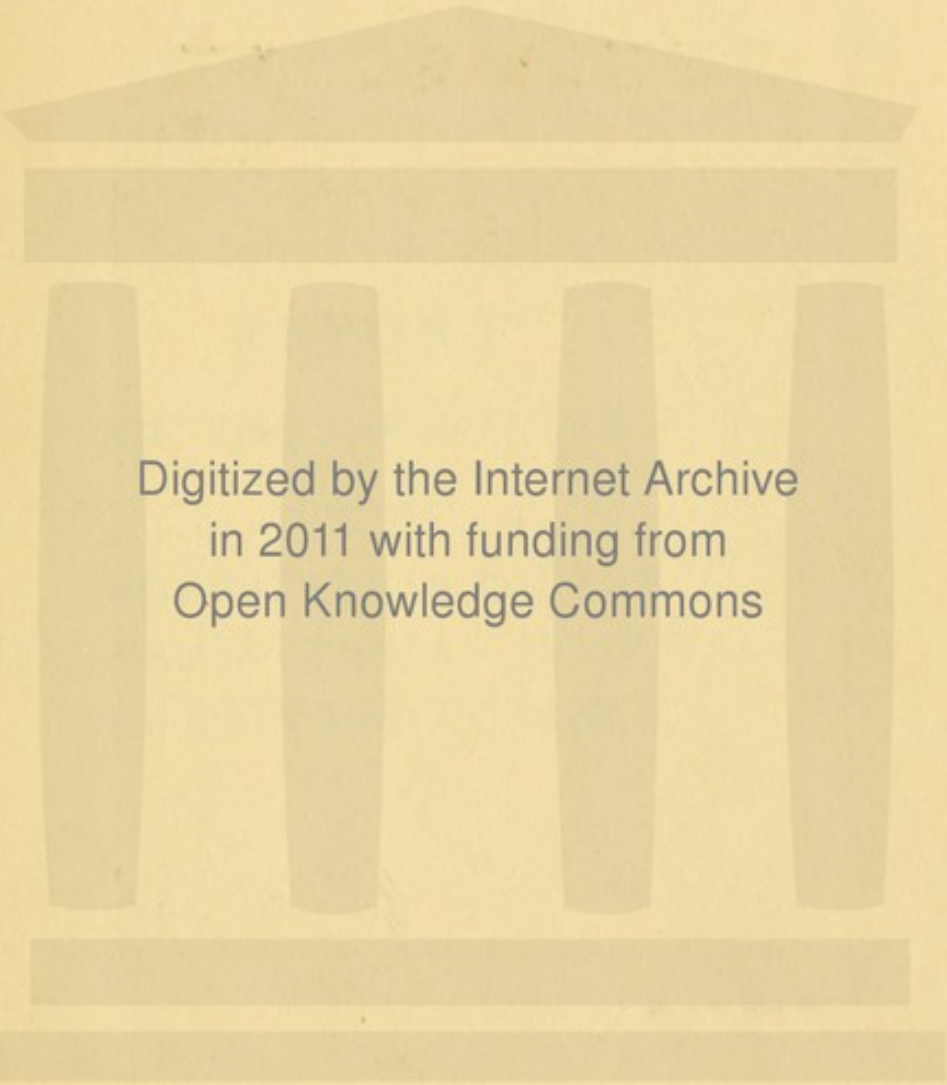
REPORT ON THE ORGANIZATION OF THE
NEW PRESBYTERIAN HOSPITAL ON
UNIVERSITY LINES.



[CONFIDENTIAL]

Columbia University
in the City of New York

# REPORT

## OF THE COMMITTEE

ON THE

## ORGANIZATION OF THE NEW PRESBYTERIAN HOSPITAL ON UNIVERSITY LINES

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APRIL 1, 1912

March 29, 1912.

To Nicholas Murray Butler, LL.D.,
*President, Columbia University, New York, N. Y.*

Dear Sir:

The committee called together by you to prepare a scheme for the organization of the new Presbyterian Hospital on university lines would report as follows:

In studying the needs of the medical school in the hospital, it has considered its task to be the formulation of a plan for the fullest utilization of the opportunities which the new hospital will afford the University, under the terms of the agreement and under the physical conditions which will exist during the continuance of the school, together with the Sloane Hospital and Vanderbilt Clinic, at its present location.

The Building Committee of the Hospital has recommended the erection of a hospital to contain 150 beds each for medicine and surgery, exclusive of beds for children and for private patients and of beds in emergency, isolation, admission, and other special wards. Services of 150 beds each will afford an opportunity unequaled in this country, both for the systematic instruction of large classes by clinical lectures and for the education of at least 100 students a year as clinical clerks, as at present carried on by the College of Physicians and Surgeons. They will equally make possible a lengthening and broadening of the curriculum, should that at some future time be desirable.

The proper direction of hospital services of this size will require all the energy of the Professors of the Practice of Medicine and Surgery. It is, therefore, the unanimous opinion of your committee that the entire work of these departments, both in teaching and in research, be transferred to the new hospital, except for the continuance of a small amount of section teaching in the Vanderbilt Clinic and Bellevue Hospital, and such instruction in other hospitals as may be given by clinical professors. It will be manifestly impossible for the Professors of Medicine and Surgery to undertake personally instruction or the supervision of work outside of the hospital. In order to make feasible the further concentra-

tion of their activities to their "clinics," the Building Committee of the Hospital has agreed to provide consulting offices for them in the new hospital.

A hospital of the size contemplated will also provide the college with adequate material for instruction in pathological anatomy for the first time in its history. The Professor of Pathology will be obliged to spend a large part of his time in the supervision of the pathological work of the hospital. If he is to accomplish anything in investigation, it is clear that his work, as well as that of the Professors of Medicine and Surgery, must be under one roof. Furthermore, the development of the institution as a true university hospital, along the lines contemplated by Mr. Harkness in making his gift—already made somewhat more difficult by the temporary postponement of the plan of rebuilding the college adjacent to the hospital—would be impossible without the constant association and co-operation of the workers in the clinical departments and those in the pathological department.

Your committee is, therefore, unanimously agreed that the entire work and staff of the Department of Pathology must be transferred to the new hospital.

Such transfer of the three departments named will economize not only the time of the instructors, but also that of the students. Your committee has prepared an hour curriculum card for the second, third, and fourth year classes, based on such an arrangement, and has shown conclusively that, with a very trifling rearrangement of courses, the students of the second year may spend half a day a week, and the students of the third year four whole days a week, at the hospital. The fourth year curriculum has been already adjusted for hospital work at a distance from the school. Such a modified curriculum will afford a much needed increase in the hours given to pathology, more bedside instruction, systematic clinical lectures in medicine and surgery, and other advantages which should appeal strongly to prospective students. It will make the admission of students to advanced standing in the third year much less objectionable, because it would guarantee their thorough education in pathology hand in hand with clinical medicine and surgery. At the present time such students miss the bulk of the instruction in pathology in the college,

and often bring an inadequate training from their previous school.

