

REPORT OF THE SURVEY OF
THE UNIVERSITY OF INDIANA
SCHOOL OF MEDICINE

by the

LIAISON COMMITTEE ON MEDICAL EDUCATION
Representing
AMERICAN MEDICAL ASSOCIATION
and the
EXECUTIVE COUNCIL
ASSOCIATION OF AMERICAN MEDICAL COLLEGES

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INTRODUCTION

The School of Medicine of Indiana University was last surveyed in October, 1954, by Drs. William N. Hubbard and Edward Turner. Continuing full approval and membership were granted at that time.

Since then, two outstanding events have taken place: the work of the first year was transferred from Bloomington to a newly completed building located on the Medical Center Campus at Indianapolis in 1958; the following year, a new combined degree program offering the first two years of medical work together with graduate study in cooperation with the College of Arts and Sciences and the Graduate School began in Bloomington.

The present survey covers both the regular four year program in Indianapolis and the new one in Bloomington. The attempt to encompass such extensive activity within the time usually allocated to one regular program, did not permit a visit with each departmental chairman and necessitated making some interviews more brief than usual; all departments visited during the last survey were included. It is hoped that these conferences together with the abundant and well prepared pre-survey material gave the survey team a sufficiently accurate impression of the wide scope of medical activity conducted at Indiana University to provide an accurate and helpful report.

The chairman and members of the survey team are deeply indebted to President Stahr, to Dean Van Nuys, to Associate Dean Mahoney, and to all their many associates whose efficient help and close guidance smoothed out all complexities and made possible the successful completion of the visit within the time allocated. So too, their friendly and generous hospitality, both in Indianapolis and in Bloomington, rendered the occasion a most memorable and pleasant one.

Indiana University is to be commended for its sense of responsibility in assuming the burdens of a program as extensive as that in Indianapolis, and for its vision in conceiving and supporting the new program in Bloomington.

Subsequent to the visit and to the preparation of the greater part of the report, word was received of Dean Van Nuys's sudden and untimely death. The Chairman and members of the team wish to express their deep regret and to record their appreciation of the many years of understanding leadership Dr. Van Nuys devoted to the Indiana University School of Medicine. His accomplishments will always stand out in the annals of the school and the University; his strong and kindly character is not to be forgotten.

HISTORY

While Indiana University was founded in 1820, its initial University School of Medicine was not organized until 1903. However, during the latter half of the nineteenth century, a number of independent medical colleges were founded, primarily in Indianapolis. In 1905, several of these were merged under the name of Indiana Medical College, which in 1908 was united with the Indiana University School of Medicine.

Until 1958, the first year of the School of Medicine was in Bloomington, and the last three years in Indianapolis. The completion of a new Medical School building in Indianapolis enabled all four years to be consolidated there at that time. Fortunately, the Medical School building in Bloomington was retained and so it proved possible to launch the new combined degree program in the following year.

Dr. John Van Nuys was Dean of the School of Medicine from 1947 until his death in 1964.

ADMINISTRATION

The main campus of the University of Indiana is located in Bloomington, a city of 32,000 located 50 miles southwest of Indianapolis. In all, 34,000 students attend the University through its various branches, 18,000 of them in Bloomington.

The Schools of Medicine, Dentistry and Nursing, together with a large number of hospitals comprise a well integrated medical center located just west of central Indianapolis. These hospitals include three operated by the University, The Robert W. Long Hospital for General Adult Medicine and Surgery, The William H. Coleman Hospital for Obstetrics and Gynecology, and James Whitcomb Riley Hospital for Pediatrics. In addition there are the Marion County General Hospital, A Veterans General Hospital and the LaRue Carter Psychiatric Hospital and Institute of Psychiatric Research operated by the State Mental Health Department. The building of the Indiana State Board of Health, a Union Building, and various forms of student housing are also included in the complex.

The trustees of Indiana University hold office for three years. Three are elected by vote of the alumni, and five are appointed by the governor.

The Board of Trustees.

Willis Hickam (President)(1953-1965) Spencer, Indiana	Attorney
Ray C. Thomas (Vice-President)(1952-1964) Gary, Indiana	Attorney
Donald C. Danielson (1959-1965) New Castle, Indiana	Sales Manager, Modernfold Door Corp.
Robert F. McCrea (1959-1965) Bloomington, Indiana	Attorney
Mrs. Harriet Simmons Inskeep (1962-1965) Fort Wayne, Indiana	Housewife
Frank E. McKinney (1962-1966) Indianapolis, Indiana	Banker
Howard S. Wilcox (1963-1966) Indianapolis, Indiana	Personnel & Pub.Relations, Mgr. Indianapolis Newspapers, Inc.
Donald A. Rogers (1963-1966) Bloomington, Indiana	Attorney

The President is the Chief Executive Officer of the University. The Dean of the Medical School reports to the President through the appropriate Vice President.

Administrative Officers of the University.

Elvis J. Stahr, Jr., B.C.L., LL.D., President of the University.

Herman B. Wells, A.M., LL.D., Chancellor of the University; President of the Indiana University Foundation.

Lynn Merritt, Ph.D., Acting Vice President, and Dean of the Faculties.

Joseph Amos Franklin, B.S., Vice President and Treasurer.

John William Walton, Ph.D., LL.D., Vice President for Graduate Development, and Dean of the Graduate School.

Samuel Edward Braden, Ph.D., Vice President, and Dean for the undergraduate Development.

Table of Organization, Indiana University School of Medicine, follows:(p. 5)

Chief Administrative Officers of the School of Medicine.

<u>Name</u>	<u>Age</u>	<u>Length of Time at Present Position</u>	<u>Highest Degrees with School and Dates</u>
John D. Wan Nuys	56	1939-Assistant in Medicine 1940-Assistant in Medicine and Medical Director 1947-Dean - School of Med. Deceased - February, 1964	A.B., Wabash Col. 1939 M.D., Indiana U. 1936
John J. Mahoney	47	1947-Assistant to Dean of School of Medicine 1951-Assistant Dean of School of Medicine 1958-Assoc. Dean of the School of Medicine	A.B., 1937; M.S., 1939 Ph.D., 1941 State U. of Iowa
Arthur D. Lautzenheiser	52	1940-Chief Accountant - Medical Center 1956-Senior Administrative Assistant-School of Med. 1960-Assistant Dean of the School of Medicine	B.S., Indiana U., 1935
Doris H. Merritt	40	1961-Director of Medical Research Grants and Contracts 1962-Assistant Dean for Medical Grants and Contracts	A.B., Hunter Col., 1944 M.D., George Washington U., 1952
Edmund J. Shea	51	1939-Asst. Administrator of Medical Center 1953-Administrator-Medical Center	A.B., University Col. (Dublin), 1935

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graph TD
    UA[UNIVERSITY ADMINISTRATION] --> DM[Dean Medicine]
    UA --> DN[Dean Dentistry]
    UA --> DNR[Dean Nursing]
    
    DM --> AD[Asst. Dean (Lambert) Gen. Adminis. Fiscal Matters - Development]
    DM --> DMS[Director, EMSI Pakistan (Headlee)]
    DM --> DMC[Dean Medical Center (Shea)]
    DM --> DCD[Deputy Director (Closs) Professional Matters Post Graduate Program]
    
    DN --> DA[Dean Administration]
    DN --> DO[Director Housing (McMillen)]
    DN --> ADM[Admissions Office]
    DN --> DCS[Director, Animal Colony (Closs)]
    DN --> ADMC[Assistant Dean Medical School (McKinley)]
    DN --> FSC[Faculty Salary (Parker) Comm. Student Expenses]
    DN --> ACP[Assistant Chief Allied Health Council, P. Program]
    DN --> DCCP[Director Combined Degree Program (Fadyen)]
    
    DMC --> P[Personnel]
    DMC --> I[Incharging]
    DMC --> A[Accounting]
    DMC --> B[Bldgs. Grounds]
    DMC --> NS[Nursing Service]
  
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The organizational chart for the University of Medicine and Dentistry of New Jersey, dated 1973, is structured as follows:

- UNIVERSITY ADMINISTRATION**
 - Dean Medicine**
 - Asst. Dean (Lambert) Gen. Adminis. Fiscal Matters - Development
 - Director, EMSI Pakistan (Headlee)
 - Dean Medical Center (Shea)
 - Personnel
 - Incharging
 - Accounting
 - Bldgs. Grounds
 - Nursing Service
 - Deputy Director (Closs) Professional Matters Post Graduate Program
 - Dean Dentistry**
 - Dean Administration
 - Director Housing (McMillen)
 - Admissions Office
 - Director, Animal Colony (Closs)
 - Assistant Dean Medical School (McKinley)
 - Faculty Salary (Parker) Comm. Student Expenses
 - Assistant Chief Allied Health Council, P. Program
 - Director Combined Degree Program (Fadyen)
 - Dean Nursing**

Таблицы, иллюстрирующие

There is no formal organization of the entire medical center. The Dean has direct charge of the University Hospitals. He is a member of the Deans' Committee of the Veterans Hospital; he deals directly with the administration of the General Hospital, or with the Deans of the School of Dentistry or Nursing as necessary.

Liaison with the local medical society is accomplished through meetings between the Dean and others, and the council of the society. At present, sixteen of the twenty members of this council are faculty members of the school. The Dean is invited to every meeting of the State Medical Society Council which meets monthly. There is also a Liaison Committee of the State Society. The current President of the Indiana State Society is an Associate Professor of Medicine on the faculty, and Chief of Service at the Marion County General Hospital. Both the local and state societies have been most helpful in their support of the school over many years.

There has been an alumni organization of the school since 1947, currently with more than 4,000 members. Special days are arranged annually, and contributions have been sought primarily for student loan funds.

Among the administrative activities, a noteworthy one is Dr. Merritt's effort to provide guidance and supervision for the entire research program. Extensive and helpful material is provided for all faculty members to assist in the securing of research grants. Dr. Merritt also has charge of research space allocations, and of compiling and describing the research program annually. Close liaison is maintained with the various granting agencies. The success of this effort is manifest in the immense support obtained.

COMMENT

The Dean of the School of Medicine seems to carry an extremely heavy administrative burden, and to have insufficient or no authority in his dealings with some of the institutions that comprise the medical center. A thorough study of these matters should be undertaken.

In view of the importance and outstanding nature of the combined degree program in Bloomington, the title of Assistant Dean might be appropriate for its director. This might also enhance communication between the Indianapolis and Bloomington programs, which did not always seem as close as it might be.

The Dean and faculty are to be commended for the fine relations that have been maintained with the local and state medical societies. This is especially noteworthy in that the transition to a sizeable full-time faculty has been accomplished in recent years, without apparent difficulty.

FACULTY

The faculty of Indiana University School of Medicine comprises all officers of instruction. It is not divided into a regular and clinical faculty. It is organized into the following departments:

1. Department of Anatomy
2. Department of Anesthesiology
3. Department of Biochemistry
4. Department of Dermatology
5. Department of Medical Economics
6. Department of Microbiology
7. Department of Neurology
8. Department of Obstetrics and Gynecology
9. Department of Ophthalmology
10. Department of Orthopedic Surgery
11. Department of Otorhinolaryngology and Bronchoesophatology
12. Department of Pathology
 - a) Section of Autopsy Service and Histopathology Laboratories
 - b) Section of Clinical Correlation and Research
 - c) Section of Clinical Laboratories
 - d) Section of Neuropathology
 - e) Section of Surgical Pathology
13. Department of Pediatrics
14. Department of Pharmacology
15. Department of Physiology
16. Department of Psychiatry
17. Department of Public Health
18. Department of Radiology
19. Department of Surgery
 - a) Surgical Experimental Laboratories
 - b) Section of Plastic Surgery
 - c) Subsection of Oral Surgery
 - d) Section of Neurological Surgery
 - e) Section of Proctology
20. Department of Urology

The general faculty of the University meets twice a year, primarily to hear reports from the various projects of the school and the major committees.

There is a general Faculty Council, to which the Indianapolis divisions of Indiana University elect two members. This Council meets twice a month in Bloomington. The Deans of Dentistry and Medicine are also voting members of this Council.

The Medical Advisory Council is the top governing body of the School of Medicine. It is made up of all the department chairmen plus six members of the faculty appointed by the Dean. It is regarded as advisory to the dean, but no action would be undertaken without its consent. This Council meets monthly.

THE MEDICAL COUNCIL

Van Nuys, John D., M.D., Dean of the School of Medicine, and Professor of Medicine, (Chairman). Deceased, February, 1961.

Andrew, Warren, Ph.D., M.D., Chairman, and Professor of Anatomy.

Arbogast, John L., M.D., Director of the Clinical Laboratory, and Professor of Clinical Pathology.

Ashmore, James E., M.D., Chairman, and Professor of Pharmacology.

Beamer, Parker, Ph.D., M.D., Chairman, and Professor of Pathology.

Bowman, Donald E., Ph.D., Chairman, and Professor of Biochemistry.

Brown, David E., M.D., Chairman, Otorhinolaryngology and Bronchoesophagology, and Professor of Otorhinolaryngology.

Campbell, John A., M.D., Chairman, and Professor of Radiology.

Close, Walter D., M.D., Medical Director of University Hospitals, Director of Postgraduate Medical Education, and Associate Professor of Medicine.

Culbertson, Clyde G., M.D., Professor of Clinical Pathology.

Garceau, George J., M.D., Chairman and Professor of Orthopedic Surgery.

Garrett, Robert A., M.D., Chairman, and Professor of Urology.

Hackney, Victor C., M.D., Chairman, and Professor of Dermatology.

Hickman, John B., M.D., Chairman, and Professor of Medicine.

Hooper, Samuel H., M.D., Chairman, and Professor of Pathology.

Kohlstaedt, Kenneth G., M.D., Professor of Medicine.

Lautzenheiser, Arthur D., B.S., Assistant Dean of the School of Medicine.

MacFadyen, Douglas A., M.D., Director of the Combined Degree Program in Medical Education, and Professor of Pathology.

Mahoney, John J., Ph.D., Associate Professor of Experimental Medicine, and Associate Dean of the School of Medicine.

Manion, Harold W., M.D., Professor of Otolaryngology.

