Twenty-fifth Annual Report

of the

University of Illinois Health Service

1940-1941

UNIVERSITY OF ILLINOIS

HEALTH SERVICE

Departments in Urbana-Champaign

Twenty-fifth Annual Report

1940-1941

and

A Brief Historical Appendix

J. HOWARD BEARD, M.D., Health Officer

Urbana, Illinois

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

TABLE OF CONTENTS

CHARTS

TABLES

TABLE OF CONTENTS

FOREWORD

A twenty-fifth annual report is an opportunity to record the events of a year, an occasion for obtaining a perspective, and a chance to note health trends both constructive and otherwise over a period of a quarter of a century. It also provides for inventories and comparisons which give substance to conclusions as to the physical condition of students entering the University during the last twenty-five years.

The objectives of the Health Service were rather clearly defined at its beginning, and efforts during the last quarter of a century have been directed to their attainment rather than to the seeking of new goals merely to insure growth. During this period, it has been kept constantly in mind that enduring progress can be achieved only by the adoption of policies and practices which time will justify.

A health service program to be adequate for a large institution of higher learning must provide for the extensive application of the principles of preventive medicine and sanitation in seven different but more or less related fields of health promotion and disease prevention:

1. Provision of a Healthful Environment

   Students must have wholesome surroundings if they are to escape epidemics, the annoyance of nuisances, and dangers from fire. Their environment must include safeguards against accidents, and a good moral atmosphere. The houses in which they live, and the rooms where they learn must be clean, attractive, well-ventilated, and correctly illuminated both naturally and artificially. A safe water supply, proper disposal of sewage, clean, pasteurized milk, and carefully inspected food are essentials of good living conditions. Adequate protection for those handling injurious substances, using lethal gases, or coming in contact with plants or animals capable of producing disease, is an important consideration in the provision of a healthful environment.

2. Health Examination

A health examination of "all students entering the University for the first time" has been required since action by the Board of Trustees on March 12, 1918. It serves as an inventory of the physical and mental health of students, and provides the information essential for their classification for military training and physical education, and the correction and alleviation of defects and abnormalities.

Conditions found at the time of the examination afford an excellent opportunity to promote health education by discussing with students personally the nature, origin, and treatment of their physical or mental handicaps. They are also told where and how they may obtain the special attention required to meet their needs. The examination and its "follow-up" also impress upon students the importance of a periodic medical "check-up" and thus contributes to their keeping physically fit, and at their highest efficiency.

A medical examination makes possible the diagnosis of disease in its incipiency, the prompt institution of treatment, and the taking of immediate action for the control of communicable disease. It reduces to a minimum the risk of requiring compulsory exercise without the adoption of proper safeguards to protect students against injury. By encouraging them to correct their defects and dysfunction early in their college career, they are materially helped in making the most of the facilities offered for their education.

By requiring a physical examination of each student on matriculation, it is possible to avoid the futile procedure of giving men military training who would later be rejected for military service. This saves both effort and money. The examination aids in locating and preventing subnormal students carrying a study schedule which may threaten, if not actually precipitate, a physical or mental breakdown.

3. Prevention and Control of Communicable Disease

The Health Service uses every practicable means to prevent and control communicable disease among students, faculty, and employees. This effort reduces sickness and death rates from preventable disease to the minimum. It is based upon the sound economics of keeping the greatest number of students possible in in the classroom.

Immunization against smallpox and typhoid fever has been continuously promoted by a campaign of education. Students requesting it and procuring the vaccine have been immunized against diphtheria, scarlet fever, Rocky Mountain spotted fever, Asiatic cholera, and yellow fever. Only those individuals whose duties require them to visit localities where the latter diseases are endemic have been inoculated against them.

Early diagnosis of communicable disease is essential in the prevention of its spread. It insures immediate isolation and quarantine, and thus decreases the number of contacts. Quick discovery of infectious disease makes prompt treatment possible, reduces the likelihood of complications, and lessens the loss of time from classes.

With the approval of the State Department of Health, modified quarantine has been established. "Exposures" have been given daily inspections and have been permitted to attend classes. During the last decade this arrangement has saved students, faculty members, and employees the loss of many thousand classroom and work hours without endangering any of their associates.

4. First Aid in Accident and Illness

The Health Service maintains a dispensary for ambulatory cases of accident or illness. This service is essential to detect communicable disease in its incipiency and to reduce to a minimum the danger of serious infections resulting from minor injuries. It promotes prompt hospitalization which does much to reduce the severity of illnesses and injuries so often caused by delay or neglect. Dispensary service also makes possible quick referral of the ill and injured to competent physicians and specialists.

First Aid Cabinets are located in convenient places in University buildings. These are equipped and supervised by the Health Service. The articles supplied to the cabinets are those approved by leaders in industrial surgery--the object being to provide all items necessary for the efficient rendering of First Aid preliminary to receiving medical attention, but not to encourage use of drugs or surgical materials by untrained persons, who in trying to do good, may do more harm than good.

5. Promotion of Mental Health

The Health Service from its beginning has accepted as self-evident that students not only need sound bodies and sound minds, but also wholesome, disciplined emotions, and a keen sense of social responsibility. At the time of the physical examination, efforts are made to detect students who may be nervously unstable or who give evidence of being maladjusted. This quest is continued through questionnaires in hygiene and in conferences relative to the findings of their medical examination. By frequent interviews where needed, and by "follow-up," students are helped in adjusting themselves to their surroundings and in obtaining satisfaction in their work.

6. Health Education

As the functions of the Health Service at Illinois are primarily preventive and educational rather than therapeutic, sustained

efforts are made to encourage students to acquire good health habits and to adopt an attitude towards personal and community health which will carry over into life and prove an advantage to them, their families, their communities, and the Nation.

Emphasis has been placed on the attainment of good physical health and mental toughness essential to meet with equanimity the vicissitudes of life, to withstand the strenuousness of the times, and to insure social vigor. Through education in personal and community health, effort has been made to give the leader of tomorrow the knowledge, awareness, and desire necessary to participate intelligently in enterprises for the promotion of the welfare of the community in which he lives.

7. Health of Personnel

In institutions of higher learning, as in the primary and secondary schools, it has been recognized as of paramount importance that the health of personnel, whether professional, skilled, or unskilled, should receive close attention, so that they will not be a source of disease, shall possess the vitality essential to pursue their work effectively and shall set an example of vigor and accomplishment.

SERVICES

I. Routine Office Calls

During the academic year 1940-41, 13,108 students were enrolled in the University at Champaign-Urbana. A great majority of these called at the Health Service Station one or more times during the year. They made a total of 54,363 visits, or an average of 4.14 calls per student. The average for women was 4.32; for men, 4.08; for upper-classmen, 3.49; for freshmen, 5.29. In addition, there were 2,386 visits by University employees, and 137 miscellaneous calls making a grand total of 56,886 calls.

Of the total visits, 5,179 were made because of the required physical examinations, and 3,832 by students for conferences relative to them. For the last sixteen years, freshman men have made about 2.13 more visits per student than upper-class men; and freshman women, 0.56 more visits per student than upper-class women. The calls of the freshmen are exclusive of examinations and re-examinations, and are caused by their somewhat greater susceptibility to infectious disease, less knowledge of hygiene, less alertness in anticipating and caring for illness in its incipiency, and greater need of adjustment.