Under this arrangement the remaining departments would continue to give their instruction at the college, as at the present time. Considerable space for their better accommodation will be afforded. The Professors of Chemistry and Bacteriology should become respectively consulting chemist and consulting bacteriologist to the hospital; and, if they so desire, may have facilities for carrying on investigation in conjunction with the director of the medical or surgical clinic. They should, however, not have routine duties in the hospital while the college remains at a distance from it. This new curriculum will change the instruction in clinical pathology to the second half of the second year and at the same time will introduce primary courses in pathology and in physical diagnosis. The Department of Clinical Pathology will continue to give its instruction in the school, so that when the students come later to the hospital they will be prepared to apply the methods already learned.

Your committee has felt that the structural details of the new hospital must express the details of its organization, if it is to become an ideal and serviceable university hospital. It has, therefore, as a preliminary to a consideration of the space required for educational and scientific purposes discussed plans for the organization of their respective departments, prepared by the Professor of Surgery, the Professor of Pathology, and the Professor and the Assistant Professor of the Practice of Medicine. The following plans have the unanimous approval of the committee and are transmitted to you as setting forth the lines along which it is hoped the new hospital may be developed, and as containing reasons for the space which your committee believes the University will need:

## Plan of Organization for the Medical Clinic in the New Presbyterian Hospital

I. Ward service of 150 beds, to be organized as follows: General wards, 132 beds in three divisions or service units, each of 44 beds, 23 for men, 18 in ward, 5 in smaller rooms, one for 3 patients and two for a single patient; and 21 for women, 16 in ward and 5 in similar smaller rooms.

Each division to have a visiting physician, and an assistant visiting physician, who shall be in charge of the out-patient service of the division and take the ward service during the absence of the visiting physician.

Each division to have a resident and an assistant resident physician, with salaries, and two internes without salaries.

Each division to instruct not more than 10 clinical clerks.

Each division to have, immediately adjacent to its wards, the following rooms in addition to the necessary service rooms, lavatories, etc.:

1. A laboratory for all the routine chemical work of the division, adequately equipped for urine, stomach and similar examinations, and of sufficient size for five men to work in at one time.

2. An adjoining and communicating laboratory for microscopic examinations, equipped with an incubator, a stone-topped table for sputum staining, a microscopic table for the resident staff and another for the clinical clerks, microscopes, etc.

3. A small office for the visiting physician and resident.

4. A teaching room for demonstrations to sections of not more than 20 students, with blackboard, charts, etc. This to contain lockers for 10 clinical clerks.

II. Special wards for the more elaborate investigation of patients, eighteen beds. These beds should be in small rooms, 4 with three beds each and 6 single rooms. Patients to be brought to these wards from the regular wards of the three divisions, or from the out-patient service as determined by the director, and returned to the regular service after the observation shall be completed.

This service to be under the immediate supervision of the director and the assistant director of the clinic, and organized for thorough research work along any line. Beds here will be available for members of the staff of the pathological or other scientific departments, when the observation of the living patient is necessary for the completion of experimental studies undertaken by them, subject to the approval of the director. Members of the divisional or out-patient staffs may also be accorded similar privileges at the discretion of the director.

The resident staff shall consist of:

1. A chief resident, who shall have general charge of the service and of the private patients under the care of the director. He shall also act as chief of clinic.

2. An assistant resident, who shall act in the same capacity for the assistant director.

3. A clinical assistant for the routine laboratory work of the private patients.

4. Assistant physicians, who may or may not be residents, one in charge of each of the laboratories described below.

5. Laboratory assistants as may be needed.

6. Voluntary assistants, who come for the prosecution of research for a limited time, some of whom may hold research fellowships.

7. A permanent nursing staff, especially trained for the management of metabolism cases, etc.

Conveniently situated with reference to these special wards, if possible on the north side of the same floor, should be the research laboratories of the division, as follows:

1. Chemical laboratories, to include a laboratory for routine clinical chemistry, a Kjeldahl digestion room, a distillation room, and if possible, three small laboratories for individual workers.

2. Physiological laboratories, to include a complete heart station, and a room for physiological apparatus for use in the wards, a room for the assistant physician in charge, and another small room.

3. Biological laboratories, to include a laboratory for clinical bacteriology, a laboratory for serological work, a laboratory for the examination of blood, exudates, etc., and at least two rooms for individual workers.

There should be a room for the small experimental animals necessary, proper store rooms, a preparation room, and a room for the janitors.

In addition there should be a small office for the resident and one for the assistant resident on this floor.

Furthermore, unassigned space should be left on this floor for future expansion of the scientific activities of the clinic along lines which it is impossible now to foresee.

III. Private rooms.—Not less than 15 nor more than 25 should be provided. These would be more convenient from the standpoint of medical care if situated in the medical pavilion, but could be in a special private patients building, if that be important from the administrative standpoint.

Private patients should be cared for by the resident staff of the director or of the visiting physician in charge of them. There should be no separate staff for private patients.

All private patients applying at the hospital should be assigned to the director and distributed by him, as he sees fit.

IV. Isolation wards, 8 beds in separate rooms.—These should be merely for the care of cases of contagious disease arising in the hospital, and not for the admission of contagious diseases nor for instruction.

V. Medical record room.—The medical histories should be preserved in a room or rooms in the medical building, preferably on the same floor with the library. There should be at least one large fireproof record room with stacks for the bound volumes, and smaller rooms for the history clerk and for the consulting of histories.

VI. Teaching facilities.

1. One teaching room on each of the three divisions, as already specified.

2. A medical amphitheatre for 250 students, located on one of the lower floors of the medical pavilion and near the out-patient department, with side light, preferably from the north. This must be equipped with automatic window curtains, projection apparatus, radiograph box, blackboards, laboratory tables for showing chemical reactions, microscope tables, a specimen table, a reading desk, wash basins, etc. There must be a separate entrance for students, convenient to students' coat room in the basement or out-patient department.

Adjacent to and communicating with the amphitheatre must be two waiting rooms, one for male and one for female patients, and a large room or rooms for the storing of the teaching collection of charts, models, lantern slides, radiographs, museum specimens, etc.

3. The library of the clinic. This should be on the same floor with the medical amphitheatre, and convenient to the offices of the director and assistant director, so that the department secretary may supervise it. There must be ample stack room and a large reading room.

4. Three rooms suitable for recitations or demonstrations, one capable of holding 60, the others 30 students, should be provided in the out-patient department. These rooms are for the use of both medical and surgical departments.

5. A coat room for students should be provided, preferably near the out-patient department, with accommodation for 250 students.

6. Students' lavatories for the same number should be provided, adjacent to the coat room.

7. A lunch room, capable of serving a buffet lunch and with some tables should be provided for students, and be run at a small profit or leased to a purveyor.

VII. Accommodations for the staff.

1. Consulting offices for the director and the assistant director, with a convenient anteroom, sufficiently large to accommodate the department secretary and patients and other callers should be provided on the floor with the amphitheatre and library. Communicating with these consulting offices should be a small examining room, a dressing room, and a small clinical laboratory.

2. Resident staff quarters to provide for 20 men, the chief resident and assistant to have a study, bedroom, and bath; the division residents and assistants each suites of a study, two bedrooms and a bath; the internes, two bedrooms and a bath for each division. The remaining rooms to be arranged with a bath for each two bedrooms for voluntary assistants or assistant physicians who may be resident. There should be a

general club room, a reading and writing room, and a common dining room.

3. A lunch room, or accommodations in the staff dining room, for luncheon for the visiting staff, to be provided at cost, should be planned.

