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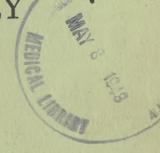
The

WASHINGTON UNIVERSITY

MEDICAL ALUMNI

QUARTERLY





PUBLISHED IN THE INTEREST OF THE UNIVERSITY AND THE ALUMNI

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The Use of Antibiotics in the Treatment of Bacterial Infections Proceedings of Washington University Medical Society Anesthesiology Professorship Established

Vol. XI

JANUARY-APRIL, 1948 Nos. 2 & 3

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The Washington University Medical Alumni Quarterly

Vol. XI

January-April, 1948

Nos. 2 and 3

The Use of Antibiotics in the Treatment of Bacterial Infections*†‡

W. Barry Wood, Jr., M.D. (by invitation), St. Louis, Mo.

As an internist I am not qualified to do more than outline the principles of the subject of "The Use of Antibiotics in the Treatment of Bacterial Infections." I am convinced, however, that it is extremely important for all who use antibiotics to understand their pharmacology; therefore, I shall devote most of my discussion to the pharmacology first of penicillin, and secondly of streptomycin.

CLINICAL USES OF PENICILLIN

Concerning the clinical use of penicillin there are certain important facts with which I am sure all of you are familiar. I would like to review them quickly:

1. Penicillin is effective in the treatment of acute infections caused by most Gram-positive micro-organisms (particularly Gram-positive cocci) and by the meningococcus and gonococcus.

2. Penicillin is effective in the treatment of both early and late syphilis.

3. It will control such highly fatal diseases as pneumococcal meningitis, where the case fatality rate in untreated cases is close to 100 per cent.

4. Penicillin will cure many cases of subacute bacterial endocarditis.

5. It has been successfully used in such suppurative lesions as pneumococal empyema, acute osteomyelitis and cavernous sinus thrombosis.

6. Penicillin is a relatively nontoxic drug.

In spite of the effectiveness of penicillin as a therapeutic agent, it has at least two important limitations: the first of these is its ineffectiveness in the treatment of infections caused by Gram-negative bacilli; second, its very rapid excretion from the body.

^{*} Read at the Fifty-first Annual Meeting of the American Laryngological Rhinological and Octological Society, Inc., St. Louis, Mo., April 25, 1947.
† From the Department of Medicine, Washington University School of Medicine, and

the Barnes Hospital, St. Louis, Mo.

‡ Reprinted from *The Laryngoscope*, Vol. LVII, No. 10, October, 1947. Published by The Laryngoscope, 640 South Kingshighway, St. Louis 10, Mo.

PHARMACOLOGY OF PENICILLIN

The proper use of penicillin in clinical medicine depends a great deal upon knowledge of the pharmacology of the drug. This fact was brought home to us very forcibly in our own department recently when a young boy, 14 years of age, was admitted to the hospital with pneumococcal meningitis. During the previous three weeks he had been treated for a middle ear infection and had received one injection of penicillin a week. He entered the hospital in extremis and died of the meningitis within a period of 24 hours. The physician who had prescribed the penicillin in this case obviously must have been unfamiliar with the pharmacology of the drug.

When penicillin is administered intravenously in a dose of 20,000 units, it causes an immediate rise in the penicillin blood level to approximately 0.6 units per cc. Because of the rapid excretion of the drug by the kidneys, the blood level begins to fall almost immediately, and measurable quantities of the drug remain in the blood for less than three hours. Within the first hour after injection approximately 40 per cent of the penicillin can be recovered in the urine. It is because of this very rapid excretion of the drug that penicillin must be administered at frequent intervals during both day and night, if a bacteriostatic concentration of the drug is to be maintained in the blood. When the drug is injected intramuscularly, the blood level curve is much the same, although its peak is slightly lower, and the excretion in the urine is not quite so rapid. The intramuscular route is the one most widely used today in medical therapy. Subcutaneous injection gives very low blood levels and, therefore, is seldom used.

When the dosage is increased to 40,000 units, the peak of the blood level curve is higher, and detectable quantities of the drug remain in the blood stream a little longer. Even with the large doses little drug remains in the blood after three hours. Since most of the penicillin is eliminated in the urine, it is not surprising that the blood level curve is markedly influenced by renal function. When the latter is depressed, the drug tends to remain in the blood stream considerably longer than in the normal patient.

The foregoing remarks apply to the use of penicillin dissolved in saline solution, the common vehicle used in medical practice. When penicillin is prepared in a mixture of oil and beeswax ("P.O.B."), the drug is absorbed more slowly from the site of intramuscular injection, and an adequate blood level may be maintained for as long as 24 hours. The usual dosage employed is 300,000 units per injection. In severe infections it is dangerous to rely upon this treatment alone because the blood level attained is not very high; however, if during the first day of treatment, one gives 300,000 units and then repeats it at the end of 12 hours, the blood level is usually adequate. From then on, it may be necessary to give the drug only once a

day. Penicillin in oil and beeswax has been found to be effective in the treatment of mild bacterial infections and is particularly advantageous in that it can be used in treating patients in the home.

Penicillin also may be given by mouth, but it must be emphasized that there are definite limitations to this method of administration. When given orally the drug is absorbed mainly from the upper part of the gastro-intestinal tract; however, only 20 to 30 per cent of the ingested drug is absorbed. Although some of the penicillin ingested may be destroyed by the hydrochloric acid in the stomach, the relatively low blood levels obtained by oral therapy are due mainly to the relatively poor absorption. The use of alkaline or amphoteric vehicles does not greatly influence the effectiveness of oral penicillin. Since only 30 per cent of the drug is absorbed, it is necessary to give approximately five times the amount of penicillin given intramuscularly in order to obtain the same blood level. A level of approximately one unit per cc. may be attained by the ingestion of 100,000 units every three hours. Penicillin should not be prescribed just before meals, because the drug passes through the duodenum more rapidly after the ingestion of food and is thus even less completely absorbed.

Systemic penicillin therapy alone should not always be relied upon. In the treatment of bacterial meningitis, for example, it is unwise to use only intravenous or intramuscular penicillin, because the antibiotic does not readily cross the blood-brain barrier. If, on the other hand, it is injected directly into the subarachnoid space, it remains in the spinal fluid in appreciable concentrations for more than 24 hours; thus, it is necessary to administer the drug intrathecally only once a day. Since penicillin is somewhat irritating to the meninges and will cause a cellular reaction in the spinal fluid when given in doses of 10,000 units, it is advisable to limit the size of the intrathecal dose. Twenty thousand units dissolved in 3 to 5 cc. of saline will be tolerated by most adults if given only once a day. Ten thousand units a day combined with systemic treatment have been found to be effective in all but the most fulminating cases of bacterial meningitis.

Penicillin may also be used locally at sites other than the subarachnoid space. Its injection into empyema cavities, for example, has made it possible to cure many cases of empyema without the use of surgical drainage. The effectiveness of penicillin in the treatment of empyema is due to the fact that a sufficient concentration of the drug may be maintained in the empyema cavity not only to stop the growth of the offending organisms but also to kill them outright. Penicillin differs from the sulfonamides in that when present in sufficient concentration (bout 25 units per cc.), it is bactericidal; thus, local penicillin treatment may be highly effective in the treatment of localized suppurative lesions such as empyema and abscesses.