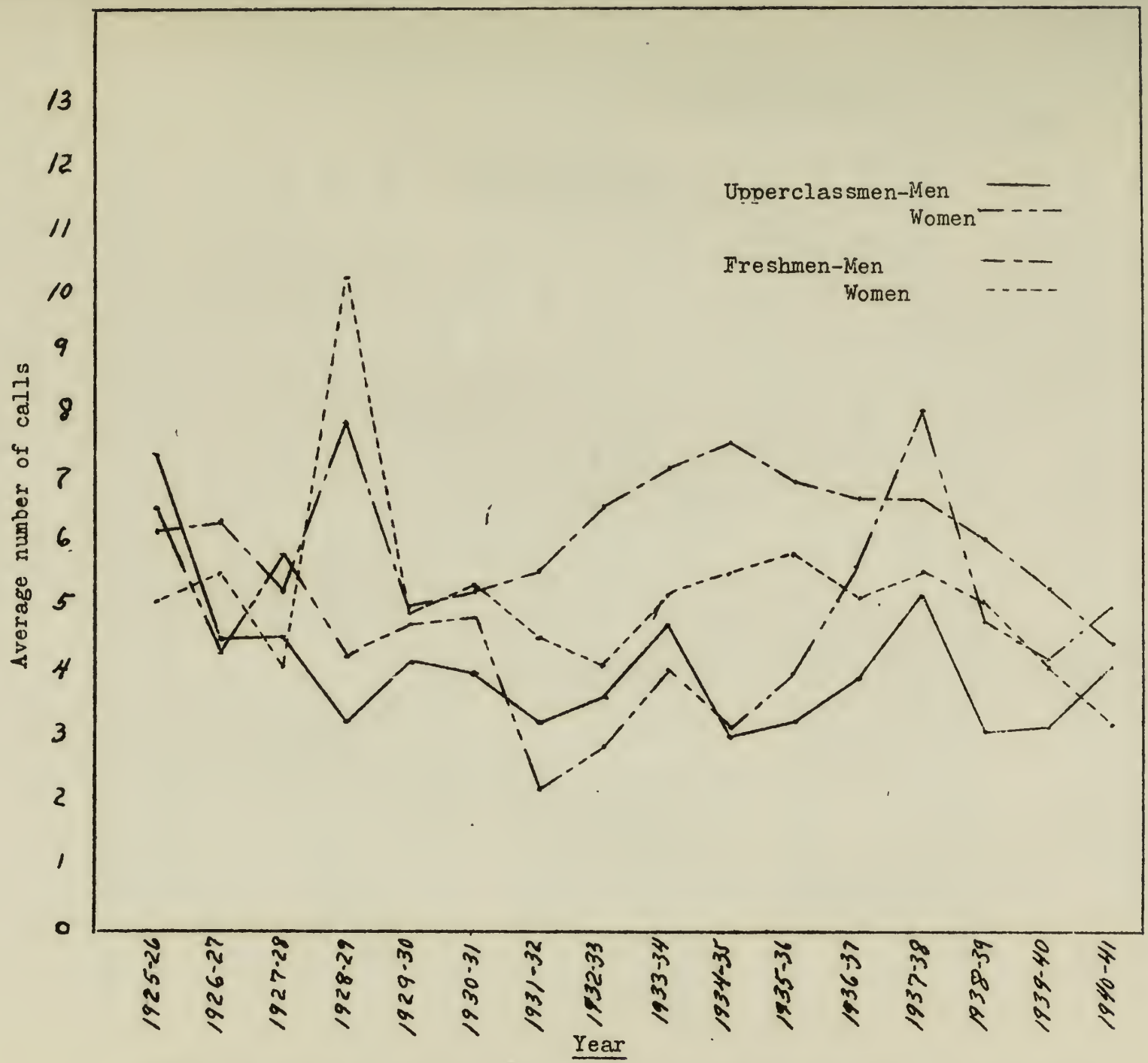
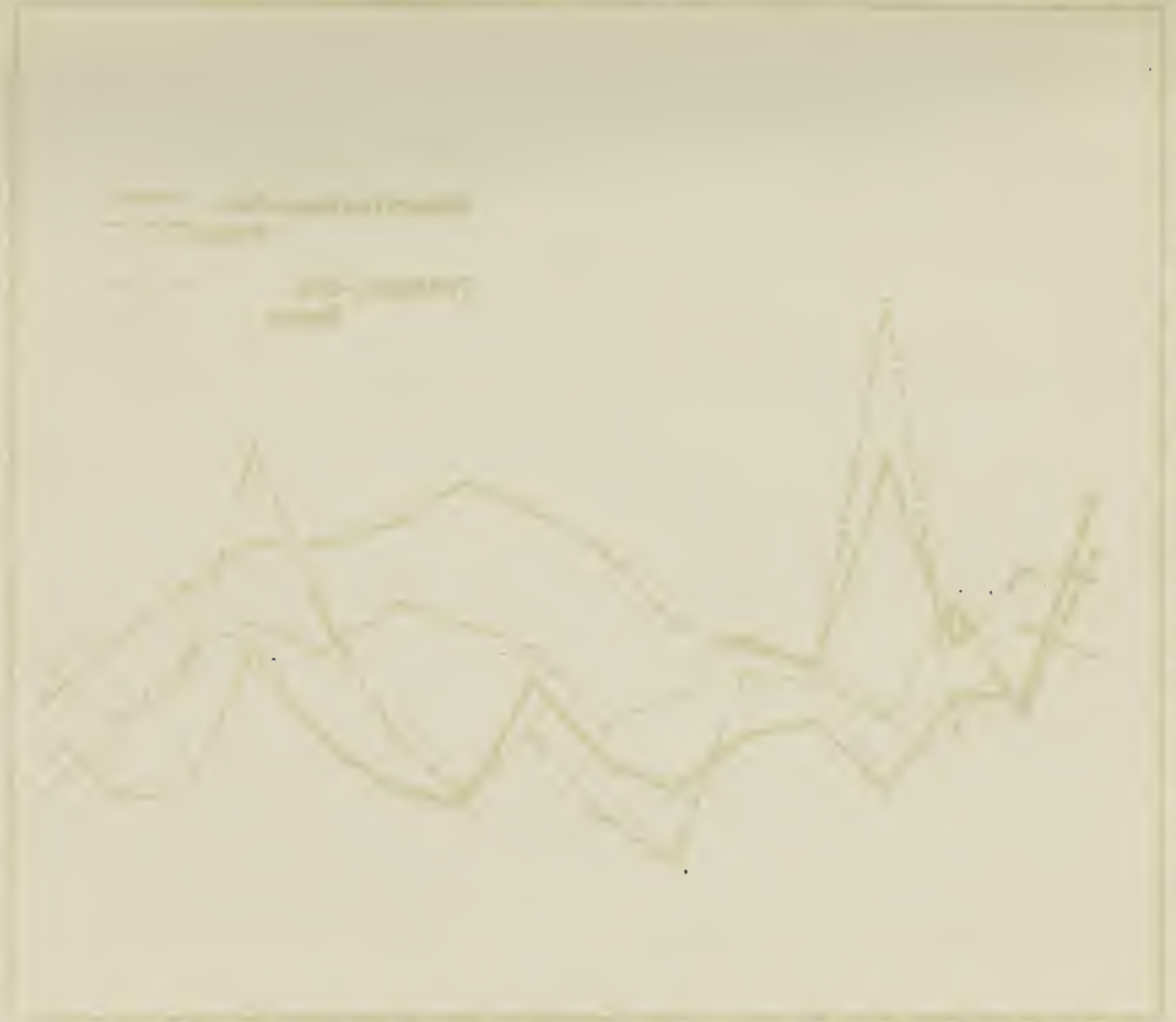


Chart No. 1

AVERAGE NUMBER OF CALLS FOR MEN AND WOMEN -- FRESHMEN AND UPPER CLASSMEN.
1925-1926 - 1940-1941



There were 16,260 laboratory tests made for students and employees during the year; 11,394 at the Health Service Station, and 4,866 by the State Laboratory. Special tests were given 189 students who wished motor vehicle permits and 532 employees desiring to drive University cars.