VIII. Out-patient department.—The out-patients' rooms devoted to medicine should be so planned that each of the three divisions may have a complete unit, consisting of two consulting and two examining rooms, for men and women respectively, with a small clinical laboratory between the examining rooms. In addition there should be a unit for tuberculosis, possibly one for diseases of metabolism and one for gastrointestinal diseases.

There should be a consulting room for the director of the medical out-patient department which would serve also for out-patient consultations by members of the visiting staff.

Three rooms for demonstrations or recitations, as already specified. These would be used for both medical and surgical instruction.

IX. Facilities desired by the medical clinic in other departments of the hospital.

1. X-ray and photographic department. This department should carry on work for the whole hospital. For the special use of the medical service there should be a room for fluoroscopic examination and demonstration, with proper protection.

Arrangements should also be made for prints of photographs and reduced radiographs for filing with the medical histories.

2. Department of physical therapeutics and hydrotherapy. This should carry on treatment as ordered both for ward and private patients and for out-patients, under proper limitations of hours for medical and surgical services.

3. Social service department. This, again, should assist both the medical and the surgical services, in hospital and out-patient department, by a proper system of reference and report. A special system of following up medical cases should be organized.

4. Pathological department. An operating room large enough for kymograph, etc., for the use of members of the medical staff who desire to do experimental work requiring larger animals, would be desirable. Reports should be furnished on tissues removed from patients for diagnosis. Copies should be furnished of all autopsy protocols to complete the medical histories.

5. Machine shop. A well-furnished machine shop for the repairing of instruments from all departments is highly desirable.

X. Personnel and duties.

*Director*, the Bard Professor of the Practice of Medicine.

Hospital duties: General supervision of the entire service; immediate supervision of his own patients in special rooms and private wards, and of certain laboratories and the library. Rounds with chief resident daily in special wards. Consulting rounds with visiting physician, staff, and clerks of each division twice a week. Once a week consultations in out-patient department. Research. Allowed private consulting office practice in the hospital and consultations outside of the hospital after 5 p.m.

University duties: General supervision of department. Clinical lecture three times a week. Clinical and pathological conference once a week. Seminar once each week.

*Assistant Director*, Associate Professor of the Practice of Medicine.

Hospital duties: To take the place of the director in the latter's absence. Immediate supervision of his own patients in special wards and private rooms, and of certain laboratories. Daily rounds with assistant resident physician. Once a week consultations in out-patient department. Research. Allowed private consulting office practice in the hospital and consultations outside of the hospital after 5 p.m.

University duties: To assist in supervision of department. Second year, elementary clinic, once a week, one-half year. Ward visits with third year sections twice a week. To substitute for director in certain of his teaching.

*Visiting Physicians*, Assistant Professors, or Professors of Clinical Medicine.

Hospital duties: The usual duties of visiting physicians to their divisions. Rounds daily with their resident staffs and clinical clerks. Allowed private patients at the discretion of the director, depending on rooms available. Allowed outside practice. Consultations in their out-patient divisions once a week.

University duties. Instruction of clinical clerks:

*Associate Visiting Physicians.* Should these prove desirable, they may be appointed at any time, without re-arrangement of the administrative plan.

Hospital duties: To assist in the care of ward patients. To substitute for the visiting physician during the academic year, and in charge of the service for half the summer, alternating with the assistant visiting physicians.

University duties: To assist in the instruction of clinical clerks.

*Assistant Visiting Physicians*, Associates in Medicine.

Hospital duties: Substitute for their visiting physician. Immediate supervision of out-patient service of their division. Allowed private patients in hospital at discretion of director. Allowed practice outside.

University duties. Recitations in medicine and physical diagnosis instruction.

All physicians attached to the hospital will be expected to engage in clinical investigation, and it will be very desirable that some at least offer special advanced courses.

*Director of out-patient department*, Assistant Professor of the Practice of Medicine.

Hospital duties: General supervision of medical out-patient department. Supervision of medical histories. Substitute for assistant director in his absence or while he is acting director, or for visiting physicians in emergency. Care of a few patients in special wards and private rooms. Allowed limited practice outside only.

University duties: Supervision of physical diagnosis instruction. Recitations in medicine. Assist assistant director in ward visits. Prepare out-patients for director's clinic when desired.

*Assistant Physicians*, Instructors or Associates in Medicine.

Hospital duties: One in charge of chemical, one of physiological, and one of biological work of the service, with responsibility for the details of the respective laboratories. No ward duties. They may be resident or live out of the hospital. These men should be nominated by the director after consultation with the heads of the Departments of Chemistry, Physiology, and Bacteriology of the College, and may also hold positions in these departments, but must give their entire time to the hospital.

*Chief Resident and Assistant Resident* of the special wards to be appointed for an indefinite term and to be men preparing for an academic career in clinical medicine.

Hospital duties: The immediate care of patients in the special wards and the private patients of the director, assistant director, and director of out-patient department. To carry on research.

University duties: Preparation of patients for the amphitheatre clinics.

*Clinical Assistant* for the special wards and private patients, to assist the residents, especially in the routine laboratory work.

*Residents and Assistant Residents* of the divisions. To be appointed for an indefinite term but not so long as the above, with the usual duties in the hospital, and to assist in the teaching of the clinical clerks.

*Medical Internes* on the divisions. Two on each division serving for one year, either all medicine or six months medicine and six months surgery. To perform the ordinary duties of the lower house staff.

*Voluntary Assistants* to be appointed by the director, as opportunity may offer, to pursue studies of problems in the special wards.

*Laboratory Assistants* as may be required from time to time. At least one chemical assistant and one assistant in the biological laboratory for help with Wassermann and Widal reactions, blood cultures, etc., will be necessary.

*Out-patient department.*

Director in charge, as above.

Assistant visiting physicians, in charge of division units, as above.

One physician in charge of tuberculosis class.
Physicians in charge of rooms.
Clinical assistants as may be required.

*Administrative force.*

One department secretary and librarian.
One assistant secretary and librarian.
One medical record clerk.

XI. Estimates of space required for educational and scientific purposes:

| | | |
|---|---|---|
| Medical amphitheatre (2 stories) | 2,500 sq. ft. | |
| Waiting rooms, 2 each 300 sq. ft. | 600 " | |
| Store rooms | 400 " | 3,500 sq. ft. |
| Rooms for recitations and demonstrations in Out-Patient Department, to be used by both medical and surgical departments. | | |
| One room | 600 sq. ft. | |
| Two rooms, each 300 sq. ft. | 600 " | 1,200 sq. ft. |
| Teaching rooms for the three medical divisions, each 300 sq. ft. | 900 sq. ft. | 900 sq. ft. |
| Library, stackroom | 1,200 sq. ft. | |
| Reading room | 500 " | 1,700 sq. ft. |
| Students' coat-room for 250 students, about | 750 sq. ft. | 750 sq. ft. |
| Students' lunch room | 750 sq. ft. | 750 sq. ft. |
| Students' lavatories | 400 sq. ft. | 400 sq. ft. |
| Laboratories (not including ward laboratories. Of this space much would be necessary for any first-class modern hospital). | | |
| *Chemical:* | | |
| Main laboratory | 800 sq. ft. | |
| Kjeldahl room | 150 " | |
| Distillation room | 150 " | |
| Balance room | 150 " | |
| Three rooms for individual workers, each 200 sq. ft. | 600 " | |
| Store room | 150 " | 2,000 sq. ft. |

| | | |
|---|---|---|
| *Physiological:* | | |
| Main laboratory | 300 sq. ft. | |
| Dark room for electrocardiograph | 240 " | |
| Two rooms, each 200 sq. ft. | 400 " | |
| Developing room | 40 " | 980 sq. ft. |
| *Biological:* | | |
| Main bacteriological laboratory. | 600 sq. ft. | |
| Serological room | 240 " | |
| Thermostat room | 30 " | |
| Refrigerating room | 30 " | |
| Preparation room | 300 " | |
| Two rooms, each 150 sq. ft. | 300 " | |
| Animal room | 200 " | 1,700 sq. ft. |
| Janitor's accommodations | | 200 sq. ft. |
| Unassigned laboratory space to be held for future use | 1,500 sq. ft. | 1,500 sq. ft. |
| Total | | 15,580 sq. ft. |