STREPTOMYCIN

Streptomycin is a drug which is probably not so important to otolaryngologists as is penicillin. It is effective against Gram-negative bacilli such as the colon bacillus, Friedlander's bacillus, Hemophilus influenza and the organism that causes tularemia. I need not remind you that the latter organism is occasionally the cause of suppurative tonsillitis. Finally, streptomycin is active against the tubercle bacillus and has been found to be particularly effective in the treatment of tuberculosis of the larynx and trachea. Like penicillin, however, streptomycin has its limitations. It is ineffective in the treatment of typhoid fever and brucellosis, both of which are caused by Gram-negative bacilli.

Streptomycin is not so innocuous as is penicillin. For example, in large doses it will cause irritation of the kidneys and when administered over a long period of time it frequently leads to vertigo, nausea and sometimes rather severe vomiting. It not infrequently causes transient deafness and in some cases of tubercular meningitis it has caused permanent deafness. Prolonged use almost uniformly leads to an appreciable eosinophilia.

Streptomycin is available in crystalline form and, therefore, is standardized in grams or milligrams rather than in biological units. Since streptomycin units, however, are frequently referred to in medical literature, it is useful to remember that 1 gm. of the drug is equivalent to a million units. The drug is dispensed in a vial containing 1 gm. Four to 10 cc. of saline are injected directly into the vial, and the saline solution of the drug is injected intramuscularly every three to six hours. A total of 1 to 3 gm. a day is administered in the treatment of most infections.

PHARMACOLOGY OF STREPTOMYCIN

The pharmacology of streptomycin is very much like that of penicilln except that streptomycin is not excreted quite so rapidly in the urine and is not absorbed at all from the gastrointestinal tract. Streptomycin remains in the blood somewhat longer than does penicillin and, therefore, may be administered at slightly longer intervals. Only about 10 per cent of the injected streptomycin is excreted in the urine in the first hour as compared to 40 per cent of the penicillin. Streptomycin is rarely given intravenously since it is absorbed rapidly from the intramuscular site and sometimes causes reaction when given by the intravenous route.

OTHER PRINCIPLES OF ANTIBIOTIC THERAPY

With this background of the pharmacology of penicillin and streptomycin, I close the discussion by touching upon four other points that are of particular importance in antibiotic therapy:

First, the use of bacteriological cultures should be emphasized. Obviously,

since penicillin is effective mainly against Gram - positive organisms and not against Gram - negative bacilli it is essential to identify the causative agent. If the infection is caused by a Gram-negative bacillus, streptomycin, of course, rather than penicillin should be used. Ideally, one should not only identify the offending mirco-organism but one should also determine its sensitivity to the appropriate antibiotic agent. Such sensitivity tests, however, can only be carried out in relatively large laboratories and are certainly not needed in every case.

Second, a word of warning should be given concerning local therapy with antibiotics. It is tempting to use all chemotherapeutic agents locally, but local therapy is universally ineffective except in certain closed cavities. Acute streptococcal tonsillitis, for example, cannot be adequately treated by the use of penicillin troches. Effective concentrations of penicillin cannot be maintained for long on the surface of the tonsils or pharynx because of the continual washing effect of the saliva; also, all of the offending streptococci are not on the surface of the tonsils; many of them are deep in the tonsillar tissues. It is dangerous to rely upon local therapy alone in the treatment of severe infections anywhere in the body. Experience has shown that in most instances the main reliance must be placed upon systemic chemotherapy.

Third, comment should be made concerning the duration of antibiotic treatment. When patients are treated for only 12 to 24 hours, relapse is all too frequent. Bacteriostasis must be maintained for a long enough period of time to give the natural defenses of the body, particularly the phagocytic cells, an opportunity to destroy the offending bacterial agent. Penicillin and streptomycin in the concentrations usually attained with systematic therapy do not kill the bacteria but merely slow down or stop their multiplication. In most cases of moderate or severe bacterial infection it is necessary to continue antibiotic therapy for at least three or four days after the temperature has fallen to normal.

Finally, a word about dosage. Penicillin is such a nontoxic drug that one should always err on the side of giving too much rather than too little. Severe infections may require as much as 50,000 units of penicillin every two hours. It is particularly important to start treatment with a relatively large dose and to maintain a high dosage for at least a period of 24 hours. If an inadequate dose is employed at the outset, the infecting organisms may become drug-fast and thus complicate therapy immeasurably.

CONCLUSION

The introduction of antibiotics in medical therapy has revolutionized the treatment of acute bacterial infections. Clinical experience has clearly

demonstrated that penicillin and streptomycin, when properly used, are highly effective in a wide range of bacterial infections. The proper use of both of these new therapeutic agents depends primarily upon an understanding of their pharmacology.

Proceedings of the Washington University Medical Society

The Wasington University Medical Society, originally organized in 1912, was reconstituted on January 14, 1948, at a meeting in the Auditorium of the School of Medicine. The old Society had held about 150 meetings over a period extending from 1912 to 1931, at which time it became inactive. During the past year, interest in such a Society became manifest again and a Committee was formed to make plans for its reorganization.

As a result of the stimulation and efforts of the members of the Committee, the new organization has now begun its program and promises to be an important addition to Medical School activities. The Organization Committee consisted of Dr. Henry A. Schroeder, chairman, and Drs. Carl G. Harford, George Saslow, Robert E. Stowell, and John F. Taylor.

More than 200 members of the faculty and student body attended the first meeting, at which time the constitution and by-laws were ratified and the following officers were elected: Dr. Carl V. Moore, president; Dr. Gerty T. Cori, vice-president; and Dr. Robert J. Glaser, secretary. Drs. James Barrett Brown, Robert Elman, Arthur S. Gilson, Jr., and Joseph C. Jaudon were named to the Council. A program committee was appointed by the president and has the following members: Dr. Henry A. Schroeder, chairman, and Drs. Gilbert Forbes, Carl E. Lischer, Robert E. Stowell, and John F. Taylor.

It is planned that the Society will meet five times during the school year, and at each meeting four papers dealing with both clinical and laboratory investigations are to be presented. The fifth meeting will be devoted to papers by students dealing with research carried on during their four years in the School of Medicine. The Borden Award, given to the student whose work is considered the most outstanding, will be presented at the meeting.

Abstracts of all papers presented will be published in the Medical Alumni Quarterly. Alumni will be most welcome at any of the Society's meetings.

Abstracts of Papers Presented Before the Washington University Medical Society on January 14, 1948:

Effects of Exercise on the Renal Circulation in Man

By Harvey L. White and Doris Rolf

Department of Physiology

Light exercise produces slight falls in PAH (renal plasm flow) and inulin (glomerular filtration rate) clearances in normal human subjects. Moderate to moderately severe exercise lowers PAH and inulin clearances to half or less of their resting values and at least doubles renal vascular resistance; protein may appear in the first postexercise urine samples. Brief maximum exercise lowers PAH and inulin clearance to 20% or less of their resting values while renal vascular resistance is increased at least five-fold; a longer period of maximum exercise at a lower rate is less effective, reducing clearances to about a third of their resting values. Rise in plasma glucose, taken as a tentative index of increased adrenalin output, usually is not marked unless exercise is severe; in a given subject it is proportional to the severity of exercise. Protein does not appear in the urine formed during even the severest exercise of these experiments, but after severe exercise is present in the first one or two postexercise samples. The interpretation of the findings is that exercise brings on generalized renal vasoconstriction and that only at the maximum work levels do any large number of glomeruli drop out of function, occurrence of postexercise proteinuria being taken as an index of such dropping out during exercise.