Masters, Robert J., M.D., Professor of Ophthalmology.

Neilsen, Lyman T., M.D., Chairman, and Professor of Pediatrics.

Merritt, Doris H., M.D., Assistant Dean for Medical Grants and Contracts, and Assistant Professor of Pediatrics.

The Medical Council (Continued)

Moore, Donald F., M.D., Professor of Psychiatry

Nurnberger, John I., M.D., Director of the Institute of Psychiatric Research,
and Chairman and Professor of Psychiatry

Ritchey, James O., M.D., Distinguished Service Professor Emeritus of Medicine

Ross, Alexander T., M.D., Chairman, and Professor of Neurology

Selkurt, Ewald E., Ph.D., Chairman, and Professor of Physiology

Shea, Edmund Joseph, A.P., F.A.C.H.A., Administrator of the Medical Center

Shrigley, Edward W., Ph.D., M.D., Chairman, and Professor of Microbiology

Shumacker, Harris B., Jr., M.D., Chairman, and Professor of Surgery

Stoelting, Vergil K., M.D., Chairman, and Professor of Anesthesiology

Trusler, Harold M., M.D., Director of the Section of Plastic Surgery, and
Professor of Surgery

Wilson, Fred M., M.D., Chairman, and Professor of Ophthalmology

Wood, Donald E., M.D., Chairman, Department of Medical Economics, and
Associate Professor of Medicine

Because of the large size of the Medical Advisory Council, an Executive Committee has been developed, made up of a senior chairman of the pre-clinical departments, two other chairmen and one senior faculty member from the preclinical departments, the Chairman of Medicine, Surgery, and Psychiatry, and one additional senior clinical faculty member. The Dean presides at meetings of this committee, which are usually held weekly, and the Associate and Assistant Deans are included.

EXECUTIVE COMMITTEE

Van Hysc, John D., M.D., Dean of the School of Medicine, and Professor of
Medicine, (Chairman). Deceased, February, 1964

Beamer, Parker, Ph.D., M.D., Chairman, and Professor of Pathology

Bowman, Donald E., Ph.D., Chairman, and Professor of Biochemistry

Hickam, John B., M.D., Chairman, and Professor of Medicine

Huber, Carl P., M.D., Chairman, and Professor of Obstetrics and Gynecology

Lautzenheiser, Arthur D., B.S., Assistant Dean of the School of Medicine

Mahoney, John J., Ph.D., Associate Dean of the School of Medicine, and
Associate Professor of Experimental Medicine

Executive Committee (Continued)

Merritt, Doris H., M.D., Assistant Dean for Medical Grants and Contracts, and Assistant Professor of Pediatrics.

Murnberger, John I., M.D., Director of the Institute of Psychiatric Research, and Chairman and Professor of Psychiatry.

Shrigley, Edward W., Ph.D., M.D., Chairman, and Professor of Microbiology.

Shumacker, Harris B., Jr., M.D., Chairman, and Professor of Surgery.

The Dean appoints the members of the standing committees of the faculty, which include the following:

FACULTY COMMITTEES

1. Admissions Committee, James O. Ritchie
Professor Emeritus of Medicine, Chairman
Twenty-five members including Associate Dean Mahoney
2. Education, Associate Dean Mahoney, Chairman
Thirteen members including Dean Van Nuys. This committee is made up of
Department Chairmen and deals with promotions.
3. Basic Science Council
James Shrigley, Chairmen and Professor of Pharmacology, Chairman.
Members: The Chairmen of the Departments of Anatomy, Pathology, Biochemistry,
Physiology and Microbiology.
4. Clinical Council
John Murnberger, Chairmen and Professor of Psychiatry, Chairman.
Members: The Chairmen of the Departments of Pathology, Otorhinolaryngology,
Radiology, Orthopedic Surgery, Urology, Dermatology, Neurology, Public
Health, Obstetrics and Gynecology, Pediatrics, Internal Medicine, Surgery,
Anesthesiology and Ophthalmology.
5. Library Committee
Richard B. Lee, Chairman and Professor of Neurology, Chairman.
Twelve members.
6. Committee on Post-Graduate Courses, Walter D. Close, Medical Director
of University Hospitals and Director of Post-Graduate Medical Education,
Chairman. Six members including Associate Dean Mahoney.
7. Research Isotope Committee, John Benner, Professor of Biochemistry,
Chairman. Eight members.
8. Advisory Committee for Animal Colony, Joseph Gais, Associate Professor
of Pathology, Chairman. Thirteen members including Mr. Lautzenheiser.
9. Editorial Board of the Quarterly Bulletin, Jacob Benner, Associate Professor
of Surgery, Editor. Eight members including Associate Dean Mahoney.
10. Committee on Student Affairs, Parker Beamer, Professor of Pathology,
Chairman. Four members.

11. Committee on Fellowships and Scholarships
Edward Ashmore, Chairman and Professor of Microbiology, Chairman.
Seven members including Doctor David McKinley, Student Personnel
Officer who serves as Secretary.
12. Committee on Medical Education for National Defense
John Mahoney, Associate Dean and MEND Coordinator, Chairman. Four
members.
13. Committee on Graduate Studies in Medical Science
James Ashmore, Chairman and Professor of Pharmacology, Chairman,
seven members.
14. Clinical Lectures Committee
John Campbell, Chairman and Professor of Radiology, Chairman, five
members.

In addition to these, there is an administrative committee of which the Dean is Chairman, having to do with affairs of the hospitals, a Deans Committee for the Veterans Hospital, and the usual hospital staff committees.

The Faculty of the Medical School has not adopted a set of bylaws nor developed a statement of objectives.

Department heads are selected through the use of Ad Hoc Committees, appointed by the Dean. The recommendation of the committee is transmitted to the Vice President and Dean of Faculties.

The selection of members of the faculty other than Chairmen is a departmental obligation. In several of the larger departments, the Chairman may appoint a committee to assist him.

Full-time faculty members in the basic science department may serve as consultants and retain fees with the agreement of the Chairman.

The term "Geographical Full-Time" includes those (faculty members) in the clinical departments who limit their activities to the University portion of the Medical Center and its affiliated units. While all fully salaried clinical faculty members may engage in limited private practice upon referral on a "Geographically full-time" basis, and retain the fees charged, in actual practice this only amounts to a small volume of faculty activity. The major exception arises in the Department of Surgery, where there is a limitation of eight beds each for two members of the department. Otherwise there are no restrictions or arrangements regarding handling of income from private patients.

Policies in regard to tenure and leaves of absence conform with usual standards.

Title	FACULTY		No. Volunteers
	No. Full-Time	No. Part-Time	
Professors	50	9	21
Associate Professors	50	9	50
Assistant Professors	40	21	97
Instructors	27	4	31
Associates			12
Assistants			123
Lecturers		6	
Total	173	49	334
Grand Totals			607

CONCLUSIONS

The faculty generally manifested high morale and confidence in the Medical School and University administration.

The development of a statement of the school's goals and objectives would be merited, as well as the preparation of a set of bylaws for the school.

While the committee structure is extensive, it did not seem active. In this regard it is of interest to note that the most active group, the Basic Science Council, formed spontaneously and recently, apparently in response to urgent needs. The present administrative organization is heavily burdened by the large size of the classes and the immensity of the total Medical Center. Consequently, there is need for additional leadership to develop cohesive academic policy and philosophy especially in the clinical area. A systematic review of the curriculum and enhancement of the mechanism for effecting curricular changes, and for study of student evaluation policy and mechanisms should be undertaken. Additional support for administrative structure and possibly reorganization of, and a restudy and reactivation of the mechanism of faculty-administrative activity is urgent.

The development of a more specific plan for the control and utilization of private patient fees would seem desirable.

BUDGET AND FINANCES

Income:

General University Funds	\$2,100,908
Tuition	353,006
National Funds for Medical Education and NIH Education and Research Foundation	<u>30,000</u>
Total	\$3,868,304
From outside agencies for research and special projects	\$5,600,215
For operation of hospital, all from patient fees	\$7,304,000

Budget:

Administration	\$ 169,044
University Administration	171,321
Buildings and Grounds	755,423
Equipment	231,500
Salaries	2,283,000
Insurance and retirement	<u>273,216</u>
Total	\$3,846,304

The budget is submitted to the Vice President and Treasurer of the University.

Salary Scale for full-time faculty:

	Basic Science Departments			Clinical Departments		
	Maximum	Minimum	Average	Maximum	Minimum	Average
Professor	\$24,000	\$12,500	\$17,840	20,000	12,000	\$17,500
Associate Professor	19,000	9,000	11,544	16,000	9,000	11,000
Assistant Professor	15,000	7,800	9,253	13,000	7,600	9,000
Instructor	10,000	7,500	8,500	11,000	5,400	7,500

Fringe benefits include a retirement plan with the Teachers Insurance and Annuity Association. This is financed by University contribution of 11% of the first \$4,000 of salary and 15% above this. Health, life and accidental death insurance, group hospital insurance and major medical expense insurance also are available.

It was indicated that in addition to the current budget the University is committed to the addition of approximately 15 full-time faculty members annually for five years.

Comments:

The School of Medicine is to be commended for its increasing support of the National Cancer Institute which has kept pace with national standards. The increase in the funds secured from outside agencies for research and special projects is noteworthy.

STUDENTS

Associate Dean Mahoney is in charge of student affairs. In this work he is assisted by Dr. David McKinley who is Student Personnel Officer and is charged with all matters affecting the individual student. Also by Mr. Charles Peak, faculty secretary, who is the staff adviser for students with financial problems. The student affairs of the combined degree program are handled by its director, Dr. Macfarlan.

The admissions office is located in Bloomington and has been operated by the same excellent staff for many years. Dr. Mahoney spends one day each week on the Bloomington campus to direct the work of the admissions office and to counsel premedical students at the University.

The present first year class numbers 216; 201 in Indianapolis and 15 in Bloomington.

First year classes in recent years have numbered as follows:

FIRST YEAR CLASSES

Year	Indianapolis	Combined Degree Program (Bloomington)	Totals
1963	201	15	216
1962	188	14	202
1961	188	8	196
1960	180	8	188
1959	176	6	182
1958	160	-	160
1957	158	-	158
1956	159	-	159
1955	155	-	155
1954	154	-	154

The present first year class attended the following colleges:

COLLEGES ATTENDED BY 1963 CLASS

Indianapolis

- 3 - Ball State Teachers College
- 2 - Butler University
- 15 - DePauw University
- 1 - Earlham College
- 3 - Evansville College
- 4 - Goshen College
- 51 - Indiana University
- 3 - Indiana Central College
- 5 - Indiana State College
- 3 - Manchester College
- 3 - Marian College (Indianapolis)
- 1 - Notre Dame
- 18 - Purdue University
- 1 - St. Joseph's College (Bennsboro, Indiana)
- 1 - St. Mary-of-the-Woods College

Indianapolis (Continued)

- 1 - Taylor University (Upland, Indiana)
- 12 - Wabash College
- 1 - Asbury College (Kentucky)
- 1 - Ballarmino College (Kentucky)
- 1 - Beloit College
- 1 - Bethel College (Minnesota)
- 1 - Blackburn College (Illinois)
- 1 - Bowling Green State University (Ohio)
- 1 - Brown University
- 1 - California, University of
- 3 - Chicago, University of
- 2 - Cincinnati, University of
- 1 - Cornell College (Iowa)
- 1 - Eastern Mennonite College (Virginia)
- 1 - Georgia Institute of Technology
- 1 - Greenville College (Illinois)
- 1 - Illinois, University of
- 2 - Louisville, University of
- 1 - Loyola University (Illinois)
- 1 - Lycoming College (Pennsylvania)
- 1 - Montana State University
- 1 - Ohio University
- 3 - Ohio Wesleyan
- 1 - Oklahoma, University of
- 4 - Olivet Nazarene College (Illinois)
- 1 - Pennsylvania State University
- 1 - Russell Sage College (New York)
- 1 - St. Edward's College (Texas)
- 1 - St. Michael's College (Vermont)
- 1 - St. Procopius College (Illinois)
- 1 - Tennessee A & I
- 1 - Tuskegee Institute
- 1 - Washington University (St. Louis)
- 2 - Wheaton College
- 1 - Wisconsin, University of
- 1 - Wittenberg College

Combined Degree Program in Bloomington:

- 1 - DePauw University
- 7 - Indiana University
- 2 - Purdue University
- 1 - Valparaiso University
- 1 - Wabash College
- 1 - Central State College (Oklahoma)
- 1 - Eureka College (Illinois)
- 1 - Southern California, University of

The geographical distribution of the places of residence of the first class is as follows:

GEOGRAPHICAL DISTRIBUTION 1963 CLASS

Indianapolis

178 - Indiana
1 - Alabama
1 - California
1 - Cyprus
1 - Delaware
1 - Ethiopia
1 - Hong Kong
1 - Illinois
1 - Iraq
1 - Kentucky
1 - Massachusetts
2 - Michigan
1 - Minnesota
1 - Mississippi
1 - New Hampshire
1 - New York
1 - Ohio
2 - Pennsylvania

Combined Degree Program in Bloomington:

11 - Indiana
1 - Illinois
1 - Nebraska
1 - New York
1 - Ohio

Number of Applicants in recent years:

<u>Total</u>	<u>In State</u>	<u>Year</u>
519	341	1961
603	334	1962
695	337	1963

At the time of the survey there had been 980 applications, 430 in State and 250 eligible out of state. To be considered eligible an out of state applicant must have an average of 2.8 on a 4 point scale. Three hundred ineligible out-of-state applicants had also applied.

The cut-off point for in-state applicants is 2.5, although in the past year the lowest average of an accepted applicant was 2.7.

Application procedures are thorough. All applicants are interviewed by at least one and often by two teams of two interviewers. Primary attention apparently is paid to the college record, somewhat less to the MCAT score. For some years the mean MCAT score of the entering class has been around 500.

Scholarship funds are extremely limited, amounting to only \$2,500 of the school's own funds. Loan funds amount to \$51,718.

An extensive student health service is provided both in Indianapolis and in Bloomington. Large student unions are available on both campuses providing all types of services. Housing, both for single and for married students, is available on both campuses.