## Plan of Organization for the Surgical Clinic in the Presbyterian Hospital

I. Ward service of 150 beds, to be organized as follows: Three service units of 50 beds each, or of 44 beds each, in order to correspond with the organization of the medical service, and a semi-private ward of 18 beds in 3 small wards of 6 beds each. (This semi-private ward to have ward food and a nurse to each six beds under a head nurse for the whole ward.) Each service unit with the exception of the semi-private ward to have, besides the necessary service rooms, lavatories, etc., additional rooms, as follows:

1. A laboratory for all the routine chemical work of the division, adequately equipped for urine, stomach, and similar examinations, and of sufficient size for five men to work in at one time. Hospital requirement.....150 sq. ft.

2. An adjoining and communicating laboratory for microscopic examinations, equipped with an incubator, a stone-topped table for sputum staining, a microscope table for the resident staff and another for the clinical clerks, microscopes, etc. Hospital requirement.....150 sq. ft.

3. A room for dressings and teaching sections of not more than 20 students, 15 x 16.....240 sq. ft.

4. A similar room, but provided with small lockers for 10 clinical clerks, 15 x 16.....240 sq. ft.

The only purely educational space in these last two rooms is that for lockers.

5. Retiring room for friends of patients on danger list.

II. Emergency Ward.

1. Twenty-five beds, 15 for men, 10 for women, should be placed in the basement of the surgical pavilion and in close connection with the surgical division of the out-patient department, in order to avoid duplication of plant.

To be under the immediate charge of the resident surgeons in rotation during the day and night, under the direction of the first assistant visiting surgeon.

2. Admitting offices. In close connection with the Emergency Ward.

One office.....100 sq. ft.

Two examining rooms (for male and female patients).....300 "

Two waiting rooms (for male and female patients).....300 "

III. Isolation Wards.—These isolation wards should be in connection with the surgical wards for children. Infected cases and erysipelas cases can be cared for in the small subdivision of the general wards.

IV. Cancer Ward.—Twenty-four beds under the auspices of the Crocker Fund and under the control of the director of the surgical clinic.

V. Private Rooms.—Not less than 35 or more than 50 should be provided.

The private patients of each member of the visiting staff to be under the immediate charge of the resident surgeon assigned to that member.

All private patients applying at the hospital should be assigned to the director and distributed by him, as he sees fit.

VI. Laboratories of surgical pathology and experimental surgery should be close together and adjacent to the library and Students' reading and study rooms. They should be near the surgical amphitheatre and preferably on the same floor as the operating room, even if in separate buildings.

Experimental surgery needs top-light for operating rooms. It and surgical pathology, including surgical bacteriology, will be under the charge of the surgical pathologist. Hence the necessity of grouping these departments as closely as possible.

The record room should also adjoin the laboratories.

If possible, surgical pathology should connect with the main Department of Pathology.

1. Surgical Pathology. Should be on the same floor or adjacent to operating rooms and in close connection with surgical record rooms.

| | |
|---|---|
| One general laboratory room, north light | 1,000 sq. ft. |
| Five individual rooms, each 200 sq. ft | 1,000 " |
| One class microscope room | 1,000 " |
| One record room for slides, etc | 200 " |
| Two rooms, photography, including dark room. | 300 " |
| One museum | 600 " |
| One store room | 600 " |
| Three animal rooms for guinea pigs and rabbits | 600 " |
| Extra space, mechanics, etc | 1,000 " |
| | 6,300 sq. ft. |

2. Surgical Bacteriology.

| | |
|---|---|
| One room for sterilization and preparation of media | 240 sq. ft. |
| One preparation room | 300 " |
| One serological room | 240 " |
| One animal room | 240 " |
| Two individual rooms, each 150 sq. ft | 300 " |
| One thermostat room | 150 " |
| One refrigerating room | 150 " |
| | 1,620 sq. ft. |

3. Experimental Surgery.—Should adjoin Surgical Pathology.

| | |
|---|---|
| Main operating room (4 tables) | 500 sq. ft. |
| Four small operating rooms 10 x 12 | 480 " |

| | |
|---|---|
| One Directors' room | 240 sq. ft. |
| One sterilizing room | 120 " |
| Four recovery wards 20 x 20 (two for isolation). (in animal house if necessary) | 1,600 " |
| One autopsy room (icebox). (Combine with Department of Pathology) | 300 " |
| One nurses' room and toilet | 120 " |
| One animal house and yard in connection with other departments (and possibly with Rockefeller Institute). | |
| Ward for supply of animals. | 500 " |
| Yards. | |
| One reception office for animals received for treatment—two or three rooms | 450 " |
| | 4,310 sq. ft. |

4. Library and Record Rooms.

| | |
|---|---|
| Library stack room | 1,200 sq. ft. |
| Students' reading room and study room | 500 " |

5. Record Room for entire surgical department:

| | |
|---|---|
| Clerk's office | 200 sq. ft. |
| Stack room | 300 " |
| History consulting room | 200 " |

VII. Operating Rooms.

1 Amphitheatre to seat 150.

4 general operating rooms about 20 x 25 ft. without fixed seats and one smaller room for cystoscopy, etc. Accessory wash, sterilizing, preparation, etherization, toilet, waiting rooms, etc.

No space is required for teaching, *per se.*

All operations to be done between 8 A.M. and 1 P.M. Ordinarily, two, possibly three, operating rooms running simultaneously. Average of 12 operations each week day.

VIII. Teaching Facilities.

1. Teaching room for each service unit as already specified.

2. A surgical amphitheatre to seat 250, located on one of the lower floors of the surgical pavilion and near the out-patient department, with side light, preferably from the

north. Equipped with projection apparatus and automatic shutters, radiograph box, blackboards, chart rack, wash, etc. Separate entrance for students.....2500 sq. ft.

Adjacent to and communicating with the amphitheatre must be three waiting rooms for patients, each about 300 sq. ft.....900 sq. ft.
and a large room for storage of charts, models, etc..400 sq. ft.

3. Departmental Library. This should adjoin the laboratory of surgical pathology, as already specified.

Library.....1200 sq. ft.
Students' reading and study rooms..... 500 sq. ft.

4. Three rooms in out-patient department suitable for recitations or demonstrations, one capable of holding 60, the other 30 students, should be provided. For both medical and surgical classes. See Medical List.