Salt Poor Human Albumin and Plasma in the Correction of Hypoproteinemia

By Frank J. Kelly and Robert Elman

Departments of Internal Medicine and Surgery

This study consists of a comparison of the effects of intravenous injection of 25% salt poor human albumin solution and lyophilized Red Cross plasma in 22 patients with malnutrition, hypoalbuminemia and edema. Changes in plasma albumin concentration, plasma volume, and circulatory dynamics were measured as well as the capacity of these preparations to induce diuresis. From the data obtained the following conclusions were reached:

- 1) Plasma albumin concentration, 24 hours after injection of the 25% albumin solution, was significantly higher than after plasma containing equal amounts of albumin.
- 2) The plasma volume, 24 hours after injection of plasma, was significantly higher than after the 25% albumin solution.

- 3) The changes in total circulating albumin (plasma albumin concentration times plasma volume) were approximately the same.
- 4) There was no relation between the severity of the initial hypoalbuminemia and the degree of retention of albumin in the circulation. There was greater retention of injected albumin in the circulation when successive infusions of either solution were given to the same patient at several days' interval.
- 5) Plasma injection produced a significant elevation of the venous pressure in all cases. This effect was most marked in those patients who had febrile reactions. Twenty-five per cent albumin solution caused no elevation of the venous pressure.
- 6) Copious diuresis of water and salt with loss of weight and of edema fluid occurred after all but one injection of pure albumin whereas plasma was much less effective.
- 7) No change in the size of the red blood cells occurred following the injection of either solution, and proteinuria was not observed.
- 8) The increase in plasma volume per gram of injected albumin as the 25% salt poor preparation was 13.7 cc. immediately after infusion (at which time the plasma volume had increased maximally). The comparable figure per gram of albumin injected as plasma was 22.7 cc.
- 9) No reactions were observed following 29 injections of pure albumin, whereas febrile reactions with significant rise in the venous pressures occurred during or after plasma injection in three of eleven instances.

The Experimental Analysis of Gene Action

SOL SPIEGELMAN

Department of Bacteriology

The long range aim of our research program is to obtain information which would permit some insight into the mechanism whereby genes control the properties and functions of cells. If the generally accepted assumption is adopted that genes exert their influence by virtue of their ability to control the synthesis of enzymes, it becomes clear that knowledge of the processes leading to enzyme formation must precede any attempts to understand the mechanism of gene action.

The phenomenon of enzymatic adaptation in microorganisms appeared to offer the opportunity for an experimental analysis of the factors and processes involved in enzyme formation. An intensive study of this phenomenon over a number of years led us to a number of conclusions concerning the general features of the cellular synthesis of enzymes. The fact that it was possible to demonstrate that enzymatic adaptation involved protein

modification and that this could occur against a constant genic background indicated that the relation between gene and enzyme was by no means as rigid as had been generally supposed. It was apparent that the existence of a particular gene in the nucleus of a cell does not guarantee that the corresponding enzyme will be found in the cytoplasm.

A study of the kinetics of adaptation revealed that it was an autocatalytic process. Furthermore, competitive interactions between different enzyme-forming systems could be exhibited so that the formation and maintenance of any given enzyme was determined not merely by the inherent synthetic capacity of the system involved in its production, but also on the com-

petitive relations with other enzyme-forming systems.

The relative independence of the process of enzyme formation from the gene as well as the other features mentioned suggested a hypothesis of gene action which could act as a rational guide for the design of the further experimental analysis of the problem. The theory assumes that genes produce at various rates more or less complete replicas of themselves which enter the cytoplasm. These replicas, which are called "plasmagenes" are presumed to be nucleoprotein in nature in view of their origin and to possess to varying degrees the capacity of self-duplication. They are the actual agents of enzyme formation and their presence in the cytoplasm controls the types and amounts of proteins and enzymes synthesized at any given moment. These plasmagenes, like all self-duplicating entities, would compete with one another for protein and energy, and the outcome of such competitive interactions would then determine the enzymatic constitution of the cytoplasm.

From a general point of view, the unique feature of this theory of gene action is that while supplying a link between the gene in the nucleus and the enzyme in the cytoplasm, it at the same time predicts that cells with identical genomes need not possess identical enzymatic constitutions. As a tentative working hypothesis it has the advantage of furnishing a unified point of view from which such diverse and apparently contradictory phenomena as classical Mendelian genetics, cytoplasmic inheritance, cellular

differentiation, and enzymatic adaptation may be analyzed.

The Relation Between Infant Birthweight and Subsequent Development of Maternal Diabetes Mellitus

By Joseph P. Kriss and Palmer H. Futcher Metabolism Division, Department of Internal Medicine

Analysis was made of birthweight data on infants born to 100 women destined later to develop diabetes and on infants born to 100 non-diabetic (control) women of comparable age and parity. In the two groups there

were 144 infants weighing ten pounds or more; 77.1% of the 144 were born to pre-diabetic women. Of 52 infants weighing 12 pounds or more, 90.3% were born to pre-diabetic women. Single and repeated births of abnormally large infants occurred far more commonly in the pre-diabetic mothers than in the control mothers. As reported by H. C. Miller, the average birthweight of the infants born to the pre-diabetic mothers was significantly greater than that of infants born to control mothers. The period between the birth of the first abnormally large infant and the development of clinical diabetes in the mother averaged about 24 years, with a range from 1 to 46 years.

According to Spiegelman and Marks, it may be predicted that 4% of women of childbearing age will develop diabetes. The data on our small group of subjects indicated that diabetes developed in over 50% of women giving birth to one baby weighing over 13 pounds or to three babies weighing more than ten pounds.

Attend the Annual Alumni Reunion and Banquet

WEDNESDAY, MAY 12, 1948, 7:30 P. M.

HOTEL SHERATON

(The old Coronado - Spring and Lindell, St. Louis)

Cocktails at 6:30 P. M.

FELLOWSHIP — ENTERTAINMENT — A DELICIOUS DINNER

Help us make this a reunion to be remembered

Plan Now to Be There

The dinner will be \$5.00 per plate. For reservations mail your check to Dr. George W. Ittner in care of the Alumni Office.

Anesthesiology Chair Established

Establishment of a permanent professorship of anesthesiology at Washington University School of Medicine was announced by Chancellor Arthur Compton on February 8. To be known as the Henry Elliott Mallinckrodt Professorship of Anesthesiology, it was endowed by Mr. and Mrs. Edward Mallinckrodt, Jr., of St. Louis in honor of their son who died in August, 1945.

Only the income of the endowment shall be used for support of the professorship. The principal, the amount of which has not been announced, will be maintained as a permanent capital endowment of Washington

University.

The Chancellor stated that no one has yet been designated as the new professor and that probably some time will be required to select the man to fill the chair. The man who is named to the position will teach surgical anesthesiology to undergraduate and postgraduate students. He will supervise the administration of anesthetic drugs and the use of oxygen and other gases as therapeutic agents in the hospitals of the Medical Center. He also will train resident physicians and nurse technicians in the practical application of anesthesiology as well as engage in research. A special research laboratory of applied physiology as it relates to respiration and the use of oxygen was recently set up in Barnes Hospital and will be integrated with this new professorship.