This year's freshman class is being assigned to members of the faculty who have volunteered to act as advisors. In addition, as mentioned above, Associate Dean Mahoney, Dr. McKinley and Mr. [redacted] will serve in this capacity.

Student organizations include a Senior Council, a group elected by the senior class representing the entire student body, which meets monthly with the Dean. Each class elects officers who advise the Associate Dean, Student Personnel Officer and Faculty Secretary on a monthly basis. There is an active chapter of the SAMA, and four medical fraternities, coordinated by an intra-fraternity council. The Indianapolis student union has a board to which two medical students are elected.

Eighty-two fellowships and assistantships are available to provide an elective quarter and research opportunities for students.

Examination policies are departmental except that senior students take comprehensive examinations administered by the clinical departments. The services of the University Testing Service are available for machine scoring and analysis and the like.

Grading and promotion policies conform with usual standards. The Education Committee has charge of promotions.

Extensive efforts are made through the distribution of photographs and other means to acquaint the faculty with the students as closely as possible. Even so, despite the excellent and thorough admissions and counseling program the attrition rate has been somewhat high as indicated in the following table.

Attrition, Indiana University School of Medicine

	1958-59	1959-60	1960-61	1961-62	1962-63
Enrolled	200	177	153	140	188
Withdrawn	(1 dead) (2 Health)	(1-illness 1-illness)			(1 transfer,
	10	7	1	1	8
Failure	8	15	15	14	11
Withdrawn	3	3	2	10	2
Total					
Attrition	21	25	21	25	21
Percentage	10.5%	14.1%	13.7%	17.9%	11.2%

	Sophomores			
	1959-60	1960-61	1961-62	1962-63
Enrolled	142	155	158	163
Withdrew	(2 grad)		(1 ill)	(Transfer)
Failure	2	0	1	1
Withdrew "ill"	3	6	1	6
Withdrew "grad"	0	0	0	0
Total				
Attrition	5	6	2	7
Percent				
Attrition	3.5%	3.9%	2.2%	4.0%

	Juniors			
	1960-61	1961-62	1962-63	
Enrolled	138	142	164	
Withdrew	(1 health, 1 grad)		(illness)	
Failure	2	0	1	
Withdrew "ill"	0	1	0	
Total				
Attrition	3	0	3	
Percent				
Attrition	2.2%	0	1.8%	

	Seniors			
	1961-62	1962-63		
Enrolled	153			
Withdrew "ill"	0	0		
Failure	1	0		
Total				
Attrition	0	0		
Percent				
Attrition	0%	0%		

Internship advice is given primarily by a senior physician with whom the students sign up late in the junior year. This physician has the responsibility of writing the formal letter of recommendation from the school. Graduates are requested to provide information concerning their internships, and a file is kept in the reserve book section of the library. A hospital day is held each year when hospitals located in the State of Indiana are invited to send representatives and exhibits to the school. Of the 153 members of the class of 1963 who are interning, 60 are in hospitals in Indiana, 25 of them in the hospitals at the Medical Center.

The team met with a number of students, including one who had completed his first two years at Bloomington. All were well satisfied with their education.

The Bloomington student stated that he had felt well prepared for the transition of entering his clinical years.

All made excellent personal impressions.

COMMENT

Indiana University is to be congratulated for its sense of responsibility in seeking to provide a sufficient number of opportunities for citizens of Indiana wishing to study medicine. It is felt, however, that the class at Indianapolis should not be expanded further, even upon completion of the additional facilities proposed and with the additions to the faculty contemplated. Expansion of the Bloomington program to the proposed number of 30, upon completion of the renovation of the facilities would seem most desirable.

In view of the thorough admissions and counseling program, the high attrition rate seems unfortunate. A study of examination procedures and policies is in order.

Scholarship funds are inadequate, and loan funds far from abundant.

BASIC FACILITIES

Indianapolis: 412,000 square feet
Bloomington: 55,000 square feet
Total 467,000 square feet

The following buildings are grouped together on the Indianapolis campus:

1. Medical Science Building. Completed 1958. Area: 213,000 sq. ft. Contents: Basic Science Departments, library, central animal quarters, dental student laboratory.
2. Emergent Hall, the original School of Medicine building in Indianapolis. Area: 67,000 sq. ft. constructed 1918; renovated, 1961. Present contents: Illustration, Neurology, Neuropathology, Surgery, Neurosurgery, Urology, Orthopedic Surgery and Medicine.
3. Fessler Hall. Area: 57,000 sq. ft. Constructed in 1938 as headquarters for State Board of Health. Transferred to the University in 1950. Contents: Anesthesiology, Dermatology, offices of the Dean and University Hospital administration.
4. Administration Building. Area: 17,000 sq. ft. Constructed 1947. Contains: Public Health, Division of Allied Health Sciences.
5. Bell Residence. Constructed 1928. Contents: Nursing, Occupational Therapy and Physical Therapy Programs.

BLOOMINGTON

1. Evans Hall. Area: 55,000 sq. ft. Constructed 1937. Contents: Anatomy and Physiology Department of the College of Arts and Sciences, Offices of the combined degree program, and the admissions office of the School of Medicine.

All the buildings at Indianapolis are connected by tunnels and are grouped together in an efficient manner. The Bloomington building is located in the central part of the campus.

An addition to the medical science building is planned which will enlarge the existing departments, and the library. This addition will permit a new honors program in the basic sciences to be offered on a approximately one-third of the first and second year classes. A clinical research building, to be located adjacent to the University Hospital also is contemplated.

BUDGET

Head Librarian: Mary June Laatz	Budget: Personnel	\$ 69,000
Professional Staff: Full-time 6	Books	40,000
Non-professional	Expense	4,500
Part-time 3	Total	\$113,500.
	Additional Funds:	\$ 2,200.

Library (continued)

Total volumes: 64,631.

Serial titles currently received = 1,421.

The Librarian is responsible to the Dean in matters relating to the Medical Center and to the University Librarian regarding general library procedures. The library serves the medical and nursing schools, as there is a separate dental library.

There is seating space for 172.

Reference and bibliographical services are provided for the faculty and for all physicians in the state without charge. Photocopies are sent at cost upon request.

The professional staff of the library scans all serials as they are received and notified Medical Center staff members of articles in which they may be interested. This work is done in regard to new books.

DEPARTMENT OF MEDICAL ILLUSTRATION

Professional staff: Six, three in photography and three in art. Clerical staff: two.

This department is well equipped for microphotography, film production and all of the usual services of an illustration department.

ANIMAL QUARTERS

Animal quarters at Indianapolis are located as follows: Medical Sciences building 10,000 sq. ft. Reilly Hospital, 4,500. Mason Hall, 2,700. Psychiatric Research, 3,400. Total space: 20,800 sq. ft.

All areas in the Medical Science building and Reilly Hospital are air-conditioned. Heating and sanitary facilities are available. All are well maintained.

With the exception of the quarters in the Psychiatric Institute, all are centrally air-conditioned. Dr. Cans, a graduate veterinarian and member of the Department of Microbiology is in charge and reports to the Associate Dean. There is a faculty advisory committee on Animal Care.

The total staff consists of three supervisors and fifteen full time and part-time employees.

OTHER SERVICES

The Medical Center operates a central print shop and a computer facility primarily for the use of hospital records available to the staff. There are several other shops on campus, the main one being operated by the Department of Physiology.

COMMENTS

The Physical Plant, if rather heterogeneous in appearance, is conveniently arranged and well maintained. There would seem to be great need for the proposed addition to the Medical Science building.

Comments (Continued)

The library is offering a very thorough and excellent program, and is more than satisfying present requirements. The expressed need for additional carrels has been justified; future space requirements for the library further support need for the proposed addition to the Medical Science building. The special attention paid to informing the Faculty of new acquisitions, and to providing rapid photocopy service for student and faculty, is most commendable.

The Medical Illustration Laboratory is probably one of the best equipped on the campus, and provides wide and effective service.

The Animal quarters are excellent and well run, and meeting present demands.

CLINICAL FACILITIES

1. University Hospitals

The clinical facilities owned and operated by the University comprise three hospitals, all located among the Basic Science Buildings described previously.

- a. The Lomb Hospital. The original building was constructed in 1914, and an addition was added in 1936. This houses beds for adult medicine and surgery, the Radiology Department for all hospitals and an outpatient department.
- b. Coleman Hospital. This was constructed in 1928, and provides beds for Obstetrics and Gynecology.
- c. The Rotary Unit. This was constructed as a convalescent hospital in 1931. At present it houses the Ophthalmology Department, the Audiology and Speech Clinic and a Cerebral Palsy Clinic.
- d. The James Whitcomb Riley Hospital. This was constructed in 1924. There were additions in 1950, 1953, and another addition presently is under construction. This hospital contains all pediatric beds.

All these hospitals are owned by the University, and directly operated by the Medical School. The Dean serves as Chief of the Medical Staff. In the operation of the hospital, he is assisted by Mr. Edward Shaw, who is Administrator of the University Hospitals, by Dr. Walter Chase, Medical Director of the University Hospitals and by Mr. Elton Bailey, Assistant Administrator with whom, in the absence of Mr. Shaw, several members of the group visited.

In all, these hospitals contain 522 beds and 57 bassinets. The beds are divided as follows:

Medicine	112	Obstetrics	15
Surgery	69	Gynecology	36
Pediatrics	83	Surgery Spec.	159

There were 15,041 admissions in the past year with an average length of stay of 3.4 days. The total number of outpatient visits in 1962-63 was 82,652. Approximately two-thirds of the patients pay for their own hospitalization, about half private and half state. One-third of the patients are paid for by the Welfare Department. The normal per diem rate is \$11.00. All patients must be referred by outside physicians.

The following examinations are offered:

Straight Medicine	71
Straight Surgery	16
Pediatrics	8
Pathology	4
Dental	1
Total	100

Thirty-eight interns presently are on duty. Residencies are as follows:

Anesthesiology	12	Pediatrics	8
Internal Medicine	20	" - Cardiology	0
Neurology	6	Plastic Surgery	3
Neurosurgery	5	Psy. & Child Psy.	16
Obs. & Gynecology	12	Radiology	14
Ophthalmology	15	Surgery	16
Orthopedic Surgery	7	Urology	1
Otolaryngology	8		
Pathology	10	Total	100

The hospital pays the salaries of the interns and the first and second year residents. In all, the hospital pays 65% of the hospital salaries and the school 35%. The Salaries of the Radiology, Pathology and Anesthesiology Departments are all paid through the school rather than the hospital budget.

2. Carter Memorial Hospital.

This is a psychiatric hospital owned by the State and operated by the Department of Mental Health. It is located to the west and directly adjacent to the University Hospitals. While there are no written articles of affiliation with the Medical School, the Dean and the Chairman of the Psychiatry Department are consulted routinely in terms of policy and educational program and staff appointments. All appointments are made under the State merit system, and the medical staff and heads of several departments have teaching appointments from the Medical School. Dr. Donald F. Moore, Professor of Psychiatry, is Medical Director of the hospital. It contains 235 beds, the average length of stay is four months. Internships are offered; eleven residents in psychiatry are in training.

The hospital is used by medical students in the sophomore course in psychopathology, the junior clerkship and the junior or senior elective clerkship.

The psychiatric research building, housing the Institute of Psychiatric Research, owned jointly by the State Department of Mental Health and the Medical School, is located adjacent to the Carter Hospital. It was completed in 1956 and contains 38,000 square feet of space devoted to the research activities of the Department of Psychiatry.

3. Marion County General Hospital.

This hospital, owned by the county, and operated by the Health and Hospital Corporation of Marion County, is located directly north east of the University Hospitals.

Members of the group met with Dr. Arvine Popplewell, Instructor in Medicine, and Medical Director of the Hospital, and Dr. George W. Fisher, Associate in Medicine and Director of Medical Education.

There are various terms of affiliation between the school and the hospital and the school makes an annual payment of \$25,000 to the hospital for use of its facilities. While the hospital has an open staff, all appointments to the teaching staff are approved jointly by the Dean and the Medical Director of the hospital. Service chiefs at the hospital are selected by the hospital staff.

The hospital contains 771 beds and 69 bassinets. In the last year there were 13,687 admissions for an average length of stay of 22.6 days. 128,332 out-patient visits were made.

Forty rotating internships are offered of which 19 were filled in the past year. One hundred thirty-five residency positions were budgeted in all the usual specialties, with 98 of them filled.

The hospital is utilized in the teaching programs of essentially all the clinical departments, both in in-patient and out-patient aspects.

About 75% of the staff of the hospital are on the faculty. 75% of the patients admitted to the hospital are private, and for the most part admitted by private physician staff members. All salaried staff members of the hospital are full-time and do not retain private patients' fees.

The hospital is to be enlarged shortly to 900 beds.

4. Veterans Administration Hospital.

This hospital is located two blocks directly west of the University Hospital. It is operated in the usual manner by the Veterans Administration with a Dean's Committee composed of Indiana Medical Society members including the Dean.

There are 727 beds. There were 7,680 admissions to the hospital in the past year. The average length of stay is 32 days, including services for psychiatry and tuberculosis.

Twelve internships are offered and twelve interns are on duty. Twenty-eight residents are on service.

The hospital is utilized by essentially all clinical departments for clinical in-patient teaching activities. In Surgery, some specialty clinics are also utilized.

5. Bloomington Hospital.

This 100 bed general hospital presently has a limited extension of its teaching program in general and clinical pathology. Teaching facilities are well limited by the absence of a morgue.

This hospital is to be enlarged shortly to 200 beds with full facilities. No internships or residencies are offered.

CONCLUSIONS

The University Hospital is an institution of being well provided, and providing a high level of service for the private patient. It is understood that these patients will be transferred to the facilities of the new University Hospital. The University is ready for construction.

The University is fortunate in having available and immediately at hand extensive and excellent clinical facilities. This is the case in Indianapolis, and apparently to some extent also in Bloomington. These affiliations should be nurtured and integrated to the fullest degree, thus obviating the necessity for large expansion of the school's own facilities.