II. Medical Examinations

Complete physical examinations were given to 5,179 students during the year. Of these, 3,745 were men and 1,434 were women. Of this total, 453 were individuals who did not matriculate. Each year from 8 to 10% of those examined do not enter the University.

A total of 73 pupils seeking admission to the University High School were examined. Of these, 34 were boys and 39 were girls. Of this group approximately 48% had had their tonsils removed, none had serious abnormalities, and only 2.06 had not been vaccinated against smallpox.

Because of the turnover associated with war, the increase in the number of workers incidental to servicing the Union Building and the Residence Hall for men, 372 domestics and laborers were examined, who were prospective Civil Service employees. Of these, 286 were men and 86 were women.

In cooperation with the College of Engineering, twenty-three students who were candidates for the primary course

NUMBER OF STUDENTS PER 1000 EXAMINED
WHO FAILED TO REGISTER

Year	Number Taking Physical Exams	Number Not Registering	Number Per Thousand
1928-29	4457	273	61
1929-30	4696	323	69
1930-31	4772	333	70
1931-32	3936	296	75
1932-33	3131	260	83
1933-34	3728	361	97
1934-35	4321	241	56
1935-36	4662	474	102
1936-37	5346	478	89
1937-38	5456	553	101
1938-39	5108	480	94
1939-40	4691	408	87
1940-41	5179	453	87

Chart No. 2

in the aviation training program were given preliminary physical examinations. This procedure saved a number of applicants from paying for special examinations when it was determinable in advance that they could not meet the physical standards of the Civil Aeronautics Authority.

Examinations for chauffeurs were given to 457 men and 75 women wishing to drive University automobiles. Of these, 471 were considered to be physically normal for driving, and 61 were found to have handicaps which made them increased risks when operating a car. A total of 189 students requesting motor vehicle permits were examined: 163 were found to be normal and 26 had defects which made driving more hazardous than ordinary. Fortunately, most of these abnormalities were associated with vision and were correctible by the use of glasses.

A total of 4,334 athletes were examined before participation in intercollegiate and intramural sports. Ten were rejected for the former, and eleven for the latter. The gradation of games on the basis of speed, strength, and endurance affords each student an opportunity to get exercise under conditions of greatest safety, when given proper preliminary training.

During the year, 863 foodhandlers were examined to determine their physical fitness and disease carrier states before serving in the food distributing agencies of the University; three prospective foodhandlers were discovered to be carriers of typhoid fever: one was a student expecting to take the course in Cafeteria Management; one to be a cook at the Union Building; and the third was to serve as a caretaker in Illini Hall. It is hardly necessary to speculate upon the harm a typhoid carrier could do in the kitchen of the University Cafeteria or dining service of the Illini Union.

Premarital examinations have been available to students since the enactment of the Saltiel law. During the year, 74 of them received the benefit of this service.

FOLLOW-UP

New Students: At the time that new students take their physical examination, a brief summary of the abnormal findings, if any, is made on their cards. Subsequently, they are recalled for conferences concerning the defects discovered, and are given advice regarding such correction and alleviation of their conditions as may be possible. A total of 2,091 men and 856 women were seen for this purpose.

Albuminuria: A total of 208 new students examined on matriculation in 1940-41 were found to have albuminuria. Repeated examinations showed the condition to be transient in 194 and persistent in 14 students. The latter were referred to their family physicians or to urologists for further study and treatment. One Civil Service employee had persistent albuminuria; of the 73 University High School students examined, only one had albuminuria. All of those seen at the Health Service Station who have persistent albuminuria are kept under observation.

Heart Disease: Of the 2,947 students examined, 43 were found to have cardiac abnormalities. These have been kept under observation, have been repeatedly examined, have been excused from physical education where the condition was marked, or have been given a program of exercise which will protect them against undue strain.

Tuberculosis: During the year, 55 students have requested tuberculin tests, of which 17 proved to be positive and 38 negative. Those who reacted positive have been urged to have roentgrams of their chests to establish as far as possible the extent and activity of their infection.

A detailed history, a thorough physical examination, and "follow-up" of suspicious cases are not enough to discover active tuberculosis in its minimal stage. Only by the wide use of the tuberculin test and X-ray of positive reactors can those with active tuberculosis be discovered in the student body and the greatest protection be provided for the University population. This procedure affords the best opportunity to discover tuberculosis in its earliest stage and to give treatment when "arrest" of the disease is most likely.

MENTAL HYGIENE

In addition to a regular physical examination, each student fills out a questionnaire which gives an insight into his health, mental state, habits, and living conditions. It supplements his medical record and physical examination, and is an important factor in determining his emotional development, attitude and adjustment.

Students found to have difficulty in adapting themselves to the demands of University life are seen periodically and every effort made to give them all possible assistance in adjusting themselves to their environment. They are encouraged to enter into forms of extra-curricular activity which will help them to find themselves and to achieve satisfaction in their work.

COMMUNICABLE DISEASE

Prevalence: There was less communicable disease in the University population this year than last. Colds, influenza, diphtheria, impetigo contagiosa and scabies were less common. Measles, German measles, chickenpox and scarlet fever were more frequent. The communicable disease rate, including colds, per 1,000 students was 129 for 1940-1941; for 1939-1940, the year before, 148. A comparison of the cases occurring for the two years is shown in Table 4.

Although 79.7 per cent of the students had had measles (rubeola) on matriculation, mass immunity, presumptive resistance, or previous good fortune in avoiding contact did not provide the "shield of protection" for 16 susceptible students when it began to occur frequently in the schools of Champaign-Urbana.

German measles was epidemic in the Community during the year. A total of eighty-three students acquired the disease. The long incubation period, the early communicability, the polymorphous nature of its rash, and the absence or mildness of its constitutional symptoms make the control of this disease exceedingly difficult. Many students do not know when they are exposed, or that they have German measles until a doctor tells them the cause of their rash; by this time a number of their associates have acquired the disease.

Faculty and Civil Service Employees: Occurrence of communicable diseases in the families of faculty members and Civil Service employees was less than in previous years. Only eight cases were reported, of which three were chickenpox, two scarlet fever, two measles, and one German measles.

Table 1

Incidence of Communicable Disease
in the Student Body for the Biennium 1939-1941

	1940-41	1939-40
Coryza	724	866
Coryza (hospitalized)	734	934
Vincent's Angina	50	96
Chickenpox	13	4
Measles	16	0
German measles	83	0
Mumps	10	10
Scarlet fever	13	11
Diphtheria	6	12
Poliomyelitis	1	1
Streptococcus Sore Throat	27	5
Impetigo contagiosa	15	16
Scabies	1	3
Amoebic Dysentery	1	1
Total	1,694	1,959

By the modified quarantine for scarlet fever permitted by the State Department of Health, the loss of time from the classroom has been reduced to the minimum compatible with safety. Of the 222 students exposed to scarlet fever, 148 gave a positive Dick test, but were allowed to attend

classes after daily observation. This procedure saved a total of 888 school days or the equivalent of a full semester for eight students.

Table 2

Modified Quarantine for Scarlet Fever

Number Exposed	Dick Tests		Certificates of having had the disease
	Positive	Negative	
222	148	51	18

Table 3

Disposition of Students Exposed to Communicable Disease

Contacts	7,264
Number held in quarantine	12
Number permitted to attend classes under daily observation	199
Number requiring no isolation under Regulations of the State Department of Health	7,053

Venereal Disease: The quarter of a century which this report concludes has witnessed a complete revolution in the attitude of the public towards venereal disease. In 1916, as now, gonorrhea was widespread. The sterility it caused blighted the fondest hopes of many couples wishing children. Its victims crowded into clinics, increased taxes, and added to the death rate; but cultured people were indifferent, apathetic, and silent.