A committee composed of the Chancellor of the University, the dean of the Medical School, and the professor of surgery administers the anesthesiology professorship. Should two of these members decide at any time in the future that there is no longer any necessity for using the income for this specific purpose, the Corporation shall have the power to use part or all of the net annual income of the endowment for research in the School of

Medicine or in the fundamental sciences.

Barnard Hospital Affiliates with Medical School

Affiliation of Barnard Free Skin and Cancer Hospital with the School of Medicine for a three-year trial period was announced by John R. Shepley, chairman of the hospital board, on February 13. The move may result in construction of a 75-bed cancer hospital and transfer of all Barnard facilities to the medical center group if the board succeeds in raising funds for erection of the new building.

The action has been under consideration since last December when Dr. E. V. Cowdry, director of research at the hospital, announced his resignation from that post next June to concentrate his research activities at the Medical School. The affiliation of the Medical School and Barnard will allow continued benefit to Barnard from basic cancer research being carried on by Dr. Cowdry, and will enable the medical school to have benefit of clinical material which in the past has come through Dr. Cowdry's work at Barnard.

During the three-year trial period, the board of Barnard Hospital will seek funds for the erection of a \$750,000 hospital in the Washington University medical center. Should the board find that it cannot raise the money the contract of affiliation may be canceled on 90 days' notice. After the three-year trial period, it will continue in effect unless a one-year notice of termination is given by either party. The board plans to sell the present 44-bed hospital at 3427 Washington if plans for the new construction prove feasible.

Dr. Cowdry is moving his 18-man staff of research workers to the anatomy department in the Medical School so they can devote their full time to basic research in the University medical laboratories.

Lectureship Established to Honor Dr. Seelig

Friends and colleagues of Dr. Major G. Seelig, prominent St. Louis surgeon and research scientist recently retired, have contributed funds to establish an annual lectureship in his honor at Washington University School of Medicine. The Washington University Seelig Fund, as it is to be known, recently passed the \$5,000 mark.

Interest from this fund is to be used to pay the expense of an annual lecture sponsored by the School of Medicine and named the Seelig Lecture. Any unused funds in any year may be added to the principal or used for a fellowship or scholarship to support in part an undergraduate or postgraduate student in the School of Medicine.

Those who have contributed to the Seelig Fund believe that this annual lectureship, or fellowship, at the Medical School will be a more lasting and appropriate tribute to Dr. Seelig's many years of civic and personal activities than a testimonial dinner or gift would have been.

In January Dr. Seelig retired from the staff of the Medical School after 27 years in the department of surgery. He retains his title of professor emeritus of clinical surgery. Dr. and Mrs. Seelig have moved to Atherton, California, where they are living at 54 Belleau Ave.

Indicative of his interest in civic affairs and in teaching, Dr. Seelig's

greatest personal joy was in watching the Negro medical profession in St. Louis attain recognition in national medical organizations. He held active positions on the staffs of Barnard Free Skin and Cancer Hospital and Peoples Hospital until he retired last January, and had been conducting cancer research for the past 17 years.

Child Guidance Clinic on Permanent Basis

Now administered as a permanent unit of the Medical School, the Child Guidance Clinic is on a full-time schedule studying behavior problems and providing neuropsychiatric treatment for children. Dr. Samuel R. Warson, assistant professor of psychiatry, is acting director of the Clinic, which is a joint project of the Department of Neuropsychiatry and of the Washington University Clinics. Two clinical psychologists and two social workers are on Dr. Warson's staff.

Referrals to the Clinic come from outside sources such as social agencies, schools, and physicians as well as from the Washington University Clinics. These children first have preliminary interviews with one of the psychiatric social workers before being admitted to the Clinic. Patients admitted have a psychiatric evaluation in addition to basic psychological tests and a psychological evaulation. Treatment plans are decided at a clearing conference of psychiatrists, psychologist, and social worker. Patients under treatment are review periodically by this board to check on progress and make recommendations.

The Child Guidance Clinic is serving a definite need in St. Louis and its communities by offering help to parents and expert treatment for children with special problems. Conference and play therapy rooms are located in a building adjacent to the Medical School, but facilities in Occupational Therapy, Children's Hospital, and other locations in the Medical Center are used also.

St. Louis Medical Schools Running Close Race

The two medical schools in St. Louis are running a very close race in providing practicing doctors for the city. Of the 2,031 doctors in the city, 592 are graduates of Washington University's school, while 599 received degrees from St. Louis University.

Broken down into percentages, 29.1% of the physicians were furnished by Washington, while 29.5% came from St. Louis University. Adding the two, 58.6% of the doctors in St. Louis, (or 1,191) have received their medical training locally. These figures are based on the 1942 edition of the American Medical Association directory, and the newer one now being compiled may offer some interesting comparisons to these figures.

V. A. Sets Up Epilepsy Unit at Jefferson Barracks Hospital

The Veterans Administration approved on February 23 the establishment of a center for the treatment of post-traumatic epilepsy at Jefferson Barracks Veterans Hospital, St. Louis. This action follows a study of medical records of veterans who developed epilepsy after suffering head injuries. The study was conducted by Dr. Henry G. Schwartz, professor of neurological surgery; Dr. James O'Leary, professor of neurology; Dr. George Bishop, professor of neurological physiology; Dr. George Roulhac, instructor in neurological surgery; and Dr. Joseph J. Gitt, instructor in clinical neurology.

The epilepsy unit will be for veterans in states west of Ohio and will make use of existing facilities, with surgery to be done at Barnes Hospital. It will be one of two centers in the country, with the other being located in Massachusetts for veterans in the East.

Postgraduate Division Offering Courses in Varied Fields

The Division of Postgraduate Studies has announced the courses to be offered during the spring and summer months in various departments of the School of Medicine, and bulletins containing full details are now available.

Beginning on May 3, three short continuation courses have been planned for both general practitioners and specialists. These will cover only a limited number of subjects in each field so that a complete review of one or two can be obtained.

May 3 to 7—Treatment of Fractures, Department of Surgery

May 10 to 22—General Practice of Medicine, Department of Medicine May 24 to May 29—General Pediatrics, Department of Pediatrics

A four weeks continuation course in obstetrics and gynecology will start on May 31 and continue through June 26. This course has been planned especially for the physician in general practice and for the physician who partially specializes. It is designed to provide practical answers to many problems which arise in every busy practice. The latest practical methods of diagnosis and treatment will be discussed and illustrated, wherever possible.

A refresher course in ophthalmology will be offered for three weeks, starting on June 7. Intended for the physician who has completed basic training in this field, it is designed to meet the needs of the practicing ophthalmologist who desires to refresh himself in the fundamentals of his specialty and become acquainted with recent advances in the field.

Full information as to martriculation and registration fees, requirements, and supplies may be obtained by writing to the Director to the Director, Division of Postgraduate Studies, in care of the School of Medicine.

Opportunities

Iowa - Nose and Throat

The Medical Associates of Dubuque, Iowa, have an opening for a nose and throat man in their group practice, according to a letter from Dr. J. C. Pickard. Salary will be adjusted to individual ability and living quarters can be arranged. Anyone who has fulfilled requirements of the American Board of Otolaryngology or is interested in qualifying for board exams should write to Dr. Pickard for further information. The staff of Medical Associates includes seven board members in the various sepcialities and two F. A. C. S.