There is always the possibility of a serious problem arising through the failure of the State to appropriate any funds to the school for patient service activities. As referred to in the section under budget, at present a large part of the Medical School teaching budget is devoted to patient service. In the future, as local medical facilities continue to improve, a higher proportion of patients presenting complex and hence expensive problems may be expected to be referred to the University Hospitals. Consequently, it will become the more difficult to support the hospital from patients fees, and an ever greater proportion of the teaching budget will have to be diverted to patient service.

Under these circumstances, replacement and renovation of clinical facilities, and provision of more certain financial support, will have to merit a higher priority than extensive additions to them.

To the visitor, some confusion in nomenclature arises through the designation of the University owned Hospitals, as the "Indiana University Medical Center" leaving no general term applicable to the entire complex of hospitals in Indianapolis.

For purpose of this report, the hospitals owned by the University are termed "University Hospitals." This is suggested as the most appropriate name, leaving the selection of a designation for the entire Medical Center to the four institutions involved. Of course the future addition of the law and business school will further complicate semantics.

OUTLINE OF CURRICULUM

FIRST YEAR

<u>Subject</u>	<u>No. of Lecture Hours</u>	<u>No. of Laboratory Hrs.</u>	<u>Other Hours</u>	<u>Total Hours</u>
Gross Anatomy	35	210	37 (Conf.)	282
Histology	38	96	---	134
Neuroanatomy	22	66	---	88
Biochemistry	96	136	61 (Conf.)	293
Cell Biology	51	--	32 (Conf.)	86
Physiology	118	138	51 (Conf.)	307
Psychiatry	23	--	---	23
Total				1,213

SECOND YEAR

Clinical Pathology	24	69	---	93
General Pathology	96	168	72 (Conf.)	336
Physical Diagnosis	70	--	46 (Clinic)	116
Medical Clinic	25	--	---	25
Medical Conference	--	--	15 (Conf.)	18
Parasitology	17	33	---	50
Microbiology	55	112	30 (Conf.)	203
Neurodiagnosis	12	---	---	12
Obstetrics and Gynecology	13	---	---	13
Pharmacology	84	77	30 (Conf.)	197
Psychopathology	48	---	---	48
Clinical Psychopathology	--	---	36 (Clinic)	36
Preventive Medicine	24	---	---	24
Total				1,171

THIRD YEAR

<u>Subject</u>	<u>Lecture Hrs. (1)</u>	<u>Clerkship Hrs. (2)</u>	<u>Other Hours</u>	<u>Total Hours</u>
Anesthesiology	11	--	---	11
Dermatology	14	--	---	14
Pathology	--	--	20 (CPC)	20
Medical Advice	7	--	---	7
Medicine	103	280	---	383
Neurology	24	--	---	24
Obs. & Gynecology	52	390	---	442
Ophthalmology	11	--	---	11
Otolaryngology	22	--	---	22
Pediatrics	91	150 (2)	---	241
Psychiatry	--	150 (2)	---	150
Public Health	15	--	---	15
General Surgery	104	280	---	384
Urology	24	150 (3)	---	174
Plastic Surgery	--	150 (3)	---	150
Total				1,766

(1) - Lecture or "all-class" Clinic

(2) - Students elect either one month of Psychiatry or Pediatrics Clerkship as

- part of "Medicine" Quarter.
- (3) - Students take either one month of Urology or Plastic Surgery Clerkship as part of "Surgery" Quarter.

FOURTH YEAR

<u>Subject</u>	<u>No. of (1) Lecture Hrs.</u>	<u>No. of (2) Clkshp. Hrs.</u>	<u>Other Hrs.</u>	<u>Total Hours</u>
Pathology	--	--	38	38
Medical Economics	8	--	--	8
Medical Jurisprudence	6	--	--	6
Medicine	50	500	--	550
Neurology	--	80	--	80
Obs. & Gynecology	52	--	--	52
Pediatrics	53	240	--	293
Psychiatry	--	160	--	160
Radiology	50	--	--	50
General Surgery	51	160	--	211
Anesthesiology	--	80	--	80
Ophthalmology	--	40	--	40
Otolaryngology	--	40	--	40
Neurosurgery	--	160 (3)	--	160
Orthopedic Surgery	--	160 (3)	--	160

Total

1,268

- (1) - Lectures or "all-class" clinics.
- (2) - Night Call and week-end call not included.
- (3) - Students take one month of Neurosurgery or Orthopedic Surgery as part of the "Surgery" Quarter.

The planning and evaluation of the Curriculum are responsibilities of the Basic Science Council and the Clinical Council. Proposed changes are studied by these councils, and if approved are submitted to the Academic Committee and Medical Council for final discussion and approval.

The teaching schedule is divided into three quarters in each year. There is a free summer quarter the first and second year. The third and fourth years are both four quarters in length, but one quarter of each is a vacation period while the student may devote as he wishes, but frequently utilizes for elective study. Six hours of lecture are held each day beginning at noon throughout the third year, and six hours of lecture or other class exercises weekly are scheduled the Senior Year.

In addition to the combined degree program in Bloomington, two special modifications of the curriculum are available in Indianapolis. Specially qualified students may enroll simultaneously in the Medical and Dental Schools in a program leading to an M.D. degree requiring one additional year just as in Bloomington. "Joint" programs are available in most of the pre-clinical departments to a very limited number of well-qualified students, permitting individual study. The Departments of Microbiology and Pharmacology cooperate in a combined lecture program in which the student may elect to be in either Department for an initial required basic program in each.

COMMENT

With the exception of these special programs, the routine curriculum would seem tightly scheduled, permitting little time for individual study. The two hours of required lecture at mid-day throughout the third year must interfere to a considerable extent with clinical case work.

The arrangements of clerkships generally would merit study to reduce fragmentation, and permit long assignments, especially in the out-patient area.

No time is available during the first and second years for the student to avail himself of the large number of elective courses that are scheduled.

It is to be hoped that the proposed addition to the Public Science Laboratories, which will permit a great expansion of the research program, may be undertaken as soon as possible. Further study of the curriculum should be undertaken so that the advantageous aspects of an honors type of program can be introduced into the general curriculum. Many faculty members interviewed spontaneously suggested that changes in the manner of instruction above would be most desirable.

JOINT COMBATSHIP FOR P. 100 (U.S.)

Section	Summer	Fall	Winter	Spring
I	Med.	Med.	Med.	Med.
II	Med.	Med.	Med.	Med.
III	Med.	Med.	Med.	Med.
IV	Med.	Med.	Med.	Med.

TEMPERATURE COMBATSHIP FOR P. 100 (U.S.)

Section	Summer	Fall	Winter	Spring
I	Med.	Med.	Med.	Med.
II	Med.	Med.	Med.	Med.
III	Med.	Med.	Med.	Med.
IV	Med.	Med.	Med.	Med.

THE COMBINED DEGREE PROGRAM IN BLOOMINGTON

At the time of the removal of the first year of the Medical School from Bloomington to Indianapolis, it was considered regrettable that this might sever the opportunities for a close association between the school and the many departments of the University not located in Indianapolis. To maintain this association and to provide an opportunity for medical students to pursue in depth studies in other fields, the combined degree program was devised, and has been in operation for four years.

Douglas A. MacFadyen, M.D., 1931 University of Toronto, is Director of the program.

It is housed in the former Medical School building on the Bloomington campus; at present, this is being remodeled extensively. Initially the program was in part supported by a grant from the Commonwealth Fund, but now entirely through University Funds.

The program is normally of three years duration, covering the first two years of Medical School and one year (thirty semester hours) of graduate study. Medical School tuition is charged for two years, and graduate school for one. To enhance the opportunities for graduate study, the clock hours of the medical courses have been reduced to two-thirds of those required in Indianapolis. Students need not confine their studies to the graduate school, but may register in any school of the University, as for example the Law School. The M.S. degree is ordinarily granted by the Graduate School upon completion of the three years of the program.

Students apply for the program subsequent to their admission to the Medical School. To date, it has proven possible to accommodate all applicants: the largest number to be accommodated, upon completion of the present renovation of facilities, will be thirty.

A review of the medical courses taught at Bloomington follows:

1. Anatomy and Physiology. These courses are taught by the combined Department of Anatomy and Physiology of the College of Arts and Sciences. Professor Robinson is Chairman of this department. William C. Reed, and Emanuel Bogdanove, Associate Professors of Anatomy, are in charge of teaching Anatomy, and Howard Rostorfer, Professor of Physiology, of the latter. All are members of their respective departments in Indianapolis as well as the Combined Department in Bloomington. Facilities, both for teaching and research, are excellent, and the teaching laboratories presently are being remodeled.
2. Biochemistry. This course is taught in the Chemistry Department of the College of Arts and Sciences by two faculty members holding joint appointments.
3. Microbiology is taught similarly through the Bacteriology Department. Professor Weinberg is in charge.
4. Pharmacology. Two members of the Department of Pharmacology of the Medical School teach in Bloomington. Professor Lyle Beck is in charge.

5. Pathology. Four members of the Medical Faculty teach pathology. These include Professor Douglas Mac Fayden, in charge of the entire program, Professor Joseph McManus, and Assistant Professor Anthony Pizzo, who is pathologist of the Bloomington Hospital, and serves as a volunteer. Clinicians practicing in Bloomington also assist them in offering the clinical aspects of the second semester of the pathology course, into which clinical material on the mechanisms of disease is integrated. Autopsies are written up by two students, who review all aspects of the case, and present it to the group. A clinical discussion is included.

Autopsies presently are done in local funeral homes, but will be carried out in the hospital when it is enlarged.

Material for laboratory diagnosis is obtained from the hospital.

6. Clinical Diagnosis. At present Physical Diagnosis is taught in Indianapolis, the students traveling there in a group. A group of local physicians in conjunction with the pathologist is devising a plan to permit the full teaching of laboratory and clinical diagnosis in Bloomington.

Separate examinations from those in Indianapolis are given in these courses. Various methods are used, among them the preparation of papers.

COMMENT

It was possible to meet with Vice President Ashton, Dean of the Graduate School, and doctors, MacFayden, McManus, Rostorfer, Beck and Pizzo while in Bloomington.

It was evident that administrative arrangements between the Combined Degree Program and the Graduate and other Schools are excellent.

The group met with several students participating in the program; all were well satisfied and appreciative and seemingly making the most of the special opportunities they were enjoying.

It is to be hoped that the new Bloomington Hospital will be completed shortly, thus enhancing the teaching of Pathology, and eliminating the necessity of conducting the Physical Diagnosis course in Indianapolis. Full utilization of the talents of the physicians practicing in Bloomington is urged.

It is noted that no teaching in the behavioral sciences is included. Such would seem desirable, and could presumably readily be arranged through the appropriate University departments.

As referred to previously, designation of the Director of the Combined Degree Program as Assistant Dean would recognize its importance. This well conceived and executed program is worthy of wide attention and public emulation. It is an example of Medical School expansion which might be adopted in many other locations. For a large school such as Indiana University, it provides a source of continuing educational experimentation which may well guide developments in the total basic curriculum. An example is the reduction by one-third of assigned class time in Bloomington without apparent ill effect.

The members of the group gathered the impression that in most areas, the Faculty in Bloomington was working quite independently of the parent departments in Indianapolis. It is suggested that closer liaison might be

desirable for all concerned. For example, the same examinations might be given to all students, the better to evaluate the teaching methods used.

GRADUATE PROGRAM

In addition to the Combined Degree Program, extensive graduate activities are conducted in Indianapolis.

All students are admitted through the Graduate School, and all degrees granted by it.

The M.S. degree requires 30 credits (two semesters of 15 each) and the Ph.D. 90 credits.

A table, listing the number of graduate students in registration and degrees awarded, follows:

	<u>M.S. Candidates</u>	<u>Ph.D. Candidates</u>
Anatomy	3	2
Biochemistry	2	30
Medical Genetics	1	2
Microbiology	9	9
Pathology	0	0
Pharmacology	7	7
Physiology	1	3

Degrees awarded in the past five years:

	<u>M.S. Degree</u>	<u>Ph.D. Degree</u>
1963	5	8
1962	2	2
1961	3	0
1960	0	0
1959	0	0

COMMENT

The growth of the Graduate Program is impressive; in the case of Biochemistry it may be somewhat excessive.

CONTINUING EDUCATION

W. Donald Close, Associate Professor of Medicine and Medical Director of the University Hospitals, is in charge of this division.

The budget is: \$35,400.

The sources are:	Medical School	\$12,000
	Tuition	22,150
	Grants	1,250

The division was established in 1957.

In the past year, nineteen courses were given:

<u>Name of Course</u>	<u>Number of Enrollees</u>
Electrocardiography	29
Psychiatry (Crawfordsville)	15
Psychiatry (Vincennes)	14
Neurology	47
Pediatrics	40
Advances in Internal Medicine	62
Psychiatry (IUMC)	8
Tuberculosis	65
Orthopedics	23
Ophthalmology	22
Obstetrics and Gynecology	28
Psychiatry (Bedford)	8
Anatomical & Cl. Otolaryngology	21
Clinical Heart Disease	36
Diagnostic Radiology	100
Psychiatry (South Bend)	22
Psychiatry (At Lawrenceburg)	9
Medical Treatment of Malignancy	18
Medical Problems in Renal Disease	25
Total	675

These have been held entirely in Indianapolis, except for some courses in Psychiatry, given through a special grant throughout the state.

COMMENT

The Continuing Education Program would seem adequate and appropriate.

POSTGRADUATE MEDICAL CENTER

Karachi, Pakistan

William Hugh Headlee, Professor of Microbiology, Coordinator.

In 1957, Indiana University contracted with the International Cooperation Administration to establish a Basic Medical Science Institute at the Jinnah Central Hospital, Karachi. This was planned for the Post Graduate training of Medical College teachers through an M.S. Degree program.

In 1962, the clinical fields were added.

All departments are staffed by Indiana faculty members, and counterpart members of the University of Karachi faculty.

Of the first class of 21 admitted in 1959, thirteen upon graduation in 1961, returned to Medical College in Pakistan, and eight came to Indiana for further training.