Syphilis, a protean disease, attacked at least ten per cent of the population, destroyed thousands of unborn children, caused many still-births, and was responsible for children afflicted in body and mind. It damaged the bones, tissues, and organs of both young and old. Impaired hearts, arterial degeneration, sclerotic spinal cords, paralytic gaits, and insanity followed in its wake; yet its name was never spoken in polite society. Not even the most courageous editor dared to go farther in his columns than to indicate by subtle innuendo that a serious "blood disease" existed.

All treatments for gonorrhea and syphilis were prolonged, inconvenient, costly, and left much to be desired. Thousands of dollars were spent for medical care; hundreds of millions for hospitalization of those made physically ill and mentally sick by the gonococcus and the pale spirochete. Men, women, and society suffered, paid, and did little to escape the blight that had attacked the race for centuries.

Suddenly, a new day dawned; common sense asserted itself. The vale of prudery was torn apart. Men and women discovered they could pronounce the words gonorrhea and syphilis. These diseases quickly made the headlines. Pamphlets flooded the mail. Exhibits appeared at meetings. Movies

brought the public up to date on venereal disease. Syphilis even became a topic for term papers for "coeds," and wherever two or three gathered together in a sewing circle, on the golf links, in the clubs, or on the street--syphilis and gonorrhea were discussed with the interest of men and women who had gained a new freedom. Caravans were formed for pilgrimages to where Kahn tests could be obtained free. Legislatures vied with each other in the adoption of inadequately considered legislation requiring premarital examinations. Laws to protect prospective mothers and unborn children against syphilis were passed without a dissenting vote. Laboratories were enlarged to do serologic tests, and facilities for treatment multiplied with most gratifying rapidity. The public awoke from its centuries-old nightmare; reticence disappeared and the battle against venereal disease had begun.

Fortunately, scientific discovery and medical progress were equal to the demand for action. The dark field microscope, serologic tests, and specific therapy were available for dealing with syphilis; the advent of the sulfonamide drugs and the use of heat provided highly efficient treatments for gonorrhea. Thus, the means, will, and enthusiasm to attack a great scourge were at hand, and man's redemption of man got under way.

Reared in such a venereal disease-conscious age, it is no surprise that the incidence of gonorrhea and syphilis is exceedingly low in college students--about one case in 500. During the year, 13 students were found to have gonorrhea; and 2, syphilis; one of these was congenital. Table 7 gives the result of 2,619 serologic tests done upon students for syphilis.

Table 4

Serologic Tests Done Upon Students for Syphilis

Test	Negative	Positive	Total
Kahn test	2,596	. . .23*	. .2,619

*Seven students on whom a total of 21 Kahn positives were reported by the laboratory were asymptomless, and Wassermann tests did not confirm the first findings. These were false-positives.

A Kahn test is a part of the routine physical examination of Civil Service employees. A total of 13 were found to have either late or latent syphilis. The incidence of lues is higher in this group than in students because of age permitting a longer period of exposure and less information concerning the disease.

Vaccination for Spotted Fever: This year, as last, students and faculty members who expected to study and to do

research in the Rocky Mountain region during their vacation, were inoculated against spotted fever. A total of five men and two women were immunized. The vaccine was furnished without cost by the special laboratory of the United States Public Health Service at Hamilton, Montana. Spotted fever, however, is no longer confined to the Rocky Mountains but occurs in most of the states of the Union

Table 5

Immunizations for Communicable Diseases

Cholera	1
Diphtheria	42
Smallpox	2,300
Spotted fever	11
Typhoid fever	1,976
Typhus	1
Total	4,331

HOSPITALIZATION

The Student Body: The facilities of the McKinley Hospital are a great insurance for the student body. A total of 3,569 students was admitted to the Hospital for 12,188 days, an average of 3.42 days per patient.

Of all the students hospitalized, 90 per cent were admitted to McKinley Hospital and only 10 per cent to other hospitals. The local hospitals, however, had 12 per cent of the student patronage in hospital days; the McKinley, 88 per cent.

This difference between percentage of cases and hospital days is due to the low average stay (3.33 days) of students in the McKinley Hospital for medical cases and the longer hospitalization in local institutions for surgical treatment.

As will be seen from the following table, 559 students with communicable disease were admitted to the McKinley Hospital for a stay of 2,958 days or an average of 5.29 days per patient. Influenza was responsible for 107 or 17.4 per cent of the cases, and 443 or 14.9 per cent of the hospital days.

Table 6

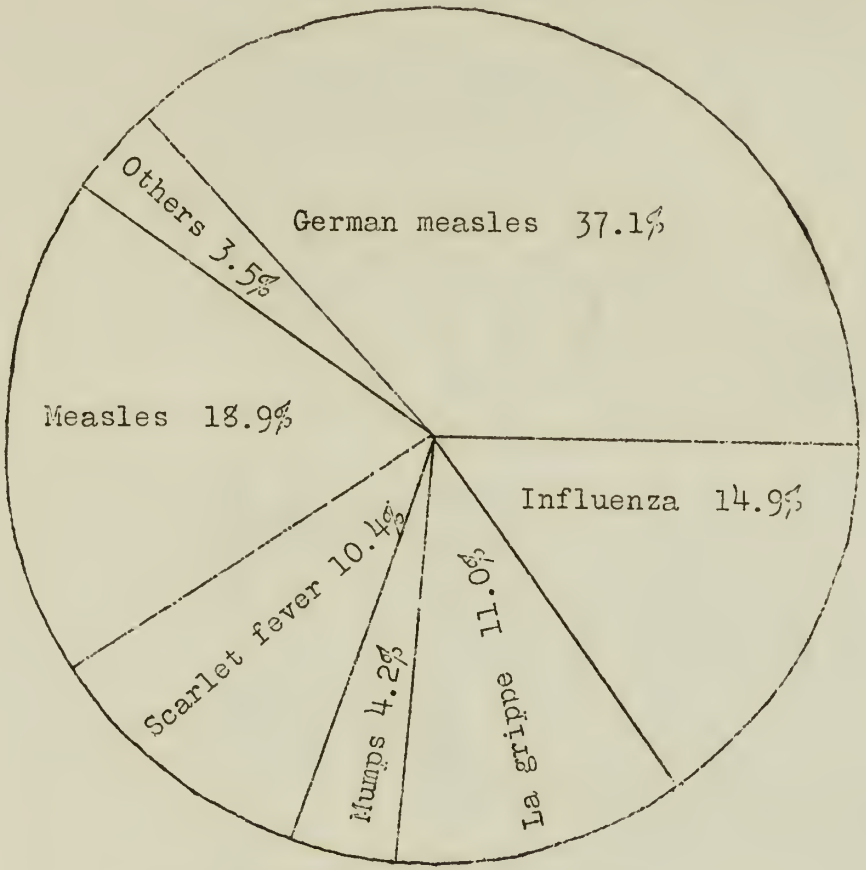
Student Cases of Communicable Disease Cared for at McKinley Hospital

Disease	Cases	Days
Influenza	107	443
La grippe	89	325
Mumps	13	124
Scarlet fever	13	309
Measles	104	558
Vincent's angina	5	15
Chickenpox	6	74
Conjunctivitis	3	13
German measles	219	1,097
Total	559	2,958

Civil Service Employees: During the year, University employees suffered 165 accidents in the line of duty. It was necessary to have 20 X-rays taken in order to exclude possible fractures. Of those injured, 108 required only minor surgical