Arkansas — General Practice

Mrs. John Hogan recently wrote from Maynard, Ark.: "We are badly in need of a doctor." Maynard is a small town of about 200 population serving a large territory that is without any physicians. Mrs. Hogan mentioned that a Protestant would be preferred and could develop a well-paying practice. She will be glad to hear from anyone interested in settling in Maynard.

North Carolina — Ophthalmology

The Kinston Clinic in Kinston, North Carolina, has an opportunity for a young man who is a diplomate of the American Board of Ophthalmology, or who is qualified for same, to do eye work there. A number of special features include the fact that it is not a partnership, since the individual concerned would own and operate his own business, though he would be associated with a clinic group. Anyone interested should write to Dr. J. C. Peele in care of the clinic.

Army Overseas Hospitals — Advanced Training

The United States Army Medical Corps has a number of available positions which can be filled by physicians who have completed their formal board requirements (residence phase) but who need one or two years of practice limited to their speciality. Some of these openings may appeal to readers of the Alumni Quarterly and details are printed below. Eligible physicians are invited to communicate with the Surgeon General, U. S. Army, Washington 25, D. C., for further information. Inquiries should include the following information: name, address, age, nationality, marital status, dependents with age of each, medical school and graduation date, internship and date, details of graduate training, specialty and geographic location desired, contemplated length of service, details of prior military service.

The U. S. Army Medical Department announces the availability of opportunities for advanced training and experience in the various special fields of medicine and surgery in overseas Army hospitals. These hospitals are registered with the American Medical Association, and this training may be acceptable by the specialty board as part of the period usually required to be spent in limited practice and experience prior to admission for examination. Interested members of the medical profession who have completed the formal training requirements for certification in one of the special fields are eligible to apply for these positions. On January 1, 1948, the following opportunities will be available, and will be kept open until filled:

Specialty Numb	er of Openings
Eye, Ear, Nose and Throat	7
Obstetrics and Gynecology	14
Anesthsia	7
Ophthalmology	3
Otorhinolaryngology	3
Neurosurgery	1
Orthopedic Surgery	5
Thoracic Surgery	
Plastic Surgery	1
Radiology	11
Internal Medicine	24
Dermatology	3
Neuropsychiatry	15
Pediatrics	10
Cardiology	2
Pathology	1

(There are also 21 positions in general surgery and 5 positions in urology, but these boards specify "supervised practice" and it has not yet been determined whether or not the hospitals will be approved by these boards. However, full approval of these specialities is being sought and inquiries are invited.)

Positions offered will be in the following hospitals:

Name and Location			Bed Capacity	
97th General	Hospital,	Frankfurt, Germany	1,000	
98th General	Hospital,	Munich, Germany	1,000	
110th Station	Hospital,	Vienna, Austria	150	
120th Station	Hospital,	Bayreuth, Germany	325	
124th Station	Hospital,	Linz, Austria	150	
130th Station	Hospital	, Heidelberg, Germany	250	

250th Station Hospital, Regensburg, Germany	150
279th Station Hospital, Berlin, Germany	350
317th Station Hospital, Wersbaden, Germany	150
319th Station Hospital, Bremerhaven, Germany	600
385th Station Hospital, Nürnberg, Germany	350
387th Station Hospital, Stuttgart, Germany	453
388th Station Hospital, Giessen, Germany	250

These locations provide excellent facilities and equipment, a wealth of clinical material and the services of visiting consultants who are outstanding specialists in the various fields of medical practice. In addition, opportunities will be afforded to observe the work of notable scientists and physicians in German and Austrian universities.

The applicant may avail himself of this training for periods of one, two or three years. Those applicants who are selected, and who hold reserve commissions in the Medical Corps, will usually be recalled to active duty in the highest grade attained prior to release from previous active service. Those who do not hold such reserve commissions will be tendered a reserve commission in the Medical Corps in keeping with their age, years of professional experience and prior service in any branch of the Armed Forces. Prior military service is not required. Individuals who are members of the U. S. Naval Reserve must transfer to the Army Reserve before being called to active duty. Families of married applicants will be allowed to accompany them to the place of duty and suitable quarters are available. Families of individuals who do not declare their desire to serve for periods to exceed one year cannot be transported at Government expense.

Departmental News

Anatomy

Guest speaker at the second annual get-together of the National Research Council of Canada in Edmonton, Alberta, during February was Dr. Edmund V. Cowdry, professor of anatomy. Dr. Cowdry has been appointed a member of the Advisory Board of the Planning Committee for the Division of Experimental Biology of the Weizmann Institute of Science. Recently he was made an Honorary Associate in the Turkish Association for Cancer Research and Control.

Bacteriology and Immunology

Dr. Alfred D. Hershey, associate professor of bacteriology and immunology, started a six-month leave of absence on January 1 to study at the

California Institute of Technology. He is carrying out experiments in the laboratory of Dr. Pauling, head of the department of chemistry there.

Biological Chemistry

Dr. Carl F. Cori will receive the 1948 Williard Gibbs Medal of the Chicago Section of the American Chemical Society for his research work on the processes by which the body converts sugar into energy. Presentation of the award will be made at a meeting of the Chicago section on May 21. Dr. Carl Cori and Dr. Gerty T. Cori received honorary life memberships in the St. Louis Academy of Science at a dinner meeting on February 17 at the University Club.

Dr. Gerty Cori was named one of the ten outstanding women of 1947 by

the editors of Associated Press newspapers in their annual poll.

Dr. J. Oliver Lampen has been promoted to assistant professor of biological chemistry, effective July 1. He was formerly instructor in biological chemistry and has been a member of the staff since 1946 when he was appointed research assistant in the department.

Medicine

Dr. W. Barry Wood, Jr., conducted a class in basic science for the U. S. Army Medical Department's Research and Graduate School in Washington, D. C., on February 16 and 17. During March Dr. Wood spoke at a meeting of the Munice (Indiana) Academy of Medicine on "Chemotherapy of Acute Bacterial Infections," and before the New York Academy of Medicine Symposium on the Evaluation of Chemotherapy Agents on the subject, "Relationship of Host Mechanisms to the Effectiveness of Anti-bacterial Chemotherapy."

Dr. Leon Bromberg and Dr. Jerome E. Cook have been promoted from instructors in clinical medicine to assistant professors of clinical medicine, effective July 1. Dr. Bromberg was first appointed to the staff in 1926 as an assistant in medicine, and Dr. Cook joined the staff in 1914 as instructor in clinical medicine.

Occupational Therapy

The Department of Occupational Therapy was hostess to the Board of Managers and the Education Committee of the American Occupational Therapy Association at a luncheon on March 21 at Hotel Chase. More than 40 leaders in the field of occupational therapy from all over the country were gathered for this semi-annual meeting from March 20 through 22. A round-table discussion on treatment terminology, in which a group of St. Louis psychiatrists and doctors of physical medicine participated, was a highlight of the meeting.

Neuropsychiatry

Dr. George Saslow, assistant professor of psychiatry, has been promoted to associate professor of psychiatry, effective July 1. He joined the staff in 1943 as an instructor in psychiatry.