COMMENT

While it was not possible to meet Dr. Headlee, or to study this program other than through presurvey material, the willingness of Indiana University to take up this challenging venture seems representative of its dedication to service, and to meeting need where ever it may arise.

OTHER PROGRAMS

- 1). The medical faculty is responsible for the instruction of the first two years of the Dental School. The classes number around 90.
- 2). The first year of the Nursing course is taught in Bloomington. Three years are held in Indianapolis. Courses in the basic medical sciences are given during the first of these years, and clinical lectures during the latter two.

Classes number around 100.

- 3). The Division of Allied Health Sciences, located on the Medical Center Campus involves ten members of the medical faculty. The following courses are given with enrollments as indicated.

Medical Record Library Sc.	9	Public Health Dent. Hygienist	12
Medical Technology	23	Public Health Education	1
Occupational Therapy	15	Sanitary Science	
Physical Therapy	43	X-ray Technology*	40
Dental Hygienist*	63		

*Certificate 2 year program.

COMMENT

Indiana University's endeavor to provide educational opportunities in all areas of the health sciences is commendable.

BASIC SCIENCE DEPARTMENTS

ANATOMY

Professor and Chairman

Warren Andrew, 53; Ph.D. 1936,
Yale; M.D. 1943, Baylor.
Service 5 years.

<u>Staff</u>	<u>Full time</u>	<u>Part time</u>	<u>Vacancies</u>
Professors	1		
Associate Professors	6		
Assistant Professors	1		1
Others	<u>1</u>		
	9		

Budget

Grants

Salaries	\$113,300	Teaching	0
Supplies	<u>25,500</u>	Research	<u>\$82,200</u>
Total	\$138,800	Total	<u>\$82,200</u>

Space 10,300 sq. ft. (Departmental office and research space only,
exclusive of teaching laboratories).

Graduate Students

Courses in anatomy for 90 dental students, and a course for 18 physical therapy and occupational therapy students. Eight courses at various times for residents.

Service Responsibilities. None.

Required Medical Courses

Gross Anatomy. First and second quarters, first year. This course includes 54 hours of lecture, 18 of conference, 198 of laboratory, totaling 270 hours. Dr. Robert Shellhamer is in charge. Eleven instructors are present in the laboratory, a very large undivided room, giving an even larger impression since a separate laboratory for dental students is contiguous. Teaching material is adequate providing a cadaver for every four students.

Correlation with Radiology and Surgery is achieved through a weekly session in radiographic anatomy, and a weekly anatomy clinic, where surgical applications of the area under study are discussed. Written exams are given about every three weeks.

Histology. First quarter, first year. Dr. Andrew is in charge. The course is of 123 hours duration, 28 of lecture, 4 of conference, 96 of laboratory.

Eight to ten instructors are present in the laboratory. Written examinations are scheduled every three weeks.

Neuroanatomy. Second quarter, first year. Dr. Alpert is in charge of this 96 hour course, 24 lecture and 72 laboratory. Each group of four students dissects a brain. Seven instructors are present in the laboratory. Some clinical cases are presented.

The course is correlated with neurophysiology; at Bloomington the courses are combined.

Elective Medical Courses. Seventeen various courses are listed. The department participates in the presentation of the combined course in Cell Biology. Dr. Jersild is its representative on the committee directing this course.

The weekly meetings of the basic science council have proven helpful in providing correlation with the teaching of the other basic science departments.

No problems arose due to the transfer from Bloomington. Faculty members wishing to, remained there.

Members of the department are receiving grants for seven research projects. Dr. Andrew has been working primarily on cellular changes of the aging process.

COMMENT

This department is offering a thorough, traditional course. It would benefit greatly by additional staff.

The full time faculty members now must teach 200 medical and 100 dental students.

Especially in view of the large number involved, more attention might be paid to the use of demonstration materials, television, models and the like.

BIOCHEMISTRY

Professor and Chairman

Donald E. Bonner, 54; Ph D.
1937, Western Reserve;
service 23 years.

<u>Staff</u>	<u>Full time</u>	<u>Part time</u>	<u>Vacancies</u>
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Professors	4		
Associate Professors	1		
Assistant Professors	4		

Other	9	16	1
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<u>Budget</u>	<u>Grants</u>
Salaries	\$ 90,000
Supplies	1,002,100
Total	\$1,092,100

Space 8,000 sq. ft. (Department space only, exclusive of teaching laboratories.)

<u>Graduate Students</u>	M. D. = 16
	Ph.D. = 31

Other Students. General biochemistry is given for the first year dental students. A course is given for anesthesiology residents.

Service Responsibilities. None

Required Medical Courses

General Biochemistry. Second and third quarters, first year. Dr. Gibbon is in charge of lectures, Dr. Bonner of the laboratory, and Dr. Merritt of clinical correlation.

The course totals 283 hours, 122 lecture hours, 144 laboratory, and 17 of conference.

The principles governing the laboratory exercises are stated as follows:

"Laboratory exercises have been selected for the purpose of teaching broad and fundamental concepts of biochemical laboratory practice and observation that apply in the clinical and research laboratories of most of the medical sciences. Emphasis is placed on understanding of theory and practical rules of operation that are required for accurate and reliable laboratory work. Attention is given to the principles of some of the more common analytical fields rather than to a more shallow approach to a large number of routine clinical chemical determinations presently in use. Emphasis is on quality rather than quantity of work."

We hope that this type of understanding and this awareness of the requirements for accuracy will equip the student to approach other areas of analysis and directions for specific determinations of body constituents in an enlightened fashion.

In addition to the direct laboratory observations provided by the selected exercises, the more advanced laboratory discussions help students to appreciate the potential of the great instrumentation of modern biochemistry in its application to medical problems. Although it is not practical or reasonable to try to teach advanced instrumentation to freshmen medical students, we believe that much can be done in discussions and conference to help them gain broader appreciation of existing methodology with an invitation to seek more advanced training in both theory and practice."

Students usually work individually. Two faculty and seven graduate students serve on a laboratory section of 100 students at one time.

Elective Courses. Twenty-four courses are offered at various times. The department was first established in 1958. Dr. Bowman has been chairman since its inception.

It participates in the course in cell biology.

A weekly biochemistry clinical correlation conference is held.

Dr. Bowman would like to extend clinical correlation teaching in the third and fourth year. It is also planned to combine the medical and dental courses to a greater extent.

Some 50 research projects are being supported.

Dr. Bowman is studying the proteolytic activity of proteases.

COMMENT

It is hoped that this department, having established an immense research program, will now have time to devote more of its creative energies to devising new approaches to handling its vast teaching load. The proposed partial combination of the medical and dental courses should be helpful. So too, would revision of the laboratory work, towards offering elective opportunities to the students, and more emphasis on group projects.

Large as the department may seem, it is noted that most of the positions are part time in nature, so that additional full time appointments would still be appropriate.

The research and graduate training programs are too extensive, if anything, and further expansion should emphasize enhancing the teaching effort devoted to the medical and dental students.

PHYSIOLOGY

Professor and Chairman

Ewald E. Selkurt, 49; M.D., 1941
Wisconsin; service 5 years.

<u>Staff</u>	<u>Full time</u>	<u>Part time</u>	<u>Volunteer</u>
Professors	3		
Associate Professors	8		
Assistant Professors	1		
	<u>12</u>		
Other		2	0

Budget

Grants

Salaries	\$109,200	Teaching	\$ 35,000
Supplies	<u>12,000</u>	Research	<u>237,900</u>
Total	\$121,200	Total	\$272,900

Space 8,000 sq. ft.

<u>Graduate Students</u>	M.S. =	3
	Ph.D. =	3

Other Students. A course in dental physiology is taught. Another -
"Physiology for the Allied Health Sciences" is offered for 30 students.

Service Responsibilities. None

Required Courses

Cell Biology. First quarter, first year. While this is an interdepartmental course, Dr. William Armstrong, Associate Professor of Physiology, is chairman of the course committee. The other members are representatives from the Departments of Anatomy, Biochemistry, Microbiology, and Medicine. It is of 84 hours duration, 46 lecture, 32 of conference, and 6 laboratory hours. Cell structure, cell membrane, energy transfer, radiation effects and cellular genetics are among the topics covered.

Medical Physiology. Second and third quarters, first year. Dr. Selkurt is in charge of this 307 hour course, comprising 108 hours of lecture, 138 of laboratory, 51 of conference and 10 of examinations. A laboratory shared with Pharmacology is used.

The class is divided into eight sections, four of which meet at a time in the laboratory and in group conference groups. Eight faculty members serve in the laboratory at a time. Students work in groups of two to four. Sufficient contemporary recording and other types of equipment are available.

Elective Courses. Twelve are available, primarily for graduate students. Clinical correlation conferences are held with the various clinical departments.

Twenty-four research projects are being supported. Dr. Selkurt is participating in studies of renal blood flow, and, together with other members of the department, has recently published a textbook of Physiology.

COMMENT

This department is fully dedicated to student teaching. It is to be hoped that it may be able to devise new and more stimulating methods of providing for so many students a more significant laboratory experience.

MEDICAL GENETICS

There is a comprehensive interdepartmental program of study and research to qualify investigators in this field. Associate Professor Marritt of the Department of Medicine is chairman of a committee of 16 in charge.

The M.S. and Ph.D. degrees are granted.

Seven courses are offered. These are available as electives to qualified medical students.

MEDICAL ECONOMICS

This department does not have a faculty of its own, but Associate Professor Wood is in charge of a group of courses presented by faculty members of other departments, or guest lecturers.

The courses given include 13 hours of lectures on ethics and 6 on jurisprudence. They are given in the third year, and 6 hours on medical economics in the fourth.

An elective preceptorship is also arranged with physicians practicing in Indianapolis.

MICROBIOLOGY

Professor and Chairman

E. W. Shrigley, 55; Ph.D. 1937
Wisconsin; M.D., 1941 Wisconsin
Service, 14 years.

<u>Staff</u>	<u>Full time</u>	<u>Part time</u>	<u>Volunteer</u>
Professors	2		
Associate Professors	5		
Assistant Professors	4		
	<u>11</u>		
Other		1	0

Budget

Grants

Salaries	\$100,000	Teaching	\$ 31,600
Supplies	<u>11,000</u>	Research	<u>111,200</u>
Total	\$111,000	Total	\$142,800

Space 10,800 sq. ft. (department space only, exclusive of teaching laboratory)

<u>Graduate Students</u>	M. S.	=	8
	Ph.D.	=	9

Other Students. Courses are taught for dental students, dental hygienists, nurses, and medical technologists, some 245 students in all.

Service Responsibilities. Postmortem bacteriology. Autoclave testing. Diagnostic parasitology and media and glassware preparation.

Required Courses.

Parasitology. First quarter, second year, Dr. Summers is in charge of this 50 hour course; experiments with trypanosomes, toxoplasma and trichinella are included. Students work in groups of eight. There are five instructors in the laboratory.

Medical Microbiology. First quarter, second year. Dr. Shrigley is in charge of this 202 hour course. Seven instructors, all of whom are regular faculty members, serve in the laboratory. The students have an opportunity to select research projects, working in groups of four. The results of these experiments are presented in a symposium at the end of the course. The teaching laboratory is shared with pathology. The intent of the course is to provide basic knowledge about microbial life and how disease is produced. Clinical pathology is not included.

Two honors programs are available. Students in the upper 10% of the class may elect the laboratory honors program. They are excused from the last four weeks of the course, and devote this time to a project of the student's choice, not necessarily in microbiology. A written report is required. Likewise, students presenting high academic records may be excused from

lectures, and participate instead in discussion groups. A final examination only is required. The program is limited to ten participants. Students may not participate in both programs. Expansion of the honors program is planned as soon as made possible by the proposed addition to the basic science laboratory. During the current year, the availability of project study for students has been extended through a joint program with Pharmacology permitting projects to be carried out through both fields and both courses.

Elective Courses. Thirteen courses are scheduled at various times. The department participates in the first year cell biology course. A wide range of research projects are being undertaken by members of the department.

COMMENT

This department is conducting a stimulating and imaginative teaching program, well adapted to the large number of students to be taught. It is hoped this may be assisted as soon as possible by the addition to the basic science laboratory.

PATHOLOGY

Professor and Chairman

Parker Beamer, 49; Ph.D., 1940
Illinois; M.D., 1943 Washington.
Service 10 years.

Subdepartments:

Autopsy Service and Histopathology Laboratories	Dale M. Schulz
Clinical Correlation and Research	Parker R. Beamer
Clinical Laboratories	J. L. Arbogast
Neuropathology	Wolfgang Zeman
Surgical Pathology	Frank Vallios
Teaching Program and Courses--Indianapolis	J. D. Hubbard
Teaching Program and Courses--Bloomington	Joseph McManus

<u>Staff</u>	<u>Full time</u>	<u>Part time</u>	<u>Volunteers</u>	<u>Vacancies</u>
Professors	6			1
Associate Professors	3			
Assistant Professors	3			1
Instructors and Others	6	1	7	
	<u>18</u>			

Budget

Salaries	\$254,000
Supplies	15,500
From Hospitals	<u>474,000</u>

Total	\$743,500
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Grants

Teaching	\$ 28,200
Research	<u>101,100</u>

Total	\$129,300
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Space 38,000 sq. ft. (department space only, not including teaching laboratories)

Other Students. Courses in general pathology are taught for dental students and some 70 Allied Health students. Instruction is provided for 25 senior medical technology students, and a course in cytotechnology is offered.

Service Responsibilities.

The department operates the complete pathological services at all the hospitals of the Medical Center.

Required Medical Courses.

General Pathology. Second year, all three quarters. This is a 314 hour course, divided as follows:

	<u>Hours</u>		<u>Hours</u>
Lectures	71	Clinicopathologic conferences	23
Laboratory--gross	47	Autopsy studies	32
Lab. microscopic	96	Examinations	<u>12</u>
Group conferences	33		
		Total	314

Dr. Hubbard is in charge. One instructor is present for 15 students. There are two sections.

Students are on autopsy call in groups of five. A complete report including review and study of the sections is included. The morgue at the University Hospital is unusually well equipped having special equipment for radiographic and perfusion studies.

In addition to the standard work in pathology, conferences concerning ethical and sociological problems of medicine are held for small groups of students.