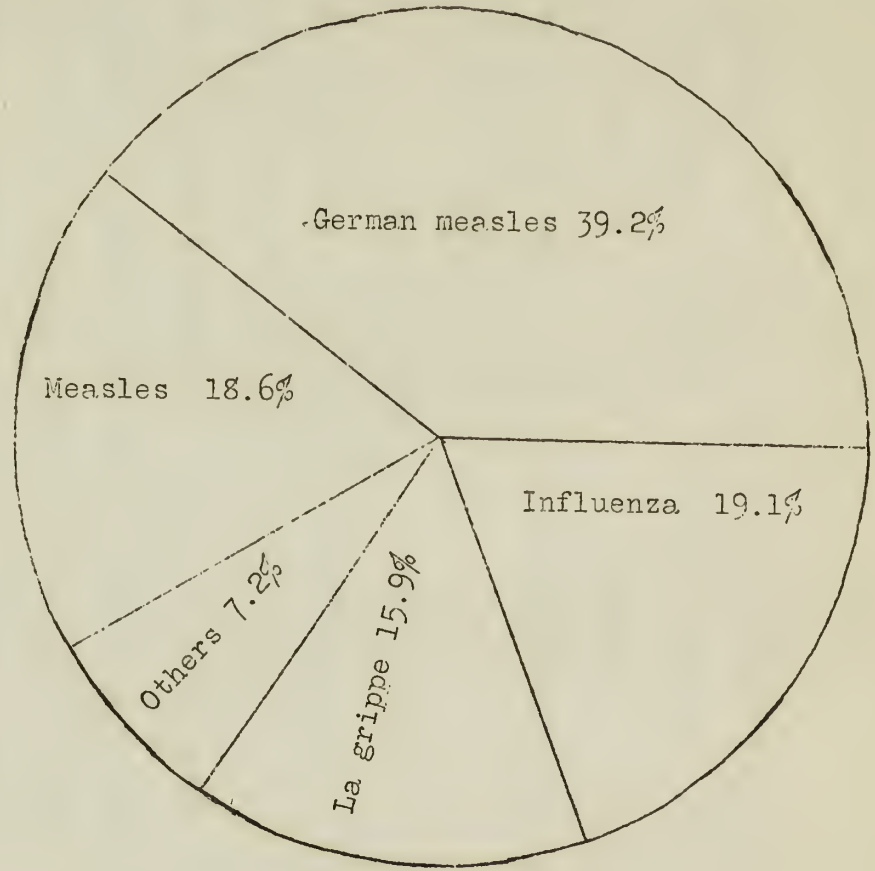
THE DISTRIBUTION OF HOSPITAL CASES AND DAYS FOR COMMUNICABLE DISEASES CARED FOR AT MCKINLEY HOSPITAL 1940 -- 1941

DIVISION OF HOSPITAL DAYS



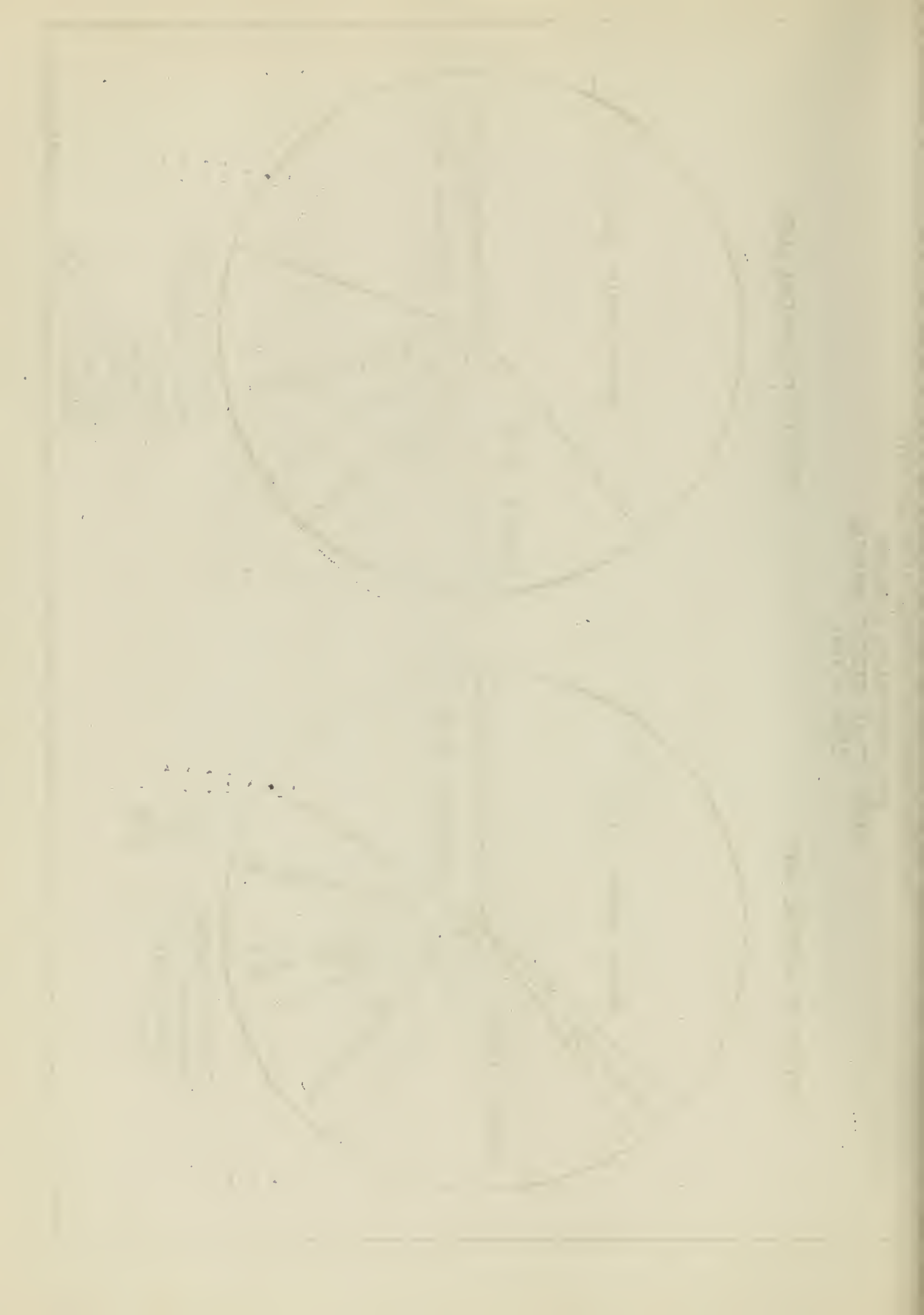
Vincent's angina 6%
Chickenpox 2.5
Conjunctivitis 4
Others 3.5%

DIVISION OF HOSPITAL CASES



Mumps 2.3%
Scarlet Fever 2.3
Vincent's angina . . .9
Chickenpox .. 1.1
Conjunctivitis .6
Others . . . 7.2%

Chart No. 3



attention and 47 were referred to outside surgeons or specialists for prolonged treatment. Fourteen employees were hospitalized for a total of 110 days, or an average of 7.9 days per patient. Two of these cases were admitted for herniotomy, and remained in the Hospital for two weeks.

Hospital Insurance: A new method of hospital insurance was instituted in the University for the year 1940-41. The Student Mutual Benefit Association reinsured its prospective beneficiaries this year through the North American Accident Insurance Company. The plan, as usual, was ably promoted and carried out by the office of the Dean of Men. Its energetic campaign induced 6,173 students, faculty members, and employees to join during the first semester, and 5,122 the second, which was 47.09 per cent of the student enrollment for the first, and 39.08 per cent the second semester of 1940-41.

This year, as under the old plan, two types of membership were made available to students, faculty members, and employees. A $3.00 payment provided for 30 days' ward care in any one semester plus $5.00 allowance for laboratory charges; a $5.00 premium which, in addition to the above, included a payment toward the physician's bill at the rate of $3.00 per day for the two-thirds the number of days hospitalized

during the semester up to a maximum of two-thirds of 30 days at $3.00 per day or a total of $60.00.