Ophthalmology

Dr. M. Hayward Post was promoted to professor of clinical ophthalmology, effective July 1, from associate professor. Dr. Post represented Washington University at the Third Pan American Congress of Ophthalmology in Havana, Cuba, from January 4 to 10. He presented a paper on the "Role of the Shahan Thermothore in Ophthalmic Therapy," and conducted an instruction course on the sterilization of ophthalmological instruments, which was given for three days during the meeting.

Dr. Lawrence T. Post, professor of clinical ophthalmology, was in New Haven, Connecticut, for the meeting of the United States Pharmacopaeia Advisory Committee on January 24. Two days later, he gave the annual Stanford R. Gifford Lecture in Chicago on "The Surgery of Strabismus."

Additional promotions in the department, effective July 1, are Dr. Bennett Y. Alvis, from assistant professor to associate professor of clinical ophthalmology, and Dr. Richard G. Scobee, from instructor in ophthalmology to assistant professor of ophthalmology. Dr. Alvis joined the staff in 1921 and Dr. Scobee was first appointed in 1941.

Otolaryngology

The Department of Otolaryngology was host to two visitors from South America during the latter part of February and early part of March. Observing work in the department were Dr. Carlos Sylvestre of Rosario, Argentina, and Dr. M. Cutin of Sao Paulo, Brazil.

Dr. Hallowell Davis, research professor of otalaryngology and director of research at Central Institute for the Deaf, recently attended a meeting of the Ultrasonics Panel of the Aeronautical Board in Washington, D. C. As chairman of the panel, Dr. Davis organized a symposium on the subject of ultrasonics. He also participated in meetings of the Psycho-physiology Panel of the Office of Naval Research.

Pathology

Dr. Robert E. Stowell has been promoted from assistant professor to associate professor of pathology. He first joined the staff as a research fellow in cytology in 1939.

Dr. Robert A. Moore, professor of pathology, spoke before the Club for Research on Ageing at the annual meeting in New York City on February 9 and 10. His subject was the "Organization of the Washington University Division on Gerontology." During March, Dr. Moore was in Philadelphia for the American Board of Pathology examinations and for meetings of the Interurban Pathologic Club, the International Association of Medical Museums, and the American Association of Pathologists and Bacteriologists.

Pediatrics

Dr. Merl J. Carson, assistant professor of pediatrics, gave a series of four talks, sponsored by the Missouri State Board of Health, in outlying districts of Missouri. The general theme of the series was care of premature infants.

Dr. Lawrence Goldman, instructor in clinical pediatrics, died on February 2 following a long illness. Death came a few days before Chancellor Compton and civic leaders were to pay first public tribute to the Children's Research Foundation, which Dr. Goldman was instrumental in founding in 1942. A graduate of the School of Medicine in 1928, Dr. Goldman did fellowship study at Johns Hopkins University and at the hospital for children's diseases in London. He had been on the Washington University staff since 1932, and bequeathed his medical library to St. Louis Children's Hospital.

Four promotions, all effective on July 1, have been made in the department. Dr. Adrien S. Bleyer, former instructor in clinical pediatrics, has been made associate professor of clinical pediatrics; he was lecturer in public health in 1929 and became instructor in clinical pediatrics in 1933. Dr. Joseph C. Jaudon and Dr. Park J. White were promoted from instructors in clinical pediatrics to assistant professors of clinical pediatrics. Dr. White was first appointed to the staff as assistant in clinical pediatrics in 1921 and Dr. Jaudon joined in 1936 as instructor in clinical pediatrics.

Dr. Paul Zentay, instructor in clinical pediatrics and in clinical neurology has been promoted to assistant professor of clinical pediatrics and instructor in clinical neurology. His first appointment to the staff was in 1924 as instructor in pediatrics.

Physiology

Dr. Harvey L. White was promoted to professor of physiology and head of the department, effective February 1. Dr. White was graduated from the School of Medicine in 1920 and had been acting head of the department since July 1, 1946. He was a colonel in the U. S. Army Medical Corps during World War II and served in the American, Pacific, European, and African Theaters of Operation.

The American Physiological Society meetings in Atlantic City during March were attended by Drs. Joseph Erlanger, Harvey L. White, Gordon Schoepfle, Sheppard M. Walker, and Albert Roos from the physiology department. Dr. Erlanger was chairman of the section on axon and synapse, while Dr. White led the section on renal hemodynamics.

Preventive Medicine and Public Health

Dr. Robert E. Shank, a graduate of the School of Medicine in 1939, has been appointed professor of preventive medicine and head of the department of preventive medicine and public health, effective July 1. Dr. Shank, a native of St. Louis, served his internship at Barnes Hospital and took his residency at the Rockefeller Institute Hospital in New York City. At present he is with the William H. Park Laboratories in New York. He is a member of the Society of American Bacteriologists and served as lieutenant commander in the navy during World War II. He is married and has two small children.

Dr. George Saunders, assistant professor of preventive medicine, returned the middle of February from a three-week visit to the Virgin Islands and Puerto Rico. He was selected by the Secretary of the Interior to serve on a medical team studying medical care in those areas.

Radiology

Dr. Wendell G. Scott, associate professor of clinical radiology, delivered three talks before the International Post-Graduate Medical Assembly of Southwest Texas in San Antonio from January 27 to 29. Giving one talk each day, Dr. Scott spoke on "Cancer of the Colon and Its Detection by X-Ray," "Prolapse of the Gastric Mucosa as a Cause of Gastro-Intestinal Symptoms," and "Low Back Pain and Its Diagnosis by Radiographic Procedures."

Dr. Sherwood Moore, professor of radiology, attended the Gastric Cancer Committee meeting of the National Advisory Cancer Council in Cincinnati, Ohio, during February. Later in February he was in Chicago for the National Campaign Meeting of the American Cancer Society, of which he is a director-at-large.

Surgery

Dr. James Barrett Brown has been promoted to professor of clinical surgery, effective July 1. Formerly associate professor of clinical surgery, Dr. Brown is a graduate of the School of Medicine, Class of 1923. He was a lieutenant colonel in the U. S. Army Medical Corps during World War II and Senior Consultant in Plastic Surgery to the Office of the Surgeon General. Dr. Brown was one of three doctors collaborating in a panel discussion on "Management of Wounds, Surgical Incisions and Fresh Traumatic Wounds" at the Sectional Meeting of the American College of Surgeons in Oklahoma City during January.

Dr. Nathan A. Womack, former professor of clinical surgery, resigned February 29 to take up his position as head of the department of surgery at the University of Iowa. Dr. Womack was appointed assistant professor of surgery in 1936, associate professor of clinical surgery in 1939, and professor of clinical surgery in 1947.

Dr. Robert Elman spoke before the Adams County Medical Society (Quincy, Ill.) on "The Problem of Starvation in Hospital Patients" on March 8. During January he gave the Ernest Edward Irons Lecture at Billings Hospital in Chicago, and in February he spoke before the Central Surgical Society meeting in Chicago.

The Wisconsin Surgical Club paid its annual visit to the department on February 4 and 5, attending a program of lectures and operations which had been arranged.

Dr. Charles L. Eckert and Dr. Frank McDowell have received promotions from instructors in clinical surgery to assistant professors of clinical surgery. Both were first appointed to the staff as assistants in surgery, Dr. Eckert in 1941 and Dr. McDowell in 1937.