Fundamentals of good medical writing are stressed in papers that students are expected to prepare.

In place of the regular laboratory work, several of the best students are permitted to select special projects each year.

Clinical Pathology. Second year, second and third quarters. Lectures 22 hrs., laboratory 22 hrs. Drs. Arbogast and Lingeman are in charge.

The laboratory exercises are designed to develop the students' technical ability in performing appropriate tests. Next year this course is to be combined with general pathology so that laboratory diagnostic aspects will be correlated directly with pathological material. The course in Bloomington presently is being conducted in this manner.

Clinical Pathology Conferences. Twenty-three hours are scheduled in both the third and fourth years. Senior clerks may be involved in the presentations.

Surgical Pathology Conferences. Twelve hours each quarter throughout the third and fourth years. Dr. Vellios is in charge.

Gynecological-Obstetrical Pathology Conferences. Ten hours per quarter during the junior year.

Elective Courses. One, Pathology of Bone Diseases, is scheduled regularly, and qualified students may participate in some eight tutorial programs during their elective quarters.

COMMENT

This department would seem to be meeting successfully the challenge of providing an individualized and challenging teaching program for its many students. The plans to combine clinical and general pathology bode well for the future.

It is of interest to note how this procedure was first tried in Bloomington, and will now be used in Indianapolis.

PHARMACOLOGY

Chairman and Professor

James A. Ashmore, 37; Ph.D., 1950
St. Louis. Service 3 years.

<u>Staff</u>	<u>Full time</u>	<u>Part time</u>	<u>Volunteers</u>	<u>Vacancies</u>
Professors	5			
Associate Professors	4			
Assistant Professors	2			
Others	<u>1</u>	0	0	0
	12			

Budget

Grants

Salaries	\$117,300	Teaching	\$ 57,800
Supplies	9,000	Research	<u>467,900</u>
For Toxicology	<u>30,000</u>		
Total	\$156,300	Total	\$525,700

Space 6,500 sq. ft. (departmental space not including laboratories)

Graduate Students: M.S. = 9
Ph.D. = 7

Other Students. A course is given for third year dental students, and one for nursing.

Service Responsibilities.

The State Toxicology Laboratory is operated by the department.

Required Courses.

Pharmacology. Second year, first and second quarter. Lecture, 59 hrs; laboratory 70 hrs, conference 24 hrs. Total 153 hrs. Dr. Ashmore is in charge. Four of 5 students work in a group in the laboratory with an instructor for each six groups. The laboratory is shared with Physiology.

The main feature of the course is that, in conjunction with Microbiology, groups of students may carry on projects in place of the regular laboratory work. Four weeks are allowed, and reports are made to the class at the end of the quarter.

Thirty percent of the students have undertaken this effort.

Teaching in biostatistics is included in the course.

This department was developed at the time of the move to Indianapolis.

Thirty-two research projects are being supported. Dr. Ashmore is studying the regulation of amino acid and protein metabolism, and experimental diabetes.

COMMENT

The cooperative teaching arrangement worked out between the department and Microbiology is to be commended. Together these departments demonstrate that approach with imagination and enterprise, and problems presented by a great class size can be resolved.

PUBLIC HEALTH

Chairman and Professor

Samuel H. Hopper, 52; 1937 M.I.T., Ph.D.
Service 18 years.

Subdepartment

Program of courses in Sanitary Science and Health Education.

<u>Staff</u>	<u>Full time</u>	<u>Part time</u>
Professor	1	
Associate Professors	3	
Assistant Professors	0	11
	<u>4</u>	

Budget

Grants

Salaries	\$38,000	Teaching	0
Supplies	<u>2,000</u>	Research	<u>\$10,000</u>
Total	\$40,000	Total	\$10,000

Space. 3,500 sq. ft.

Other Students. The department is responsible for a four year curriculum leading to the B.S. degree in Sanitary Science or Health Education. Eight are enrolled currently. A course is taught to twelve dieticians, and to second year dental hygienists.

Service Responsibilities. None

Required Medical Courses.

Biometrics. Twenty-four hours first year. Dr. Eugene E. Levitt is in charge. This course is intended, through lectures and exercises in problem solving, to introduce the student to methods for the critical evaluation of data.

Preventive Medicine and Public Health. Third quarter, second year. Dr. Hopper is in charge of this 22 hour lecture course. Traditional material is covered,

Industrial Medicine. One quarter, third year. A 15 hour lecture course under the direction of Dr. L. W. Spolyar. Various aspects of industrial toxicology, medical organization and legal matters are covered.

Dr. Hopper is studying the identification of staphylococcal enterotoxin in foods, and the reduction of operative infection.

The department believes that its primary function is the promulgation of appropriate aspects of preventive medicine throughout all the clinical departments. A reorganization and expansion of the department better to achieve these ends is under study.

COMMENT

The stated future goals of this department are most worthy. It is hoped that through imaginative study a new approach may be found.

CLINICAL DEPARTMENTS

ANESTHESIOLOGY

Subdepartment: Inhalation Therapy

Professor and Chairman
V.K. Stoelting, 45; M.D. 1936
Indiana

<u>Staff</u>	<u>Full</u> <u>time</u>	<u>Part</u> <u>time</u>
Professors	1	
Assistant Professors	5	
Associate Professors	0	
Instructors and others	5	6
	<u>11</u>	

Budget

Salaries	\$37,500
Supplies	<u>2,000</u>
Total	\$39,500

Grants

Teaching	0
Research	<u>\$42,500</u>
Total	\$42,500

Space. 2,500 sq. ft.

Other Students. Lectures to dental and nursing students are given.

Service Responsibilities.

The department is responsible for all anesthesia and inhalation therapy in the University Hospitals.

Required Medical Courses.

Lecture Course. An eleven hour course of lectures is given in the third year.

Clerkship. A two week clerkship is provided for all students in the fourth year, at the University, Marion County and Veterans Hospitals.

An active research program is underway.

COMMENT

Time did not permit a study of the work in this department. From the presurvey material the teaching effort would seem appropriate in content and length.

DERMATOLOGY

Professor and Chairman

Victor C. Hackney, 46; M.D., 1943, Yale.
Service one year.

<u>Staff</u>	<u>Full time</u>	<u>Part time</u>	<u>Volunteer</u>
Professors	1		
Associate Professors	0		
Assistant Professors			
Instructors and others		0	
	<u>1</u>		

Budget

Grants

Salaries	\$12,600	Research	\$2,600
Supplies	<u>1,000</u>	Teaching	<u>0</u>
Total	\$13,600	Total	\$2,600

Space. 500 sq. ft.

Other Students. Lectures are given to nursing students.

Service Responsibilities. None. All patients are hospitalized on the medical service.

Required Courses.

Lecture Course. Twelve hours are scheduled in the third year.

Clerkship. Students are assigned to the dermatology clinic as part of the fourth year Medical Clerkship.

Elective Courses. Research or clinical work can be arranged.

The only full time department member, Dr. Hackney, is conducting two studies.

COMMENT

One wonders, in view of increasing attention to the systemic aspects of dermatology, if this department should not have beds of its own, so that, among other things, an inpatient clerkship could be offered. Unfortunately, time did not permit a visit with the Chairman of this department.

MEDICINE

Professor and Chairman

John B. Hickam, 49; M.D. 1940,
Harvard; service 5 years.

<u>Staff</u>	<u>Full time</u>	<u>Part time</u>	<u>Volunteers</u>
Professors	4		
Associate Professors	8		
Assistant Professors	8		
Instructors and Others	1	5	79
	<u>21</u>		

Budget

Grants

Salaries	\$194,700	Teaching	\$ 263,300
Supplies	10,000	Research	<u>1,561,000</u>
From Hospitals	<u>59,500</u>		
Total	\$264,200	Total	\$1,824,300

Space. 20,000 sq. ft.

Service Responsibilities. The department is responsible for providing professorial staffing at the University Hospital and at the Veterans Administration Hospital.

Required Medical Courses.

Physical Diagnosis, second year, all quarters. Dr. Ray Behnke is in charge. Sixteen hours of lecture and 48 hours of case study are scheduled. Groups of six to seven students are assigned to an instructor. Members of the departments of Ophthalmology, Otolaryngology and Psychiatry assist the Department of Medicine in presenting their course.

Medical Clinics. Second and third quarter of the second year. Dr. Behnke is in charge. This nineteen hour lecture course is intended to introduce the "classical diseases" of internal medicine.

Medical Conference. Second and third quarter, second year. Twenty hours of lecture serving as an introduction to medicine are offered.

Medical Lectures. Four quarters, third year. Ninety-five hours are scheduled throughout the year. Students are responsible for material presented during their off quarter, as well as in the other three.

Third Year Clerkship.

This is of two months duration. Dr. Hickam is in charge at the University Hospital, Dr. Behnke at the Veterans Administration Hospital, and Dr. Tarr at Marion County Hospital. Nine students each are assigned to these hospitals. Students work on the ward from 8 to 11 a.m. and 2 to 5 p.m. Daily departmental conferences are held at 11 a.m. From 12:00 to 2:00 students attend the third year lecture program. There is a rotating night and week-end call. Space and equipment are provided for laboratory studies pertinent to the students evaluation of the case. Routine laboratory work is not required.

Fourth Year Clerkship.

This is half devoted to inpatients and half to outpatients, six weeks each. The same hospitals are used, and the same persons are in charge. Out-patient work is carried on only at the University Hospital, where Dr. Failey is in charge, ten students assigned, and the Marion County Hospital, with Dr. Priebe in charge of ten students. Six students are on the wards at the University Hospital, eight at the V.A. and six at the General.

The clerkship is conducted much as is the third year, although the senior is given more responsibility. Both clerkships utilize the same wards. Juniors are not assigned more than three patients a week; seniors not more than five. Patient work-ups were well prepared. They were noted to have been corrected by members of the resident staff in all instances.

On the outpatient service, one new patient is seen each morning, around four each afternoon, and a daily conference is held at 4 p.m. Forty percent of the third year grade is based on an examination, usually a National Board, 50% on ward work and 10% on an oral examination. Eighty percent of the senior grade is based on ward work, and 20% on oral examination.

Elective Courses. Research or clinical studies are available during the Free Quarter. Forty-three students participated during the past year.

A large number of interdepartmental conferences are held. These include a weekly medical-surgical conference, psychosomatic-medical conference, medical-neurological conference, clinico-pathologic conference, and cardiac diagnosis conference (with Radiology, Surgery and Pediatrics).

Some 57 research projects are being supported through grants. Dr. Hickam is engaged in the direction of a heart research center, and in studies of retinal and pulmonary circulation.

COMMENT

This department is conducting successfully both its immense research effort, and teaching program. When the recently enlarged first and second year classes reach the clinical years, additional problems must be faced, which will require enlargement of staff and perhaps some re-allocation of effort.

It is noted that there is little difference between the third and fourth year clerkships. This might be taken into account when a restudy of the clinical program is made.

NEUROLOGY

Professor and Chairman

A. T. Ross, 55; M.D., 1932 Oregon;
service 16 years.

Subdepartment - Neuropsychology

<u>Staff</u>	<u>Full time</u>	<u>Part time</u>	<u>Volunteers</u>	<u>Vacancies</u>
Professors	4			1
Associate Professors	1			
Assistant Professors	2			
Instructors and others	$\frac{1}{8}$	$\frac{2}{2}$	$\frac{2}{2}$	$\frac{1}{2}$

Budget

Grants

Salaries	\$55,600	Teaching	\$ 40,000
Supplies	2,000	Research	<u>118,200</u>
From Hospitals	<u>10,000</u>		
Total	\$67,600	Total	\$158,200

Space. 9,800 sq. ft.

Other Students. Lectures on the neurologically handicapped child are given to occupational therapy P.T. and nursing students. A training program in neuropsychology is conducted.

Service Responsibilities. The department is responsible for staffing the University and V.A. Hospitals. At the University it conducts a large number of special neurological clinics. It operates the EEG Laboratories in all the hospitals of the Medical Center as well as the EMG Laboratory at the University Hospital.

Required Medical Courses.

Introductory neurology and neuro-diagnosis. Second year. Twelve lecture hours.
Clinical Neurology. Third year. Twenty-six lecture hours. Dr. Ross is in charge.

Clerkship. Fourth year. Two weeks. Dr. Ross is in charge at the General Hospital and V.A. Hospital and Dr. Drew at the University Hospital. Two to three clerks are assigned to each of these hospitals. Both inpatient and outpatient service is included. The assignment at the University Hospital is to pediatric neurology. In addition to the regular ward work, various conferences, including brain cutting sessions, are scheduled.

Elective Courses. Research in Neurology.

Lectures on neuroanatomy are given during the anatomy course both in Indianapolis and Bloomington. A lecture on cerebral physiology is given in Indianapolis in the physiology course.

Seventeen research projects are being undertaken by members of the department.

Dr. Ross is working on peripheral neuropathies during treatment with Vincristine, and on neuropsychological correlates in multiple sclerosis.

COMMENT

A visit with Dr. Ross could not be included. This would seem to be a well staffed and equipped department. It is unfortunate that the clerkship must be so brief, especially in regard to the outpatient service.

OBSTETRICS AND GYNECOLOGY

Professor and Chairman

Carl P. Huber, 60; M.D., 1928,
University of Michigan; service
25 years.

<u>Staff</u>	<u>Full time</u>	<u>Part time</u>	<u>Volunteers</u>	<u>Vacancies</u>
Professors	2			
Associate Professors	1			
Assistant Professors	1			1
Instructor and Others	2	4	11	1
Total	6	4	11	2

Budget

Grants

Salaries	\$66,600	Teaching	0
Supplies	2,300	Research	\$51,000
Total	\$68,900	Total	\$51,000

Space. 3,000 sq. ft.

Other Students. Lectures are given to nursing students.

Service Responsibilities. The department is responsible for the staffing of the University Hospital.

Required Medical Courses.

Second year, a course of 14 hours of introductory lectures is given. Drs. Stander and Carter are in charge.

Third year, lecture course. Thirty-nine hours of lecture are scheduled, again under the direction of Drs. Stander and Carter.