5. A coat room for students should be provided, preferably near the out-patient department, with accommodations for 250 students. See Medical List.....750 sq. ft.

6. Students' lavatories for the same number should be provided, adjacent to the coat room. See Medical List.

7. A lunch room, capable of serving buffet lunch and with some tables should be provided for students, and be run at a small profit or leased to a purveyor.....750 sq. ft.

IX. Accommodations for the Staff.

1. Consulting offices for the director and assistant director should be provided on the first floor of the surgical pavilion, with anterooms sufficiently large to accommodate patients, callers and secretary.

Two consulting rooms.....480 sq. ft.
One waiting room .....250 "
Three examining rooms.....240 "
Two dressing rooms .....240 "
Two anterooms for nurses and attendants.....
One laboratory..... 100 "
Two toilets near examining rooms.....

2. Resident staff quarters to provide for 16 men, the residents each to have a study, bedroom and bath; the internes,

three bedrooms and a bath for each division. The remaining rooms to be arranged with a bath for each two bedrooms for voluntary assistants or assistant surgeons who may be resident. There should be a general club room, a reading and writing room, and a common dining room for both medical and surgical staffs. See Medical List.

3. A lunch room, or accommodations in the staff dining room, for luncheon for the visiting staff, to be provided at cost, should be planned. See Medical List.

X. Out-Patient Department. Should be administered by a single staff under the first assistant visiting surgeon as chief and the second assistant visiting surgeon as deputy chief.

The arrangement and size of rooms will have to be determined later.

Three rooms for demonstrations and recitations, to be used conjointly with the medical clinic, as already specified.

XI. Facilities desired by the surgical clinic in other departments of the hospital:

1. X-ray and photographic department. This department should carry on work for the whole hospital. For the special use of the medical and surgical service there should be a room for fluoroscopic examination and demonstration, with proper protection. See Medical List.

Arrangements should also be made for prints of photographs and reduced radiographs for filing with the medical and surgical histories.

2. Department of physical therapeutics and hydrotherapy. This should carry on treatment as ordered both for ward and private patients and for out-patients, under proper limitations of hours, for medical and surgical services.

3. Social service department. This, again, should assist both medical and surgical services, in hospital and out-patient department, with a proper system of reference and report. A special system of following up surgical cases to be organized. See Medical Lists.

4. General admitting offices.

XII. Personnel of Staff and Duties. The organization of the staff in the surgical clinic must differ essentially from that proposed for the medical clinic, on account of the double work in the wards and the operating rooms. In the medical clinic the entire teaching and treatment can be done on rounds. In the surgical clinic both rounds and operating are necessary.

The most important thing in conducting a surgical clinic is to provide for systematic and efficient service in the operating rooms. The technique should be simple and consistent and the hours regular.

If three distinct divisions were organized in the surgical clinic there would be three distinct groups of operators, which would bid fair to demoralize an operating room staff or call for a much larger and more expensive one. Furthermore, the fitness of certain surgeons for certain lines of work, especially operation, is more emphasized than in the case of physicians.

In fact, both theoretically and practically it is found best to organize a surgical clinic upon a graded basis.

A. Visiting Staff.

1. *Director*, the Professor of Surgery.

Hospital duties: General supervision of the entire service; immediate supervision of his own patients in wards and private rooms; operations; consulting rounds with each associate surgeon, staff and clerks of each service unit once a week; consultations in out-patient department once a week. Allowed private consulting practice in hospital, and consultations outside after 5 P.M.

University duties: General supervision of department. Operative clinic three times a week; clinical lecture twice a week and didactic lecture once a week; departmental seminar once in two weeks; instruction clinical clerks.

2. *Visiting Surgeon and Assistant Director*, Associate Professor of Surgery.

Hospital duties: Substitute for director; immediate supervision of one service unit and of his private patients; rounds in his own wards daily and of emergency ward once a week; operations 3 days a week; consultation hour out-patient

department once a week. Allowed private consultation practice in hospital and consultations outside after 5 P.M.

University duties: Assistant in administration of department; three didactic lectures a week 3d year; one clinical lecture 4th year. Instruction of clinical clerks on rounds.

3. *First Assistant Visiting Surgeon*, Assistant Professor of Surgery.

Hospital duties: Immediate supervision of one service unit and of his private patients; rounds in his service unit daily; operations three days a week. Substitute for visiting surgeon. Out-patient department consultation once a week. Allowed outside practice.

University duties: Instruction of clinical clerks on rounds; charge of class in experimental surgery; lectures and conferences on selected subjects.

4. *Second Associate Visiting Surgeon*, Associate in Surgery.

Hospital duties: Same as first associate.

University duties: Instruction of clinical clerks on rounds; 4 recitations 3d year.

5. *Third Associate Visiting Surgeon*, Associate in Surgery.

Hospital duties: General substitute in wards and operating rooms. Consultation hour, out-patient department, twice a week; immediate supervision of children's ward.

University duties: Four recitations 3d year; instruction of clinical clerks.

6. *First Assistant Visiting Surgeon and Visiting Surgeon to the Out-Patient Department*, Instructor in Surgery.

Hospital duties: Chief of surgical out-patient department. Substitute for third associate. Limited number of operations. Ward rounds. Allowed private patients.

University duties: Instruction of clinical clerks in minor surgery and in wards.

7. *Second Assistant Visiting Surgeon*, Instructor in Surgery.

Hospital duties: Deputy chief, out-patient department; limited operation and ward service; allowed private patients.

University duties: Instructor of clinical clerks in minor surgery and in wards.

8. *Third Assistant Visiting Surgeon*, Instructor in Surgery.

Hospital duties: Assistant surgical pathologist and recorder.

University duties: Overseer of clinical clerks.

9. *Fourth Assistant Visiting Surgeon*, Instructor in Surgery.

Hospital duties: Assistant recorder. 2d assistant surgical pathologist.

University duties: Overseer of clinical clerks.

10. *Fifth Assistant Visiting Surgeon*, Instructor in Surgery.

Hospital duties: Assistant recorder, 3d assistant surgical pathologist.

University duties: Overseer of clinical clerks.

11. *Sixth Assistant Visiting Surgeon and Visiting Surgical Bacteriologist*, Instructor in Surgery.

Hospital duties: In charge of laboratory surgical bacteriology.

University duties: Instructor of clinical clerks.

12. *Visiting Surgical Pathologist*, Assistant Professor of Surgery.

Hospital duties: Director of laboratories of surgical pathology and experimental surgery; in charge of surgical library. Allowed special patients in wards and private rooms.

University duties: As above, and in charge of courses for second year students.

13. *Consulting Bacteriologist*, Professor of Bacteriology.

All members of visiting staff will be expected to do research work.

B. Resident Staff. Salaried. Indefinite appointments.

1. *Chief Resident Surgeon.*

Duties: In charge of the private patients of the director; assist him in the operating room; prepare his general clinics; chief admitting officer; research.

2. *First Assistant Resident Surgeon.*

Duties: In charge of one of the service units, under the visiting surgeon; assist him and care for his private patients; prepare clinics; research.

3. *Second Assistant Resident Surgeon.*

Duties: In charge of one of the service units; under the first associate surgeon; assist him and care for his patients; research.

4. *Third Assistant Resident Surgeon.*

Duties: In charge of one of the service units; under the second associate surgeon, and assist him and care for his private patients; research.