Miscellaneous

Twenty-five members of the staff are attending a course in statistical methods and their applications in the medical sciences, which was started on February 6. The course, which is taught by Mrs. Barbara Bartels Hixon, instructor in mathematics at Washington University, will extend until about April 15.

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Alumni News

1883

Enoch R. Weaver, living in Bristow, Okla., writes that he is in his 12th year of retirement after having practiced for 53 years.

1893

John N. English died January 4, 1948, in Gillespie, Ill., where he had lived since 1904. He was 82 years old and had been retired from practice since 1937. Dr. English was chairman of the board of the Peoples State Bank in Gillespie. He and the late Mrs. English had celebrated their Golden Wedding Anniversary in 1943.

J. J. Meredith is living with his sister and brother in Cleveland, Ohio. His sister writes that he does not walk very well, but otherwise is fine and happy, and recently celebrated his 83rd birthday.

Arthur R. Stover can be reached at Box 951, Kingman, Arizona. He recently moved from Holbrook, Ariz.

1894

J. D. Brazeel of Okmulgee, Okla., reports that he is not in practice but is able to play a round of golf almost every day after 85 birthdays.

1895

Sandor Horwitz has received a lifetime commission as lieutenant colonel in the United States Army Honorary Reserve. He was honorably discharged from the U. S. Army as a captain after World War I and entered the Army Reserve Corps, advancing to the rank of lieutenant colonel. For the past several years, Dr. Horwitz has been superintendent of the Peoria district for the Illinois Department of Public Health.

1904

After practicing medicine for 42 years, Ira C. Stayner died at his home in Spencerville, Ohio, on Sept. 12,1947.

Dr. Stayner had practiced in Spencerville since 1905, except for a four-year period spent as assistant physician in the State Hospital for Feeble Minded at Apple Creek, Ohio.

1907

Llewellyn Sale inaugurated his term as president of the St. Louis Medical Society on Jan. 6, 1948. Dr. Sale, who is assistant professor of clinical medicine at Washington University, is a former president of the Missouri Social Hygiene Association and of the St. Louis Social Planning Council. At this same meeting, C. Malone Stroud (26) was installed as one of the councilors of the Society; and Oliver Abel, Jr. (23), Carl Althaus (03), William B. Kountz (26) and Curtis Lohr (22) were installed as delegates.

1909

For his instrumental part in the growth of the Missouri Social Hygiene Association, Richard S. Weiss was honored on February 3, 1948, by having his name inscribed on the Honorary Life Membership Roll of the American Social Hygiene Association. He was president of the American Academy of Dermatology and Syphilology in 1941 and is now a Diplomate of the American Board of Dermatology and Syphilology. At present Dr. Weiss is honoary president of the Missouri Social Hygiene Association, having served as president of that group from 1937 to 1945. He has practiced dermatology in St. Louis since 1914.

Theodore P. Brooks died March 31 of a cerebral hemorrhage at Lutheran Hospital in St. Louis. He was an assistant professor of orthopedic surgery at Washington U., and had been a specialist in that field for the past 23 years. He was a member of the executive board of the St. Louis Council of

Boy Scouts of America, F.A.C.S., and was on the staffs of Barnes, Deaconess and Lutheran Hospitals in St. Louis. Navy General Hospital in Hot Springs and to the Veterans Hospital in North Little Rock, Arkansas.

1919

Leo Joseph Starry of Oklahoma City was appointed chairman of the department of surgery at the Medical School, University of Oklahoma, during January, 1948.

1921

"Enjoyed Dr. Compton's visit here so much. Send him around again," writes Clifford C. Sherburne of Columbus, Ohio.

John C. McKittrick has moved from Monmouth, Ill., to 812 North Seventh St., Burlington, Iowa.

1924

Milo Tedstrom of Santa Ana, California, recently was elected president of the Orange County Medical Association. He was resident at Barnes in Internal Medicine in 1926. This information comes from A. G. Henrich, '27, of Los Angeles.

George H. Garrison is assistant professor of pediatrics at the University of Oklahoma Medical School and speaker of the House of Delegates of the Oklahoma State Medical Association.

1925

Separated from active service in August, 1946, as a lieutenant colonel, Jerome S. Levy has resumed his practice, limited to gastroenterology, in Little Rock, Ark. He married Marion Lee of Indianapolis in June, 1946, and Carol Lee Levy arrived June 28, 1947. Dr. Levy is associate professor of medicine in charge of gastroenterology at the University of Arkansas School of Medicine. He has been elected an associate member of the American Gastroenterological Association, and was appointed civilian consultant in gastroenterology to the Army and

1928

Lawrence Goldman died February 2 in St. Louis after a long illness. He was 44 years old and is survived by his wife, Vida, a son Myron, 18, and a daughter, Vida, 15. At the annual meeting of the Children's Research Foundation, February 8, Chancellor Compton said of Dr. Goldman: "He was a great spirit and the kind of person whom St. Louis is glad to have represent it, as Dr. Goldman did in his medical work in the East and in Europe." (See Departmental News, Pediatrics.)

1929

Donald Ford Robertson, died at Presbyterian Hospital, New York, on November 8, 1947 of leukaemia. He had been for eleven years Associate Medical Director of Merck & Company during which he won widespread recognition for the high quality of his research. In recent years he made valuable contributions in the subjects of penicillin and streptomycin. Dr. Robertson's scholastic record in college and medical school was outstanding: an M.S. degree from the University of Missouri in 1927 on cytological studies, the Gill Prize in Anatomy and graduation in medicine cum laude. He was appointed student assistant in anatomy during the medical course and interned in Presbyterian Hospital, New York. His interest was in research rather than in medical practice and he demonstrated inclination toward anatomical fields in pursuing investigations on mitochondria while a medical student, finding time in later years to write a monograph on the anatomy of the South American monkey, Lagothrix, left unfinished by his untimely and lamented death.

1930

W. E. Alsup has moved from the Alsup Clinic in Honolulu to San Mateo, Calif.

1931

Martin M. Weinbaum has been health commissioner to the city of Marion, Ohio, for the past ten years. He says he has a general practice with emphasis on Ob-Gyn.

1932

Harold M. Williams was named secretary of the State Medical Association of Texas on January 20, 1948, to succeed the late Dr. Holman Taylor. Dr. Williams had been acting secretary since December, and had been named assistant secretary last summer. His duties include editorship of the Texas State Journal of Medicine, published in El Paso where Dr. Williams lives.

1933

Earl B. Zurbragg writes that he is in the general practice of medicine with most of his time devoted to the practice of anesthesia. He is married and has two sons: Eric, 4, and Anton, one year old.

1934

A. Joshua Siever died December 5, 1947, in Los Angeles following a long illness. Dr. Siever, who was born in Poland in 1902 and obtained American citizenship in 1927, was a member of the Los Angeles County Medical Association. He did postgraduate work at St. Francis Hospital in Colorado Springs, Colorado, and at Los Angeles Sanitarium where he was a resident. His specialty was chest diseases.

1936

John W. Records has been in group practice at the Oklahoma City Clinic since 1939 with five years out for the Army, most of which time was spent as instructor at Carlisle Barracks, Pennsylvania. During his last year in the army, he did peripheral nerve

surgery. He has been home a little more than two years with his family, which consists of wife (Eleanor Jeffrey) and three children: George (13), Susan (5), and Nancy (3). In June, 1947, he was certified by the American Board of Obstetrics and Gynecology.