The number of students having sickness insurance was somewhat increased by those patronizing companies now providing such a service. It is, nevertheless, regrettable that more students do not join the Association or otherwise provide protection for themselves, particularly during the second semester when sick rates are higher and hospitalization is often badly needed by those who can least afford it. As long as less than half of the student body has hospital insurance, both the control of communicable disease and the rendering of prompt treatment of the ill leaves much to be desired. There is also a correlation between delay in medical attention and the increase of complications and the severity of the disease.

A number of insurance companies of varying degrees of merit are trying to sell insurance to students. The extent and quality of the service they offer are not yet equal to that of the Student Mutual Benefit Hospital Association. Such companies generally offer much that will rarely be needed, but are more conservative where service is most likely to be used. Such action is essential where rates are low and considerable overhead has to be met before profits are made.

However, the publicity associated with their bids for business causes some students to make provision for illness who otherwise would not do so.

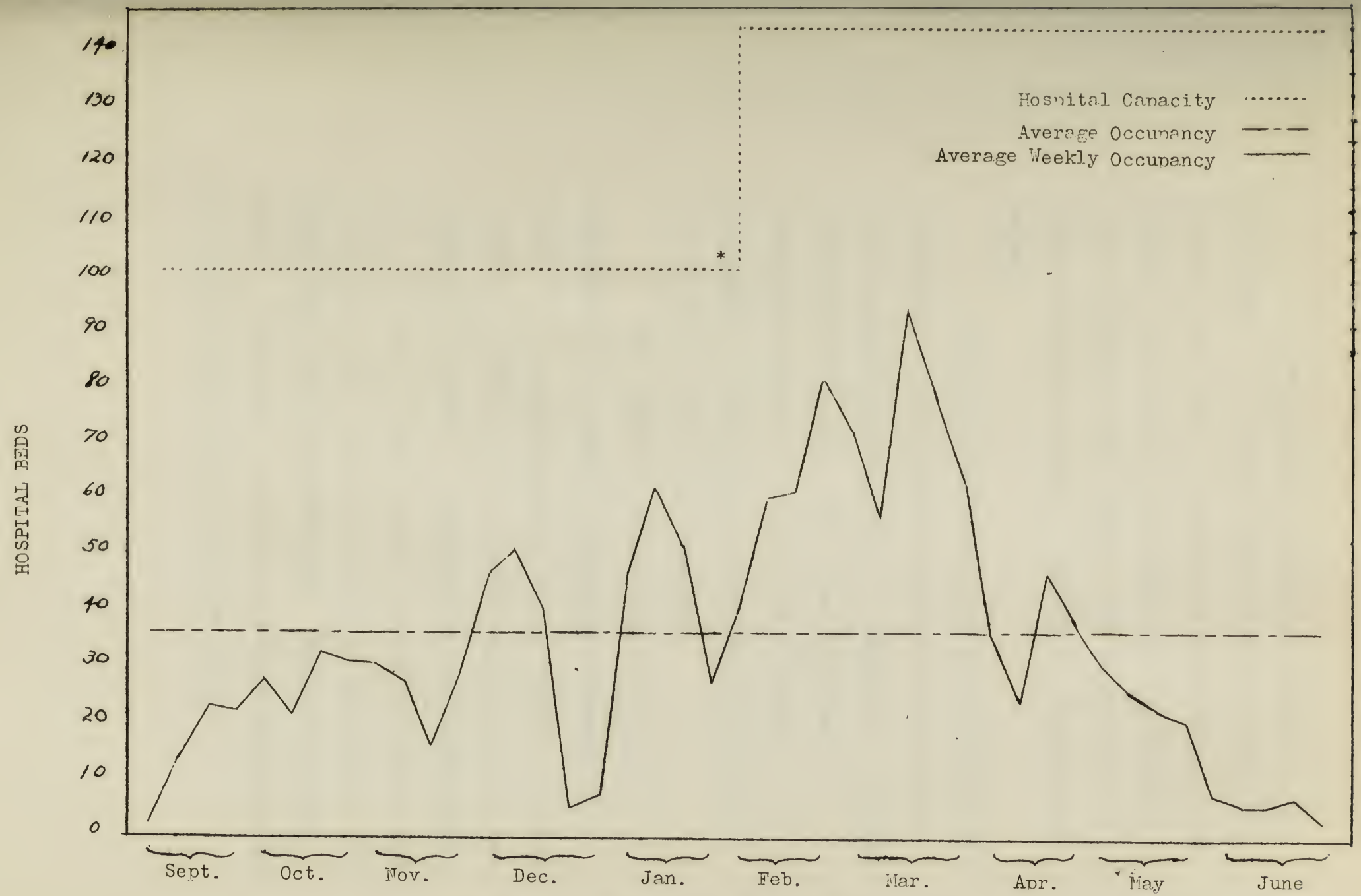
Local Hospitals: The Mercy and Burnham Hospitals admitted 357 students for a total of 1,478 days, an average of 4.14 days per patient. The average length of stays in these hospitals was 5.25 and 3.98 respectively, which are longer than those of the McKinley Hospital by 19 per cent. They admit students requiring surgery; hence, the prolonged period of hospitalization.

MC KINLEY HOSPITAL

Last year marked the completion of the south wing to the Hospital; the new addition is completely equipped. All rooms in the new unit were in use this year.

Patients: The Hospital was open for a period slightly over nine months. The first patient was admitted September 9, 1940 and the last discharged on June 30, 1941. A total of 3,072 patients were treated for a total of 10,735 days or for an average stay per patient of 3.49 days. Of this number 2,789 were bed patients and 283 out patients. The highest number of bed patients in any one day was 119. (See chart 4.)

The total number of patients admitted to the Hospital were 3,072, of whom 2,850 were students, 165 were members of the faculty, and 57 were outsiders who were chaperones, members of the family of operators of lodging houses for students, etc.



HOSPITAL BED OCCUPANCY -- MC KINLEY HOSPITAL
1940-1941

*Increase due to completion of new South Wing.

Chart 4

Of the patients entering the Hospital, 2,079 were members of the Mutual Benefit Hospital Association. Although only 43.08% of the students were members of the Hospital Association for both semesters, nearly 68% of those hospitalized were members. The benefits paid on these memberships amounted to $28,925.10, or $13.91 per patient.

Failure of students to join the Hospitalization Association results in greater exposure of their associates to communicable disease and of themselves to serious complications when ill. Grave cases of pneumonia are usually more common in those who are not members of the Association and delay going to the Hospital until they are too sick to avoid doing otherwise.

The student who saves himself the cost of a membership in the Hospital Association; who makes provision for his health secondary to his effort to obtain an education is often like the man who pays for a car by not buying oil, and fails to arrive because his machine burns out. Of the 137 Illini who have died of tuberculosis since the class of 1916, death has occurred on an average of 4.21 years after leaving the University. Obviously learning, whether in high school or college, is inadequate which does not bring an appreciation of relative values.