5. *Resident Bacteriologist.*

Duties: In the laboratory of surgical bacteriology under the visiting surgical bacteriologist; research. Instructor of clinical clerks.

The resident staff, with the exception of the resident bacteriologist, besides their clinical duties, will have the opportunity to work in the laboratories and also will be expected to coöperate in the teaching of the clinical clerks.

They shall have charge of the emergency ward for specified hours of the day and act as admitting officers under the chief resident.

6. *House Staff.* Not salaried. There shall be nine internes, three for each service unit with assignment of duties in the emergency ward.

Duties: Same as present assistant members of house staff.

7. *Clinical clerks.* There shall not be more than 30 clinical clerks in the entire surgical clinic.

Volunteer assistants or scholars may be appointed from time to time by the director to conduct research or help in the laboratories.

Out-Patient Department. Sufficient assistant surgeons and clinical assistants.

## Plan of Organization for the Pathological Department in the New Presbyterian Hospital.

Hospitals differ according to their material and according to the character of their staff, but it may safely be said that the difference in the character of the staff far outweighs the difference in the material. Indeed, the material depends greatly upon the interest and skill shown by the visiting

physicians in the study of some particular type of disease—a thing which is made very evident in the case of the hospital of the Mayo Brothers at Rochester. It becomes quite obvious from the examination of the work done in the hospitals which have a relatively small staff and which are not connected with a teaching institution, that the work ends with the establishment of a reasonably satisfactory diagnosis or indication for operation, unless some especially enthusiastic attending physician becomes interested in a particular group of cases. The work of such a hospital must average about fourth class, not necessarily so far as the individual patient is concerned but as compared with the possibilities of extending the results obtained to the general medical world.

To attain anything like first class work, more than the mere routine treatment of patients must be aimed at, and we cannot consider any hospital work first class unless it succeeds finally in making some addition to the sum of human knowledge concerning the diseases which are brought to the attention of the staff. A first class hospital, therefore, requires a staff of a size which might seem at first sight extravagantly great, but which is absolutely necessary in order to accomplish the enormous amount of work for which they have opportunity.

If this is true in connection with the medical and surgical divisions, it is more than ever true of the pathological department of the hospital, for notwithstanding the fact that we cannot too highly estimate the value of purely clinical observations as far as the welfare of the patient is concerned, the actual contribution to our knowledge of disease comes in this age chiefly from the application of laboratory methods to the patients. A pathological laboratory of the hospital, therefore, which contents itself with the routine examination of tissues and excreta from the patients, is shamefully perfunctory and goes far to drag down the standard of work throughout the hospital. It is recognized by every broadminded person of the present day that in order to clear up the problems presented by these diseased patients as well as to carry out the mere necessary routine, it is essential to have, in immediate connection with the hospital, laboratories fully equipped with facilities and, above all, with men, for the investigation of the most varied questions. This essential, in so far as the men

are concerned, can be fulfilled only by such an alliance with the University as has been entered upon.

The men are perfectly available at the present moment, and the material need consists only in the establishment of adequate laboratories for their work, in the hospital. If they are compelled to carry out the investigative parts of the work in a far distant institution and the routine parts in the hospital, the whole thing will become perfunctory as far as the patients are concerned. It seems that this can be avoided only by the establishment of the whole pathological department in the hospital—a plan which involves, of course, a temporary separation of the medical, surgical and pathological departments from the rest of the school. This separation should not be permanent, however, and would have far less injurious influence than a continuation of the present division of the pathological work.

The medical and surgical institutes are planned to be complete in so far as the clinical pathology is concerned; but when problems arise there which demand experimental study of animals, it is far more convenient to perform such experiments in rooms separated from the ward buildings,—and this should be arranged for in the pathological department. For practical reasons this department must also hold itself responsible for the examination of tissues excised from patients either in the medical or surgical clinics. Since there is a very great amount of such material from numerous surgical operations, it is necessary to establish a separate staff of surgical pathologists; but it should be especially emphasized that this work should be done under the supervision of the director of the laboratory of general pathology. This is because it follows certain narrow lines, and experience shows that the results deteriorate very rapidly if it be separated from work in general pathology. The laboratories of surgical pathology should therefore be built either in the general pathological laboratory or in immediate connection with it.

After the death of the patient, the further study of the case falls into the domain of the pathological department. Complete arrangements must therefore be made for the performance of autopsies and the preservation of records and of specimens. As a continuation of this, however, the problems suggested by the autopsies must be studied by experimental methods.

All of this is legitimately the function of the pathological department in the hospital. For the purpose of education and instruction, there is required in addition a working laboratory for the students, a small demonstration room and some smaller rooms for individual workers.

Buildings for the pathological department may be planned as follows:

It is desirable to concentrate, as far as possible, all infected material such as is derived from autopsies and such as is used for gross pathological demonstration, in one or at most two rooms. For this purpose the morgue, with its cold storage apparatus, and a large simple autopsy room would be sufficient. This combination, together with the rooms for experimental work and the room or rooms in which operative technique is taught, should be on the top floor of the building, and all should be furnished with generous skylights as well as lateral lights. There should be a service elevator connecting the top story with the corridor in the basement for the transportation of animals, bodies and freight. It should be so arranged as to be readily kept quite clean.

The autopsy room should be a perfectly plain, square room, with the largest possible windows and with the largest possible skylight. Its walls, ceiling and floor should be smooth as possible and composed of tile, concrete, opaque glass or some such substance capable of being easily cleaned. The angles of walls and floor should be round. There should be abundant artificial (electric arc) lights in the room—one or more over each of four autopsy tables. The floor should be so arranged as to readily drain away any fluids which are spilt on it so that the room could be swept out with a hose. There should be absolutely no furniture except the tables and sinks. Of these there should be several hand basins and two or more large porcelain sinks with drain boards, standing at a low level. The plumbing should be everywhere exposed. The autopsy tables should be very plain, possibly of the type installed in the new laboratory of Bellevue Hospital.

All bodies from the hospital should be brought to the morgue in the top floor of the laboratory, and there should be a room set aside for their reception which could also serve as the room to which undertakers must come for them. It is

especially desirable that this room should be under the immediate supervision of the laboratory authorities, who could thus form an intelligent idea of the proportion of autopsies obtained. This room should be provided with lockers for the patients' clothes, etc. One side might constitute the cold storage plant composed of ten or twelve compartments, with a door at each end so that the body could be put in at one end and taken out either there or at the other end. The elevator shaft from the basement and other corridors should open conveniently into this room. The opposite ends of the cold storage compartments should open into a room adjoining the autopsy room in which the body could be weighed, prepared before the autopsy and transported to and from the autopsy room on a wheeled carriage. This room should be large enough for such a wheeled stretcher to turn around and should open by a wide door into the autopsy room.

The autopsy room should be used for the demonstrations in gross pathology, so that infected material need never leave this room except to be burnt.

Upon this floor there should also be a small room supplied with sufficient apparatus for the immediate examination of materials from autopsy, making frozen sections, museum specimens, etc This room might also contain accommodation for autopsy instruments, gowns, gloves, fixing fluids, jars, etc. On this account it cannot be very small. It would be desirable to have somewhere in the building a room in which those performing autopsies could change their clothes and take a bath, and this could be placed to greatest advantage quite near the autopsy room.