Clinical Clerkship. Third year, one quarter. Dr. Huber is in charge. One month of the clerkship is spent in obstetrics at Coleman Hospital, one month at the General Hospital and one month in gynecology at both Coleman and General Hospitals. Students are assigned to night call about one night weekly. Each student delivers about 20 patients. There are 200 deliveries monthly at Coleman Hospital, about 60% of them private and 300 at the General, all of them service patients. Each student keeps a record of all patients he sees and writes up in detail one gynecological and one obstetrical case. Conferences are held regularly, and one hour weekly is devoted to gynecological pathology. One member of the department, Dr. Gardiner, is certified in psychiatry as well as in obstetrics and gynecology. Final written examinations are held upon completion of the pathology and mannequin courses and a final oral examination is held at the end of the quarter.

Fourth Year in Obstetrics and Gynecology. Fifty-two lecture hours are scheduled under the direction of Drs. Gardiner and Huber.

Elective Courses. Research or clinical studies may be arranged.

Four research projects by members of the department are being supported through various grants.

COMMENT

This department is utilizing its resources effectively and presenting an excellent course. The Third Year Clerkship is handicapped by the number of hours daily that the students must attend other classes; at the same time, in view of the thorough third year program, one might question the need for scheduling fifty-two hours of conferences in the fourth year.

OPHTHALMOLOGY

Chairman and Professor

Fred M. Wilson, 49; M.D., 1939,
Indiana; service 12 years.

<u>Staff</u>	<u>Full time</u>	<u>Part time</u>	<u>Volunteer</u>
Professors	1		
Associate Professors	2		
Instructors and Others	2	1	38
Total	5	1	38

Budget

Grants

Salaries	\$52,900	Teaching	\$ 80,900
Supplies	<u>4,100</u>	Research	<u>33,800</u>
Total	\$57,000	Total	\$114,700

Space. 6,000 sq. ft.

Other Students. Seven lectures are given to 30 junior year nursing students.

Service Responsibilities.

The department provides consultation service for the University Hospital, Carter Psychiatric Hospital, the General Hospital, and the Veterans Administration Hospital. Yearly eye examinations for the Indiana State School for the Blind are conducted, and a special clinic is maintained at the General Hospital for the purpose of doing special survey examinations of patients taking experimental drugs to determine ocular side effects. The departmental pathologist also serves other hospitals throughout the state by processing some 250 pathologic eye specimens a year. An Eye Bank, supported by the Indiana Lions Clubs, is located in the department.

Required Medical Courses.

Lectures in Ophthalmology. Third Year. Eleven hours are scheduled.

Fourth Year Clerkship. All students are assigned to the clinic for one week.

Elective Courses. A clerkship of one quarter duration, and a special course in Advanced Clinical Ophthalmology are available.

Six principle research projects are being undertaken by members of the department.

Dr. Wilson is studying retinal detachment.

COMMENT

While time did not permit a visit with Dr. Wilson, the presurvey material would indicate this is a strong department with an active research program. The time allocated to the clerkship seems rather short.

ORTHOPEDIC SURGERY

Professor and Chairman

George J. Garceau, 68; M.D., 1924
Northwestern; service 35 years.

<u>Staff</u>	<u>Full time</u>	<u>Part time</u>	<u>Volunteers</u>
Instructors	1	2	11

Budget

Grants

Salaries	\$18,200	Research	\$32,400
Supplies	<u>500</u>		<u> </u>
Total	\$18,700	Total	\$32,400

Space. 1,200 sq. ft.

Other Students. Lectures are given to nursing students, and a course in Orthopedic Basic Science is given for all residents in Orthopedic Surgery in the Indianapolis area.

Service Responsibilities. The department is responsible for the staffing of the services at the University Hospital and the Veterans Hospital. Special clinics in rehabilitation, cerebral palsy, and various special orthopedic problems are held. One member of the staff acts as consultant to the medical genetics clinic.

Required Medical Courses.

Lectures in Orthopedic Surgery and Fractures. Twenty-six hours are scheduled in the third year.

Clinical Studies in Orthopedic Surgery. Fourth Year. An eleven hour lecture demonstration course, case histories, films, and patients are presented by senior students. The series is required of all senior students during their surgical clerkships whether assigned to the orthopedic clerkship or not.

Clerkship. Senior year, one month, available for half the students. Assignments are divided between the general hospital, the Veterans Hospital and the University Hospital. All students are assigned to night call at the General Hospital because of the active fracture service. Conferences on X-ray reading, fractures, office orthopedics, are included and assignments to outpatient clinics are made.

Elective Course. Quarterly research opportunities are available. The department cooperates in the teaching of first year anatomy.

Ten research projects are being undertaken by members of the department.

Dr. Garceau is studying the etiology of epiphysiolysis and several other projects.

COMMENT

Unfortunately, it was not possible to schedule a visit with Dr. Garceau.

The content and extent of the orthopedic teaching program would seem appropriate, and the emphasis on the widely applicable aspects of orthopedics, such as fractures and office procedures, is commendable.

OTO-RHINO-LARYNGOLOGY AND BRONCHOESOPHAGOLOGY

Professor and Chairman

David E. Brown, 54; M.D., 1936
Stanford; service 20 years.

Subdepartment: Audiology and Speech

<u>Staff</u>	<u>Full time</u>	<u>Part time</u>	<u>Volunteer</u>
Associate Professors	3		
Assistant Professors	1		
Instructors and Others	4	3	18
	<u>8</u>		

Budget

Grants

Salaries	\$ 75,500	Research. None listed.
Contributions from		
Hospital	31,500	
Supplies	<u>1,000</u>	
Total	\$108,000	

Space. Clinical space only, no research areas listed.

Other Students. None.

Service Responsibilities. The department staffs the University Hospital, Veterans Hospital, and Audiology and Speech Clinics.

Required Medical Courses.

Lecture Course, Third Year. Nineteen hours of lecture are given.

Clinical Clerkship. One week, Fourth Year. The University, General and Veterans Hospitals are utilized, both in and outpatient aspects.

Elective Courses. Quarterly clinical or research opportunities by arrangement.

The department conducts a joint head and neck tumor clinic along with Radiotherapy, Pathology, and Oral Surgery, and participates in the second year physical diagnosis course.

COMMENT

A visit with Dr. Brown could not be included. A clerkship of only one weeks' duration would seem too brief to be of much benefit. The department needs encouragement towards securing some of the abundant training and research grant funds available in this field.

PEDIATRICS

Professor and Chairman

L.T. Meiks, 60; M.D., Johns Hopkins, 1927; service 32 years.

<u>Staff</u>	<u>Full time</u>	<u>Part time</u>	<u>Vacancies</u>
Professors	5		
Associate Professors			1
Assistant Professors	2		1
Instructors and Others	3		
	<u>10</u>		

Budget

Grants

Salaries	\$112,000	Teaching	\$10,400
Supplies	1,500	Research	<u>89,400</u>
From Hospitals	<u>74,100</u>		
Total	\$187,600	Total	\$99,800

Space. 3,850 sq. ft.

Other Students. Lectures are given to nursing and to senior dental students.

Service Responsibilities. The department staffs the University and Carter Hospitals. It also operates laboratories for infectious disease, biochemistry and cardiology.

Required Medical Courses:

Third Year Pediatric Lectures. Twenty hours. Clinics 98 hours. Various lecture topics are covered and cases presented.

Senior Year. A weekly clinic for the entire class is held.

Third Year Clerkship. For some years this one month clerkship has been split between pediatrics and psychiatry. In the present year the student spends the entire month on the one service or the other. The clerkship is spent on the wards of the Riley Pediatric Hospital, eight students usually at a time. One of the groups is on duty each night in rotation. Patient work-ups at the University Hospital were well prepared. They had been corrected by members of the resident staff.

Fourth Year Clerkship. All members of the class serve the six-week clerkship. The ward and outpatient services at the Riley and General Hospitals are available. Those on hospital ward assignments are on duty in rotation about every fourth night. In general, students who have the third year clerkship are assigned to the outpatient services and others to the ward service. Four students are assigned to inpatient, and seven to outpatient service. On the Riley ward service both third year and fourth year students may be assigned to the same patient and both may do a work-up.

Elective Courses. None.

Two lectures are given in physiology, two in biochemistry, and several in

psychiatry by members of the department. The department does not participate in the physical diagnosis course because of insufficiency of staff and does not present any lectures during the second year.

Thirty research projects are being undertaken by members of the department.

COMMENT

The teaching program of this department suffers from a rather confusing clerkship structure in that these are short but separate third and fourth year clerkships, and that only half the students have the third year clerkship. Also, the absence of any Pediatric instruction in physical diagnosis, and of any introductory second year lectures, must prove something of a handicap, especially when the student's third year pediatric clerkship comes at the beginning of the year.

The service activities of the department at the University Hospital would benefit greatly from some type of residential unit so that parents and children could reside there while studies in the outpatient department are being undertaken. All patients seen are referred, and most come a considerable distance.

PSYCHIATRY

Professor and Chairman

J. L. Nurnberger, 47; M.D., 1943
Northwestern; service 8 years.

Subdepartments: Psychology and the Institute of Psychiatric Research

<u>Staff</u>	<u>Full time</u>	<u>Part time</u>	<u>Volunteers</u>	<u>Vacancies</u>
Professors	5			
Associate Professors	1			
Assistant Professors	9			1
Instructors and Others	8	2	24	1
	<u>23</u>			

Budget

Salaries	\$129,100
Supplies	3,500
Psychiatric Ins.	<u>415,200</u>

Total	\$547,800
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Grants

Teaching	\$254,100
Research	<u>205,000</u>

Total	\$459,100
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Other Students. The department is involved in the teaching of nursing, social work, psychology, and sociology students and post-doctoral trainees in neurochemistry.

Service Responsibilities. The department staffs the University Hospital, Carter Hospital, V.A. Hospital and General Hospital, and operates the Institute for Psychiatric Research attached to the Carter Hospital.

Required Medical Courses:

Science of Human Behavior. Twenty-three hours, first year. Dr. Nurnberger in charge. This course is given in three sections; Dr. Nurnberger considers the basic determinants of human behavior; Dr. Brady, normal learning, conditioning, and perceptual experience, and Dr. Ferster, a systematic introduction to human behavior in an operant conditioned context.

Psychopathology, Stress, Reactions to Stress, Mental Mechanisms and the Structure and Function of Defenses. Twenty-four hours, second year, Dr. Tyler in charge. The intent of this course is to familiarize the student with the graduation from normal to abnormal behavior.

Clinical Psychopathology. Second year, twelve hours. Dr. Moore in charge. This course consists of case presentations of selected psychiatric patients from the Carter Hospital.

Physical Diagnosis. The department participates in the physical diagnosis course, devoting six hours to the medical and psychiatric interview and mental status.

Third Year Clerkship. The inpatient service is at the Carter Hospital, with Dr. French in charge, and outpatient service at the University Hospital under Dr. Kooiker. Seven students are assigned one month for half of the class, the other half being assigned to pediatrics. Ten hours of didactic

lectures are included which are attended also by the students on the pediatric clerkship. In the outpatient program each student is assigned two unscreened new patients to evaluate from the beginning. The students work is closely supervised. The intent is to increase the student's skill in talking to patients with common emotional problems. Treatment is discussed in terms of what a non-psychiatrist practitioner would do.

Fourth Year Clerkship. One month, all students. The inpatient service is at the V.A. Hospital, thirteen students assigned, Dr. Fisher in charge. The outpatient is at the Riley Hospital, two students assigned, under Dr. Tyler. There is a combined service at the General Hospital with four students supervised by Dr. Kissel. At the V.A. Hospital, the students serve in the admitting room where they do the initial evaluation of some patients. These clerkships are all coordinated with those in Neurology so that students have their four weeks in psychiatry and two weeks in neurology at the same hospital.

Elective Courses.

Quarterly research or clinical assignments are available. The latter are provided both at the medical center and at five hospitals throughout the state.

The department has made a special effort to conduct correlated teaching with the Basic Science and other departments and has established the position of a coordinator of the undergraduate psychiatric curriculum to take charge of this activity. In the clinical area, the Pediatric department has been the most active in cooperative teaching.

A very wide range of research activities are being conducted primarily through the Institute for Psychiatric Research. Dr. Nurnberger has been engaged in cooperative studies with the Department of Obstetrics and Gynecology on psychiatric and psychological aspects of pregnancy.

COMMENT

This department is conducting an excellent teaching program. This fine effort would be enhanced by a re-arrangement of clerkships, especially on outpatient services, so that longer patient assignments could be scheduled.

RADIOLOGY

Professor and Chairman

John A. Campbell, 49; M.D., 1937,
Cincinnati; service 22 years.

Subdepartments: Adult Diagnosis, Pediatric Diagnosis, Radiation Therapy,
Radioisotopes, Radiation Physics.

<u>Staff</u>	<u>Full time</u>	<u>Part time</u>	<u>Volunteers</u>
Professors	1		
Associate Professors	3		
Assistant Professors	4		
Instructors and Others	5	0	13
	<u>12</u>		

Budget

Grants

Salaries	\$106,800	Teaching	-0-
Supplies	100,000	Research	\$15,000
Research	10,000		
Other	19,000		
From V.A.	<u>25,000</u>		
Total	\$260,800		

Space. 12,000 sq. ft.

Other Students.

The department conducts a two-year certificate course in Radiologic Technology for 40 to 60 students. A three-year postgraduate training course in Radiation Physics also is offered.

Service Responsibilities. The department staffs the Radiology Departments of the V.A. Hospital, the General Hospital, the University Hospital and the Student Health Service Hospital in Bloomington. It also offers consultation to the Indiana State Board of Health Commission on Radiology Control. In addition to the regular budget, members of the department earn an approximately equal sum from private fees, 50% of the therapy patients and 25% of the diagnostic patients at the University Hospital being private. This sum is used to supplement salaries and often to purchase necessary equipment.

Required Medical Courses:

Roentgen anatomy. First year, correlated with gross anatomy. This course is under the direction of Dr. Campbell, and comprises 18 lectures intended to correlate roentgen with gross anatomy.