William H. Jacobson is practicing internal medicine in Canton, Ohio. He now has a son, Robert Paul, two years old.

The preceding issue of the Quarterly erroneously reported the whereabouts of Wallace E. Allen. At present, he is chief of the Eye, Ear, Nose and Throat Department, United States Naval Hospital, Pensacola, Florida; and Clinical Instructor in Otolaryngology at the School of Aviation Medicine, Naval Air Station, Pensacola, Florida. He holds the rank of Commander in the Medical Corps, U. S. Navy.

1937

Ralph C. Petersen opened his offices in Glendale, California, in January, with a practice limited to fractures and orthopedic surgery. He writes the following: "I have just completed two and a half years of special training in orthopedic surgery-one year at the Los Angeles Children's Hospital and one and a half years at the Los Angeles County Hospital. After five years in the Army it has been a long grind to prepare for my specialty. You may be interested in other Washington U. men I have encountered. Henry Gehrand of my class is practicing pediatrics in Pasadena. Sam Hollome, '36, is in a surgical residency at Los Angeles County Hospital, and Ted Lynn, '38, is practicing orthopedic surgery in Beverly Hills."

Charles Polan stopped in at the Alumni Office while in St. Louis for a short visit during March. He is now living in Huntington, W. Va., and specializing in ophthalmology,

1938

Anthony Piraino resumed his practice in Oberlin, Ohio, late in 1945 after returning from overseas duty. He visited Washington U. for a postgraduate course last September.

Dorothy Gill of Seattle, Wash., reports: "I've added one new thing in 1947, a certificate from the American Board of Internal Medicine, but it competes unfavorably on my office wall with the picture I put up in 1946 of my three daughters—Nancy, Amy, and Bonny. Patients always note the latter, and never the former!"

Harry H. Abrahams has been a resident in surgery on the George Washington Medical School service at Gallinger Municipal Hospital in Washington, D. C., for the past two and a half years. He was in the Army Medical Corps for four years, three of which were spent on overseas duty. Previous to military duty, he had taken his internship at Kings County Hospital from '38 to '40, then spent one year at Meadowbrook Hospital as resident in pathology.

1939

George Fraser is at the U. S. Naval Hospital in Chelsea, Mass. He finished a one-year Navy Fellowship in radiology at Washington University in 1947.

John H. Ahrens is in Iowa City, Iowa, where he is with the State University of Iowa Hospitals.

1941

William C. Stahl is assistant director of the clinical laboratories, Miami Valley Hospital in Dayton, Ohio. He was assistant pathologist in the Veterans Adminstration Hospital at Dayton from July, 1946, to July, 1947.

Leon Kahn is now living at 12903 Zanja St., Venice, Calif.

1942

Arnold J. Herrmann is enjoying the change of scenery in Tacoma, Wash-

ington, since he moved there from Fulton, Mo.

Herman Rice, Cleveland, Ohio, is senior resident in surgery at Crile Veterans Administration Hospital in Cleveland, and has been there for two years. Prior to his residency at Crile, he spent four years at Mt. Sinai Hospital in Cleveland. He will complete his surgical training in the near future.

French H. McCain, also of Cleveland, is finishing up two years as assistant resident in medicine at the University Hospitals of Cleveland. He intends to start practicing this coming summer. He has two daughters, one and three years old.

1943

Martin P. Meisenheimer is the father of a son, Karl William, born March 11 in Prospect Heights, Ill.

David Feldman recently moved his offices from the Missouri Theater Building to the Humboldt Building in St. Louis. His practice is limited to internal medicine and cardiology.

James H. Quinn and Denise C. Quinn are living in Missoula, Montana, where he is practicing ophthalmology and she is doing pediatrics. They say there is good hunting in the fall, skiing in winter, and everybody is happy. Tney have one boy two and a half years old and a second son who is six months old.

Sigmund Gundle writes the following from Topeka, Kansas: "Our daughter, Ruth Elizabeth, was born March 1, 1947, following our son, Michael Julian, by two and a half years. You may recall that my wife, Beatrice A., though not a graduate of W. U., was instructor in the School of Social Work from 1942 to 1944. In 1947 I was discharged from the army after three years of service. For the last one and a half years in the army, I was Director of the Division of Psy-

chiatry and Sociology at the U. S. Disciplinary Barracks Camp in Gordon, Ga., and was promoted to major early in 1947. I was discharged in August, 1947 and at present we are settled here in Topeka, where I rereived a fellowship at the Menninger Foundation School of Psychiatry and plan to complete my training in psychiatry later in the year."

Albert Lemoine, Jr., recently moved his office from the Rialto Building to the Plaza Time Building in Kansas City, Mo.

Dorothy M. Case has moved to Denver, Colo., where she is living at 340 Colorado Blvd.

Torrence A. Makley writes that at present he is chasing a rainbow called ophthalmology. Upon his return from service, he found it impossible to get a residency so took a postgraduate course in ophthalmology at Northwestern while waiting for an opening. He is now studying ophthalmic pathology at the Army Institute of Pathology in Washington, D. C. Next July he starts a residency at University Hospital, Columbus, Ohio. Torrence is married to the former Anne Gorham, an alumna of Miss Helen Lamb's anesthesia course, and they have a bouncing six-month-old boy.

Nathaniel Ewing has moved to Vincennes, Ind., from Baltimore.

1944

Twelve members of the '44 class held a reunion on St. Valentine's night at the Hamilton Hotel in St. Louis. Dancing and food were the main attractions for Irvin Birenboim, David Citron, Robert Donaldson, Joseph Doyle, Albert Eisenstein, Russell Hunt, Bernard Lieppman, Virgil Loeb, Jr., Roland Neumann, Marvin Pursell, John W. Payne, and Harold Stricker.

Edward A. Mason writes from Cambridge, Mass., that he is out of the army at long last and soon starts work at Massachusetts General Hospital.

1945

John T. Johnstone, Jr., was married to Mary Xenakes on January 10 in Asbury Park, New Jersey. They are living in Corona, California, where he is at the U. S. Naval Hospital.

Dr. and Mrs. Norton E. Johnson announce the birth of a son, Keith Eric, on January 6. Capt. Johnson is with the Selfridge Field Base Hospital in Michigan, but their home is in Mt. Clemens, Mich.

1946

John McGrath is stationed in Fukuoka, Japan.

James C. Sisk has moved from St. Louis to Hot Springs, Ark,

Donald Gallagher recently joined the staff of Brooks General Hospital at Ft. Sam Houston, Texas.

Joseph C. Williams' address is 1218 E. 82nd Terrace, Kansas City, Mo.

Edward Niedermeyer is now in Roanoke, Mo.

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The School of Dentistry Otto W. Brandhorst, D.D.S., Dean

The School of Nursing Louise Knapp, R.N., B.S., A.M., Director

The School of Fine Arts
Kenneth E. Hudson, B.F.A., Dean

University College
Willis H. Reals, Ph.D., Dean

The Summer School Frank L. Wright, A.M., Ed.D., Director

Mary Institute, a preparatory school for girls, located at Ladue and Warson Roads, is also conducted under the charter of the University.