The rest of the top floor should accommodate the greater number of the rooms for experimental work since for this purpose skylights are so valuable. For the teaching of students in surgical technique, Dr. Blake's specifications are referred to. Animal rooms for the animals in immediate use should be built into this floor. There should be as many small operating rooms as possible to accommodate those, whether of medical, surgical or pathological departments, whose problem requires experimental study of animals. These rooms need not be very large—indeed most of them should be quite small—not more than ten by fifteen feet, but there should be one or two larger

rooms in which the more elaborate apparatus, kymographs, etc., could be properly set up. They should have walls of wood upon which apparatus could be hung, vertical and cross bars of iron for the same purposes, a sink, a table, a window bench and a cabinet for books, instruments, etc., large windows, skylights and abundant electric light and gas. Not less than ten of such rooms should be planned for, *exclusive of those for teaching surgical technique.* There should also be a room for sterilizing dressings and for the assistant, in which to keep his materials and apparatus.

The next two floors should be planned to accommodate the work in pathological histology, chemistry, bacteriology and such physiological work as does not require overhead light. Here, too, might be lodged, if possible, the laboratories for surgical pathology according to Dr. Blake's specifications. Since these specifications involve large teaching laboratories, it may be difficult to arrange for them all in the pathological laboratory.

If surgical pathology is to be added to the Pathology Building—7,620 sq. ft.—required by Dr. Blake in his estimate, it could easily fit into a fifth floor; an extra floor to be added.

There should be a laboratory room for the director of the department with a toilet room, an anteroom for the reception of those who wish to consult him, and a small room for the secretary. For the assistant director there should be a similar laboratory room with anteroom. The other assistants should each have a small laboratory room and there should be several similar rooms to be available for voluntary workers. In addition there should be two larger rooms for the accommodation of miscellaneous students and other workers. The individual rooms should be small with a large window, window bench, sink, table, and a cabinet for slides, books, apparatus, etc. There should be as many as possible of these, and their small size, which insures privacy, would aid in this respect. The other requirements on this floor are a room for the stenographer, with arrangements there, or in a separate fireproof room, for the preservation of records, index, catalogue, etc., a room for the artist, who forms an integral part of the department, and a room of rather larger size for the technician where most of the section cutting, staining, etc., must be carried out.

There must be on each floor a small store-room for the materials which are in current need, and a room for the janitor in which to keep brooms, mops and refuse, with sinks and cleaning apparatus in general. There must also be a toilet room on each floor.

On one floor of the building there should be a room where the staff might take their luncheon, or provision should be made for them with the visiting staff. Another necessary feature is a workshop fitted with a carpenter's bench and such simple machinery as a lathe, grinding apparatus, etc., for the repair of instruments. A band saw for the preparation of sections of bone is an apparatus found in every European laboratory and is essential for the study of bones. This could be set up in the workshop.

The bacteriological and chemical divisions need not be elaborate, but must be adequate for the work of the autopsies. There must be a room for the preparation and sterilization of media, and two rooms for the actual bacteriological work, with an animal room for rabbits, etc., and a small store-room for glassware.

The chemical laboratory should not, as is usually the case, be in the form of one large room with apparatus common to all workers, but rather in three small individual laboratories fitted up in the usual way, with a small balance room and at one side a small but well ventilated Kjeldahl room. For both bacteriological and chemical divisions there should be space for electric motors with centrifuge, shaking machines, etc.

Upon the second floor the library of the department could be most conveniently lodged. It should be constructed like that of the Rockefeller Institute, with one large reading room with stack room for current journals, also to be used as reading room. Each room should be provided with several small tables and sufficient light.

The first floor should accommodate the teaching laboratory. This should be large enough for one hundred and twenty-five (125) students and should be arranged at the end of the building so that the students might face the light either way. It must be provided with tables—or better, with desks containing lockers. There must be a platform about a foot high with a blackboard and a table for the lecturer. This

laboratory should be very accessible from the main corridor and should give ready entrance into a small adjacent amphitheatre room which could be darkened. In this room there should be seats for one hundred and twenty-five (125) students, so arranged as to allow the best view of lantern slides projected on the screen. The rest of the first floor should be occupied by the museum except for a small preparation room immediately adjacent to the large laboratory, and a storeroom for students' materials. The museum should be arranged in the manner of those in the large hospitals abroad and should be easily darkened. Adjoining it there should be a small preparation room for the mounting, labeling and preparation of specimens.

In the basement there should be dry storerooms of the greatest possible extent provided, in some places with shelves upon which specimens could be stored—in other places left vacant. There, too, should be the rooms for photographic apparatus, with dark rooms and other accessories. At the door of the service elevator, on one side, should be a room for undertakers, with a wide door to the outside, approached by the road. On the other side of this elevator there should be a similar room for the reception of express and freight parcels. At the foot of the passenger elevator and stairs there should be coat and washrooms for students. Some rooms in the basement should be retained for the setting up of such heavy apparatus as the Buchner press, and it is important here, as elsewhere in the laboratory, that there should be unassigned space wherever possible, because one cannot foresee the changing trend of pathological work even for a few years.

The construction of the building should be much like that of the Rockefeller Institute, with central longitudinal corridors. The stairs and passenger elevator should be placed somewhere near the centre of the building.

Stock animals and many convalescent animals must be kept in a small separate building with a yard or runway. It would be desirable, if possible, to enter into coöperation with the Rockefeller Institute in this regard so that the stock animals could be kept together. Otherwise, a building separated into small rooms, like that at present on the roof of the College of Physicians and Surgeons, could be built along the river edge

of the lot. This end of the lot seems also the most desirable situation for the whole pathological laboratory, because it requires unobstructed light, and because, being lower than the surgical building itself would not obstruct its light. Indeed, it would be possible to build the basement below the level of the cliff and thus still further reduce the height of the building.

## Estimate of Space Required for Pathological Department

### FOURTH FLOOR

| | | |
|---|---|---|
| Autopsy room, 35 x 40 | 1,400 | |
| Preparation room for bodies, 14 x 15 | 210 | |
| Small laboratory near autopsy room, 15 x 16 | 240 | |
| Cold storage, 7 x 18 | 126 | |
| Service elevator, 8 x 6 | 64 | |
| Undertaker's room, 14 x 15 | 210 | |
| Bath and toilet, 15 x 10 | 150 | |
| Two animal rooms, 14 x 15 = 210 | 420 | |
| Ten small operating and experimental rooms, 10 x 15 | 1,500 | |
| Two kymograph rooms, 16 x 17 | 544 | |
| | 4,864 | |
| Experimental surgery as specified by Dr. Blake | 2,480 | |
| | 7,344 | |
| Remainder, unassigned | 656 | 8,000 |

This would require a building of at least 40 x 200 ft.