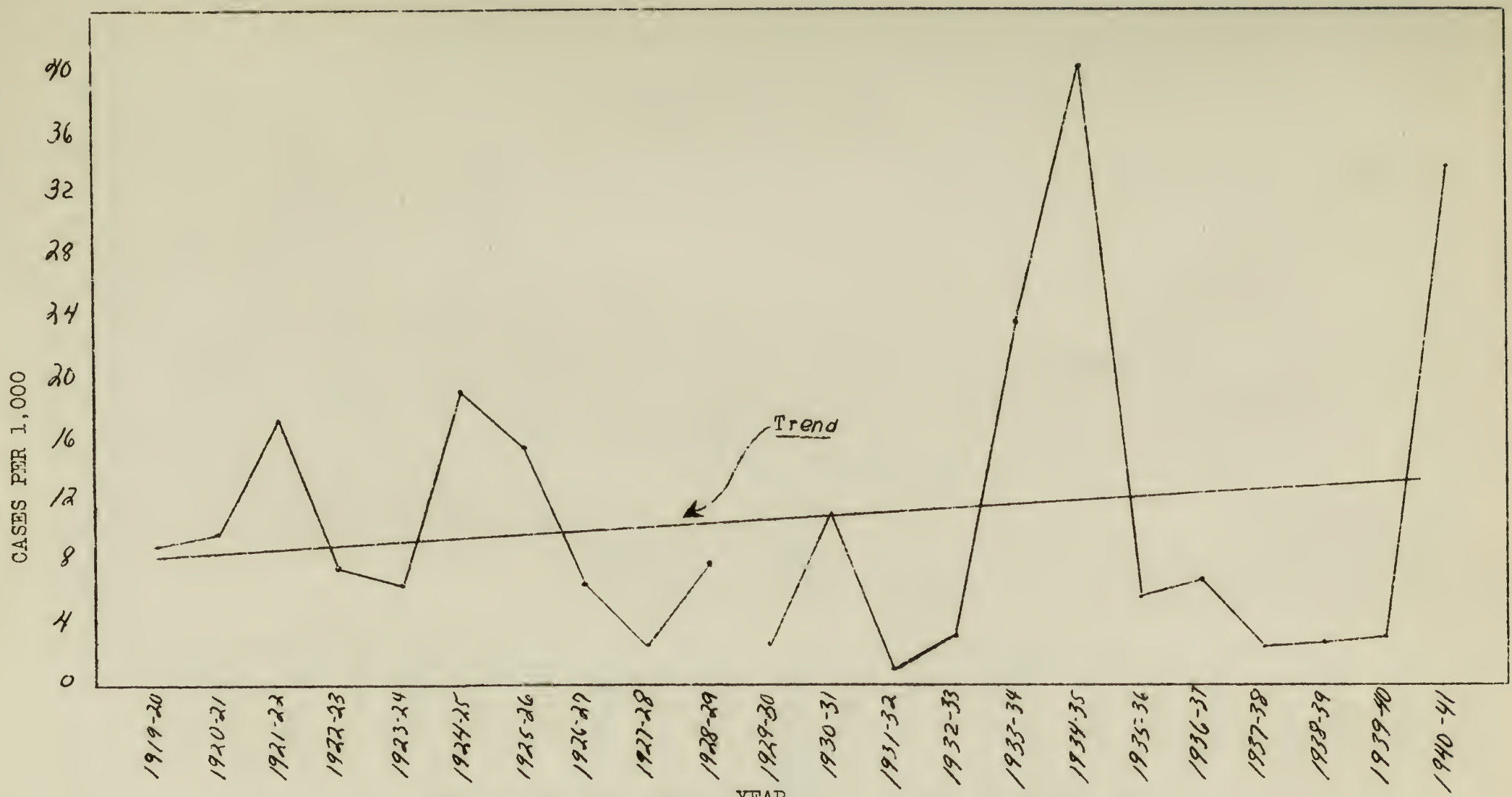
A student who saves himself $3 to $5 a semester by not joining the Hospital Association with the expectation of remaining at his lodging house or fraternity when sick frequently infects others, who as a result, become ill and must pay for their own hospital and medical care. Thus, he dulls his sense of social responsibility and gets his education at the expense and at the temporary or permanent loss of the health of others--hardly a commendable standard of conduct in an age of "Keeping Fit."

Contagious Disease McKinley Hospital admitted 457 cases of contagious disease. Of these, 360 were hospitalized for German measles; a total of 351 students, or 96.7 per cent, and 9 non-students. The cases of contagious diseases admitted to McKinley Hospital are given in the following table:

Table 7

McKinley Hospital Contagious Disease Cases

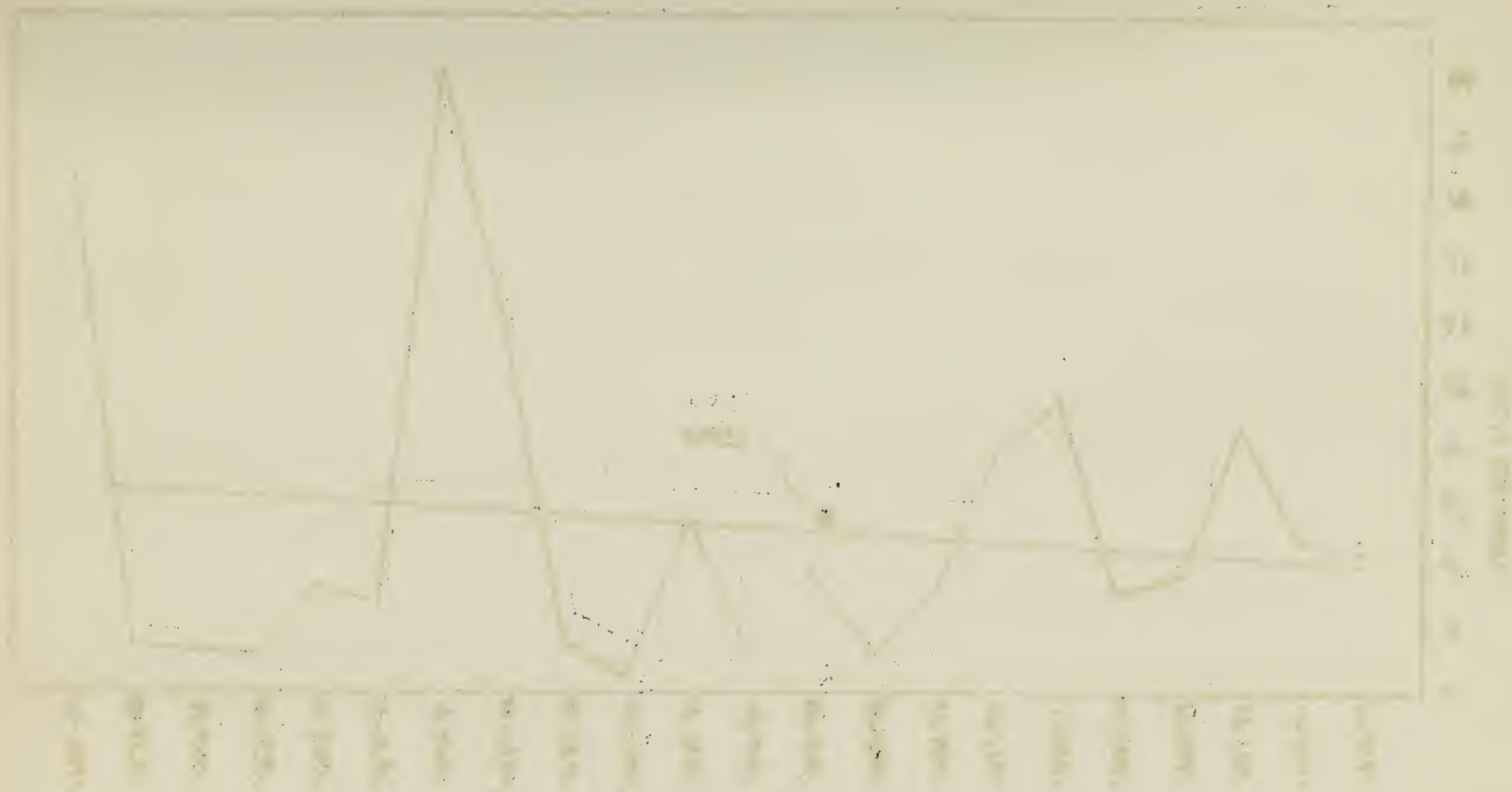
Disease	Students	Non-Students
Scarlet fever	10	10
Chicken-pox	17	-
Diphtheria	1	-
Diphtheria carriers	12	-
Red measles	8	4
German measles	351	9
Mumps	14	2
Pneumonia	14	2
Infectious mononucleosis	2	-
Meningitis	1	-
Total	430	27