Radiographs in Pathology. Second year. This course is directed by Dr. Miller and given as part of the course in general pathology. It consists of a weekly film demonstration of pathologic lesions correlated with the course in pathology.

Medical Aspects of Nuclear Weapons. Third quarter, second year. This course is given by Dr. Campbell and consists of four lectures concerning radiological

casualties resulting from nuclear warfare.

Gynecology-Roentgenology Therapeutic Conference. Third year. This course is directed by Dr. Million and consists of a weekly clinical conference on the management of new cancer patients held in conjunction with the Gynecology Department.

Roentgen Diagnosis. Fourth year, all quarters. This course is taught for one session weekly in six sections simultaneously by the faculty of the diagnostic section of the department. Each section covers a different aspect of diagnostic roentgenology. The students spend five weeks in each section.

Senior Radiology Clinic. Fourth year, four quarters. This course consists of twelve one-hour lectures to the entire senior class on the general clinical applications of radiology.

In addition to these courses the following combined conferences are held: ENT Therapeutic Conference, Pediatric Roentgenology Conference, Medical Roentgenology Conference, Orthopedic Roentgenology Conference, Cardiology Roentgenology Conference, Surgical Roentgenology Conference, Urology Roentgenology Conference, Neuroroentgenology Conferences. These conferences are conducted jointly by the Radiology Department and the respective clinical departments. Senior students participate, the student presenting the history in each case.

Unknown roentgenograms of clinical cases are exhibited each week. Senior students are invited to submit their diagnoses of these cases, and special prizes are awarded.

Elective Courses.

Senior Radiology clerkship. This is an elective clerkship of one month's duration. Clinical studies in Radiology. This is a three month course planned for the elective quarter. A research problem is carried out and thesis submitted.

Ninety percent of the teaching of the department is carried out as a cooperative effort with other departments.

Fourteen research projects are being undertaken.

COMMENT

This department is conducting an imaginative and effective teaching program. The extensive effort to cooperate with other departments is most commendable.

In view of this excellence, and the moderate deficiency of clinical teaching material in some areas in relation to the large number of students, Dr. Campbell's hope for a required clerkship would seem worthy of consideration.

SURGERY

Professor and Chairman

Harris B. Shumacker, 55; M.D., 1932
Johns Hopkins; service 16 years.

Subdepartments: Plastic, Neurologic and Oral Surgery

<u>Staff</u>	<u>Full time</u>	<u>Part time</u>	<u>Volunteers</u>
Professors	4		
Associate Professors	1		
Assistant Professors	4		
Instructors and Others	2	6	40
	<u>11</u>		

<u>Budget</u>		<u>Grants</u>	
Salaries	\$136,200	Teaching	\$ 25,300
Supplies	8,500	Research	<u>387,400</u>
From Hospital	<u>14,300</u>		
Total	\$159,000	Total	\$412,700

Space. 22,800 sq. ft.

Service Responsibilities. The department staffs the University and Veterans Hospital.

Required Medical Courses:

Third Year Clerkship. This clerkship is both in and outpatient in nature. It is of three months duration with 40 students assigned at one time. Dr. Shumacker is in charge at the University Hospital, Dr. Lempe at the Veterans Hospital and Dr. Carson at the General Hospital. Each student spends one month in general surgery at the General Hospital, one month at the Veterans Hospital, and one month either in plastic surgery at the University or Veterans Hospital or in Urology at one of these hospitals. Surgical grand rounds are held each Saturday morning along with surgical x-ray conferences. Night on-call duty varies from once every three or four nights to once every ten nights. When on call at night, students are expected to participate in the examination of newly admitted patients and to follow through on necessary operations. A member of the full time staff is assigned as counselor to each surgical clerk.

The student work-ups of patients both ward and private at the University Hospital were thorough. They had been corrected by members of the resident staff.

Surgical Clinic. Twice weekly, all four quarters, third year. Dr. Shumacker is in charge. A few clinics are also held during the second year.

Fourth Year Clerkship. This is a combined in and outpatient clerkship of three months duration, 40 students assigned, held at the University Hospital. Dr. Shumacker is in charge. One month is spent in General Surgery, one month in Orthopedic Surgery or Neurology, two weeks in Anesthesiology, and one week each in Ophthalmology and Otolaryngology.

All students attend daily four o'clock and other conferences. It is planned to shift the clerkship arrangements somewhat so that all students will get Urology and Orthopedics, and Neurosurgery and Plastic Surgery will be paired.

Fourth Year Surgery Clinic. This is held weekly by the chairman of the department, and centers about a case presentation.

Elective Courses.

Research or clinical studies, each of three months duration planned for the elective quarter.

The department participates in numerous joint conferences including X-ray, Medical-Surgical, Surgical Pathology and Heart Conference. The latter involves the departments of Pediatrics, Medicine and Radiology.

COMMENT

This department is conducting a well organized teaching program. The proposed changes in clerkship arrangement should represent a distinct improvement, in that urology and orthopedic surgery would seem to represent areas of more widespread application than do neurosurgery and plastic surgery.

UROLOGY

Professor and Chairman

Robert A. Garrett, 44; M.D., 1943,
Indiana; service 15 years.

<u>Staff</u>	<u>Full time</u>	<u>Volunteers</u>
Professors	1	
Associate Professors	<u>1</u>	
Instructors and Others	2	8

Budget

Grants

Salaries	\$29,900	Research	\$10,100
Supplies	<u>6,500</u>		
Total	\$36,400		

Space. 5,300 sq. ft.

Other Students. Lectures are given to nursing, medical technology, and a number of students from the Division of Allied Health Sciences.

Service Responsibilities. The department staffs the University and Veterans Hospitals.

Required Medical Courses:

Third Year Lectures. Twenty-six hours are scheduled.

Third Year Clerkship. This is available for half of the class for four weeks. Both inpatient and outpatient services are utilized at the University, General and Veterans Hospitals, four students being assigned to each. Dr. Garrett is in charge.

Fourth Year Clinic. A series of demonstration clinics for the class is conducted.

Elective Courses.

Clinical or research activities may be selected during the free quarter.

Dr. Garrett is conducting two research projects concerning the mechanism of urethral peristalsis and genito-urinary abnormalities.

COMMENT

While time did not permit a visit with Dr. Garrett, the presurvey material indicates that the teaching program of this department would seem appropriate in method, content, and extent.

COMPARATIVE SUMMARY

	<u>1954</u>	<u>1963</u>
President	Wells	Stahr
Dean	Van Nuys	Van Nuys
Total Faculty	?	607
Full time	?	173
Total Budget	\$ 1,469,000	\$ 3,868,000
Grants	\$ 686,000	\$ 5,600,000
Class Size	156	216
Plant Area - - Indianapolis	?	411,000 sq.ft.
- - Bloomington		55,000 sq.ft.
Library Books	44,000	65,000
Budget	?	\$115,000

Departments

	<u>Chairmen</u>		<u>Full time</u>		<u>Budget</u>		<u>Grants</u>	
	<u>1954</u>	<u>1963</u>	<u>54</u>	<u>63</u>	<u>54</u>	<u>63</u>	<u>54</u>	<u>63</u>
Anatomy	Webb	Andrew	8	9	84	139	6	82
Biochemistry	Harger	Bowman	8	9	76	92	2	1,092
Physiology	Herman	Selkart	8	12	95	121	38	273
Microbiology	Sarigley	same	7	11	70	111	15	143
Pathology	Smith	Deamer	13	18	146	702*	43	129
Pharmacology (with Biochem.)	Ashmore			12		156		526
Public Health	Hopper	same	3	4	44	40	4	10
Medicine	Ritchey	Hickam	8	21	77	264*	59	1,824
Surgery	Stumacker	same	9	11	90	159*	260	413
Pediatrics	Meiks	same	4	10	50	188*	51	100
Obstetrics-Gyne	Huber	same	3	6	29	69*	7	51
Psychiatry	Caldwell	Nurnburger	?	22	32	548*	?	459
Radiology	Campbell	same	4	12	59	260*	22	15

*Include Hospital Funds.

CONCLUDING CONFERENCE

The conference with President Stahr was held in Bloomington. Vice President Merritt, Dean Van Nuys, Associate Dean Mahoney, and Assistant Deans Lautenheiser and Merritt also attended.

President Stahr is well acquainted with the development and problems of the medical programs both in Indianapolis and Bloomington. He reviewed with the group the extensive and well conceived plans for the further progress of the Indianapolis campus. These will include, in addition to the new hospital construction, the relocation of the Law and Business Schools which are presently in downtown Indianapolis, on land adjacent to the Medical School.

It was evident that the highly efficient and geographically happy arrangement of the Medical Center is not due to fortunate chance alone but to unusually thoughtful long range planning by all those responsible on the state, county, city and University. Similar long range and well conceived plans for the Bloomington campus were reviewed, which bode well for the future of the University, and the medical program located there.

SUMMARY

Administration and Faculty. In the nine years since the last visit, there is evidence of distinct progress. The Medical Sciences building has been completed and occupied, making possible the highly desirable concentration of all four years of instruction on one campus.

The obvious emphasis on quality in the selection of the several new department chairmen since the time of the last visit is commendable.

The creation of separate departments of Biochemistry and Pharmacology is a mark of progress.

The increase in full time faculty in recent years has been significant especially the Departments of Psychiatry and Medicine. The manner in which the transition to a sizeable complement of full time faculty has been accomplished without apparent community friction is highly commendable.

There appears to be generally wide-spread high faculty morale and confidence in the Medical School and University administration.

Particular commendation is due for the imaginative development of the combined degree program in Bloomington. This is an experiment in medical education having wide-spread interest. One of the principal aspects of this program is its flexibility and it is urged that this feature be vigorously defended and if anything increased rather than decreased.

Nowhere was a statement of the school goals and objectives found. Likewise, a well constructed set of bylaws for the faculty would appear to be in order.

While the present administrative staff and organization appear to be sufficient for routine functions, there seems to be insufficient effective

leadership to develop cohesive academic policy and philosophy. Evidence for this may be found in the spontaneous formation of the Council of Pre-clinical Department Chairmen. A study should be made of the administrative structure of the total Medical Center, so that sufficient time and help can be provided for the office of the Dean to give such leadership.

Budget. The financing of the operations of the University Hospitals is a cause for concern. Under the present system of receiving no state subsidy for patient care it is probable that the teaching hospital may become increasingly scarce and less desirable in the sense of being representative of the full spectrum of patients. As community hospitals continue to improve, the referral of patients, especially those with financial resources, may be expected to decrease. Careful planning to meet this problem should be undertaken at once.

The total budget support of the Medical School, both for operations and research, has increased substantially and about in accordance with national trends.

It is noted with favor that a commitment has been made for the addition of some 15 new full time faculty positions per year for the next five years. It is important that these will be considered as fulfilling present needs, and that no further expansion of the student body will be contemplated without many additional preparations.

Students. In view of the apparent lack of financial resources of many of the students, the available scholarship and loan funds are inadequate. It is noted that the school has a relatively large number of alumni and it is suggested that a well directed effort might produce from this source at least a portion of the funds needed.

Basic and Clinical Facilities. The expressed need for expansion of the library and of the basic student laboratories seems well justified.

There is need for some expansion, improvement and extensive renovation of the University Hospitals. It is important that the rebuilding of the clinical facilities be carried forward rapidly. At the same time the need for an appropriation of funds for patient service again is emphasized.

Curriculum. The present curriculum overall does not adequately reflect modern trends towards graduate education in the sense of provision of opportunities for self study. The entire four years appear to be heavily structured, and lecture and examination oriented, with little free time, at least in the preclinical years. The laboratory exercises are, in some instances, unimaginative and outdated by modern standards. In the clinical years there is heavy emphasis on didactic instruction, even to the extent of forcing clinical clerks to leave their patients for two hours of mid-day lecture throughout the third year. The curriculum of the postgraduate degree program is in striking contrast, and could serve as a model for renovation of the undergraduate curriculum.

Preclinical Departments. Probably as a reflection of the heavy teaching load of large classes in medicine, together with a similar service load for other students, instruction in these departments appears to be, on the whole, pedantic and uninspired. The faculty appears to be somewhat overwhelmed with work and with some noticeable exceptions was not found fully effective means for providing an atmosphere of scholarship and

motivation. The teaching emphasis is largely on transfer of present knowledge, which is in striking contrast to the very vigorous investigative efforts of the staff.

On the other hand, the combined laboratory program of the Departments of Microbiology and Pharmacology would seem to represent an imaginative and successful effort to provide the best possible teaching atmosphere.

The fine working relationship between the chairmen of the Basic Science departments, established through the Basic Science Council, is to be commended and bodes well for the future.

Clinical Departments. Among the clinical departments there appears to be inadequate communication. The Clinical Science Council does not seem to be functioning as effectively as the Basic Science Council. A lack of unifying leadership is evident and common goals for clinical instruction are not apparent. The coordination, scheduling and distribution of the clinical clerkships generally is in need of study.

Key Recommendations. The Dean's office should assume a more active leadership role in working with the faculty, in whole or in its parts, towards a clearer goal of instruction, evaluation, and purpose.

Efforts should be stepped up to secure operating funds for the enhancement and operation of the University Hospitals.

Special attention should be centered on the combined degree program, especially in terms of encouraging the interest therein of young, vigorous first rate faculty members. This program has much merit, and will serve as a model being watched by many institutions.

RECOMMENDATION

In recognition of the immense scope of the effort undertaken by the Indiana University School of Medicine, and of the distinctive contribution of its Combined Degree Program, the Chairman and Members of the Liaison Survey Team recommend continuing full approval by the Council on Medical Education and Hospitals of the American Medical Association and continuing membership in the Association of American Medical Colleges. It is further recommended that this action be effective the date of completion of the visit, December 12, 1963.


Kenneth E. Penrod, Ph.D.
Council on Medical Education
American Medical Association


Paul J. Sanazaro, M.D.
Executive Council
Association of American Medical Colleges


Richard F. Manegold, M.D.
Council on Medical Education
American Medical Association


Edward S. Petersen, M.D., Representing
Executive Council as Secretary
Association of American Medical Colleges

December 9-12, 1963