### THIRD FLOOR

| | | |
|---|---|---|
| Director's laboratory, 15 x 20 | 300 | |
| Director's anteroom, 12 x 15 | 180 | |
| Secretary, 15 x 10 | 150 | |
| Assistant Director's laboratory, 15 x 20 | 300 | |
| Assistant Director's anteroom, 15 x 12 | 180 | |
| Associate Professor, 15 x 20 | | |
| Assistant Professor, 15 x 20 | | |
| Associate, 15 x 20 | | |
| Associate, 15 x 20 | | 150 x 8 = 1,200 |
| Instructor, 15 x 20 | | |
| Instructor, 15 x 20 | | |
| Assistant, 15 x 20 | | |
| Assistant, 15 x 20 | | |

| | | | |
|---|---|---|---|
| Four other individual rooms, 15 x 10 | 600 | | |
| Two larger rooms, 15 x 25 (375) | 750 | | |
| Assembly room for seminar and small classes, 20 x 30 | 600 | | |
| Stenographer's room, 20 x 12 | 240 | | |
| Record room, 15 x 10 | 150 | | |
| Artist's room, 20 x 12 | 240 | | |
| Technician's room, 20 x 15 | 300 | | |
| Two storerooms, 10 x 12 | 240 | | |
| Two janitor's rooms, 10 x 15 | 300 | | |
| Two toilet rooms, 10 x 15 | 300 | | |
| Lunch room for staff, 18 x 20 | 360 | | |
| Workshop, 18 x 20 | 360 | | |
| Unassigned space | | 1,250 | |
| | | | 8,000 |

SECOND FLOOR

*Bacteriological Laboratory*

| | | | |
|---|---|---|---|
| Media and sterilizing room, 14 x 15 | 210 | | |
| Bacteriologist's room, 20 x 15 | 300 | | |
| Bacteriological work room, 18 x 15 | 270 | | |
| Animal room, 14 x 15 | 210 | | |
| Store room, 10 x 12 | 120 | | |

*Chemical Laboratory*

| | | | |
|---|---|---|---|
| Five individual laboratories, 12 x 15 | 900 | | |
| Kjedahl room, 10 x 12 | 120 | | |
| Balance room, 10 x 12 | 120 | | |
| Chemical store room, 10 x 12 | 120 | | |
| Library, 30 x 40 | 1,200 | | |
| Journal room, 30 x 20 | 600 | 4,170 | |
| Unassigned space available for extension of these two departments | | 3,830 | |
| | | | 8,000 |

FIRST FLOOR

| | | | |
|---|---|---|---|
| Teaching laboratory, 40 x 70 | 2,800 | | |
| Demonstration room, 25 x 30 | 750 | | |
| Preparation room, 10 x 15 | 150 | | |
| Store room, 10 x 15 | 150 | | |
| Museum, 40 x 100 | 4,000 | | |
| Museum preparation room, 10 x 15 | 150 | | |
| | | | 8,000 |

## BASEMENT

| | | | |
|---|---|---|---|
| Ten store rooms, 14 x 15 | 210 | 2,100 | |
| Photographic room, 15 x 20 | 300 | | |
| Dark room, 10 x 12 | 120 | | |
| Printing room, 15 x 14 | 210 | 630 | |
| Undertaker's room, 18 x 20 | 360 | | |
| Students' coat room, 20 x 30 | 600 | | |
| " wash " 20 x 20 | 400 | 1,360 | |
| Freight room, 20 x 20 | | 400 | |
| Unassigned space | | 3,510 | |
| | | | 8,000 |
| Animal house | | | 5,000 |
| Janitor, 10 x 12 | | | 120 |
| Food and bath room, 10 x 15 | | | 150 |
| Autopsy room (with icebox), 20 x 15 | | | 300 |
| Four recovery wards, 20 x 20 | | | 1,600 |

## Recapitulation of Space

*Medical Clinic*

| | | |
|---|---|---|
| Teaching rooms | 4,400 sq. ft. | |
| Library | 1,700 " | |
| Laboratories | 6,380 " | 12,480 sq. ft. |

*Surgical Clinic*

| | | |
|---|---|---|
| Teaching rooms | 4,800 sq. ft. | |
| Library | 1,700 " | |
| Laboratories | 12,230 " | 18,730 sq. ft. |

*Pathological Department*

| | | |
|---|---|---|
| Teaching rooms | 9,840 sq. ft. | |
| Library | 1,800 " | |
| Laboratories | 25,880 " | 37,520 sq. ft. |

*Rooms for General Use*

| | | |
|---|---|---|
| Three teaching rooms in Out-Patient Department | 1,200 sq. ft. | |
| Students' coat rooms, lunch room and lavatories | 1,900 " | |
| Animal House | 7,170 " | 10,270 sq. ft. |

The foregoing plans for the organization of the Presbyterian Hospital as a university hospital would hold good in the main, whether the medical school be adjacent to the hospital or for a time remain separate from it. The reasons for the concentration of the work of the departments of medicine and surgery in the hospital have already been set forth, and the maintenance of the work of the surgical research laboratories is specifically designated to be supported by the gift of Mr. Harkness as a part of the work of the Presbyterian Hospital. The plan presented for the Department of Pathology looks toward the creation of a pathological institute completely equipped for hospital work and for education and research. With the exception of the institute which has just been erected as part of the new Bellevue Hospital in New York, such complete institutes have not existed in the United States. They are, however, essential parts of all newer hospitals in Germany, whether university hospitals or otherwise.

A large part of the work to be carried on in the special building thus planned for is hospital work and must be kept on hospital ground. An example of such work would be that which has to do with the handling of bodies of those who die in the hospital. The research and teaching will be so intimately connected with the utilization and study of this material that the Committee is unanimous in opinion that, even if the college should be situated adjacent to the hospital, it would be the height of unwisdom to maintain any portion of the pathological department in a separate building on college ground.

The Committee is still unanimously in favor of the principle which was presented to the medical faculty by another committee on October 17, 1910: "That there should be no separation of laboratory work and clinical work, and that the first two years of the curriculum should not be separated from the last two years." The Committee would, therefore, urge that every effort should still be made to unite to the new Presbyterian Hospital a new College of Physicians and Surgeons; and in support it would again call your attention to your own criticism of January 19, 1910: "That the work of the medical faculty must always be hampered and limited until an appropriate physical equipment is provided for it." Should it be possible to rebuild the College in proximity to the Presbyterian

Hospital, the rooms for general use specified in the recapitulation of space could be provided in the college buildings.

In addition, the Committee begs to call your attention to the opportunity for making the Vanderbilt Clinic, with its assured income from endowment, a part of the new hospital. From the standpoint of the college it is most important that the special branches represented in the Vanderbilt Clinic be not divorced from general medicine and surgery. On the other hand, the Vanderbilt Clinic, with its large clientele, and its endowment, would be a most valuable asset for the Presbyterian Hospital. It seems to the Committee that an arrangement might be made whereby the contribution by the University of the Vanderbilt Clinic might be considered an adequate compensation in lieu of rental for the teaching facilities desired by the University in the pathological department of the hospital. The teaching rooms for medicine and surgery should be located in the new Vanderbilt Clinic, and student's coat-rooms, etc., would belong here or in the college buildings, were they adjacent.

In addition to the requests for space for the departments already specified, the Committee believes that a children's service of fifty beds should be provided in the new hospital, arranged virtually as one of the medical service units and containing a similar teaching room. Beyond this, should any special branches be provided for in the plans made by the Managers of the Presbyterian Hospital, a neurological service of forty-four beds, one service unit, with a similar teaching room, should be the first to have consideration.

Respectfully submitted,

Samuel W. Lambert
Joseph A. Blake
Theodore C. Janeway
W. G. MacCallum
W. T. Longcope

Annex