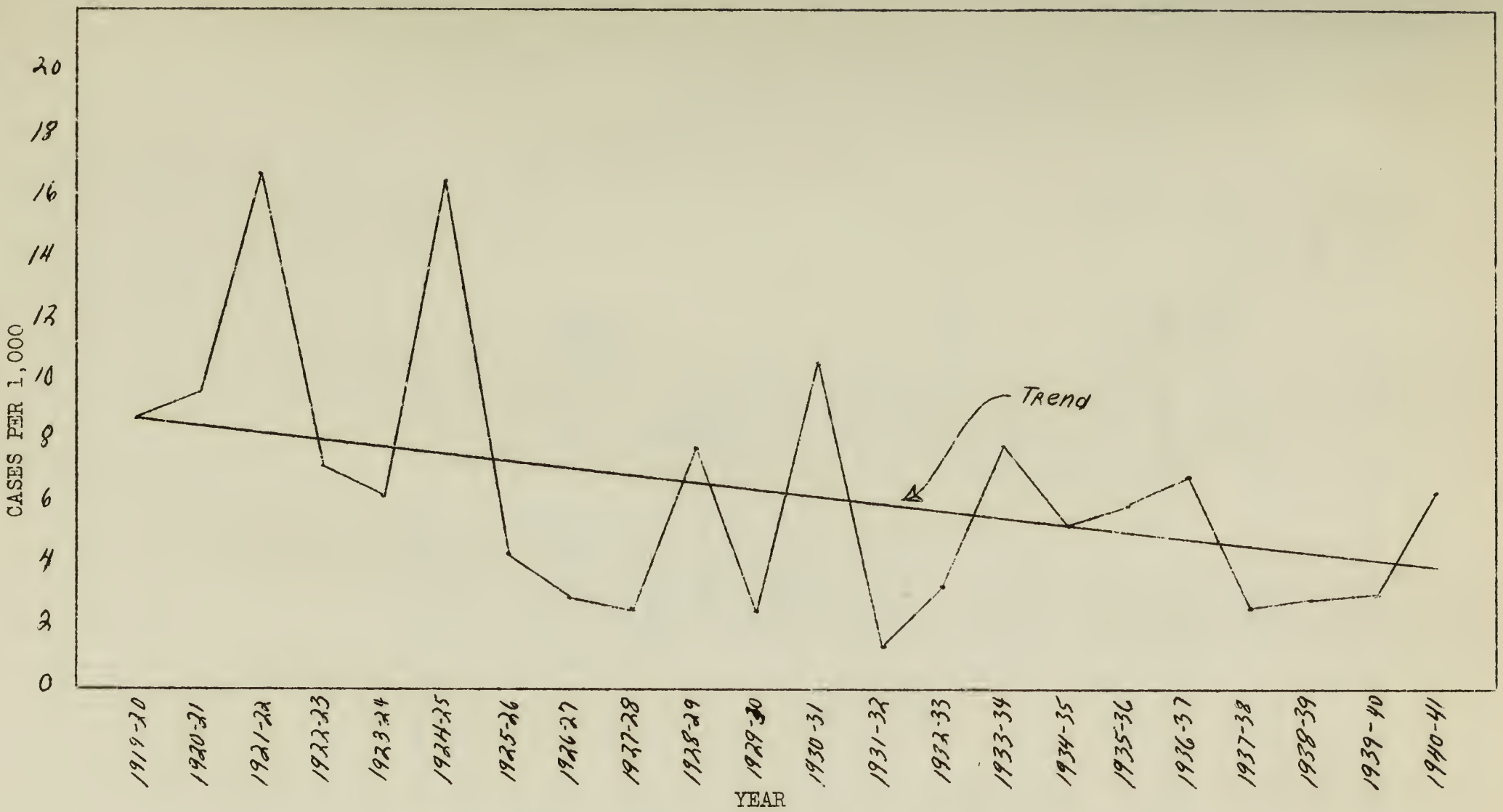


NUMBER OF CASES OF QUARANTINABLE DISEASES PER 1,000 STUDENTS
1919-20 -- 1940-41
McKINLEY HOSPITAL

Includes German measles.

Chart No. 5





NUMBER OF CASES OF QUARANTINABLE DISEASES PER 1,000 STUDENTS
1919-20 -- 1940-41
McKINLEY HOSPITAL

Does not include German measles.

Chart No. 6

In special instances, where it was to the advantage of the University, patients who were neither students nor employees were admitted to the McKinley Hospital. There were twenty-seven such admissions.

Laboratory Service: The Clinical Laboratory made 3,853 tests as listed in the following table:

Table 3

Clinical Laboratory Tests

Urinalysis		2,803
Blood count		
Complete count	324	
White and differential . .	327	
White count	78	
Matching	23	
Specimens for State . . .	14	
Smears for malaria	4	
Haemoglobin estimation . .	4	
Determination of coagulation time . . .	2	
Sedimentation	3	
Total blood tests		779
Throat smears and cultures		269
Sputum		1
Spinal fluid cell count		1
Total clinical laboratory tests		3,853

A total of 637 roentgrams were made by the X-ray laboratory which may be summarized as follows:

Table 9

X-Ray Laboratory Examinations

Roentgrams

Chest	251	Humerus	2
Ankle	94	Cricoid cartilege	1
Finger	29	Colon filling	1
Foot	31	Pelvis	8
Knee	19	Mastoid	3
Wrist	21	Gall bladder	1
Elbow	18	Abdomen	2
Tibia and fibula.	16	Heart	1
Shoulder	15		
Hand	26	Total Roentgrams	630
Clavicle	9		
Toe	8		
Ribs	15	Urography	1
Spine	18		
Skull	7		
Sinuses	12	Fluroscopy	
Nose	3		
Hip	3	Chest	4
Radius and Ulna	2		
Kidney bladder	2		
Jaw	2	Pyelography	2
Dental	8		
Femur	2	Total X-Rays	637

COOPERATION WITH OTHER DEPARTMENTS

Military Science and Physical Education

(a) Permanent Classification: During the year it was necessary to assign 324 men and 188 women to individual gymnastics for special training. Because of marked physical abnormalities or organic disease, 146 students were classified as unable to take either regular physical education or military.

There were 33 students permanently excused from military because of failure to meet the minimum requirements of the

Medical Department of the Army. Five students were re-assigned to military because of improvement or correction of their physical defects.

(b) Advanced Corps Students: The Health Service administered 286 doses of typhoid vaccine and vaccinated 112 students against smallpox who were planning to attend the Reserve Officers Training Camps. In cooperating with the Army Medical Corps, 289 urinalyses were made upon candidates for advanced military training.

(c) Temporary Excuses: During the year 216 men and women students were given temporary deferment from military, physical education, or both; 12 men from military only, 84 men and 120 women from physical education only. They had undergone recent operations, or had lost so much time on account of illness that they could not complete satisfactorily the work for the semester.

Students suffering from certain forms of dermatitis, sinusitis, infection of the middle ear, or perforation of the ear drum were transferred from swimming to a form of exercise less likely to cause them trouble. A total of 44 recommendations were made to change students from one type of physical education to another or for modifications of their required exercise.

The Personnel Bureau

The Bureau has referred students to the Health Service for a recheck of their physical condition, metabolism tests, or further determination of their acuity of vision. Forty-seven students were given telebinocular examinations. Ninety-one students were given metabolism estimates, and a number of others advised as to their health.

INSTRUCTION IN HYGIENE

Compilation of the results of 1,965 questionnaires filled out by freshmen registered in Hygiene 1, 2, and 5 revealed that only 33 teachers of hygiene in the high schools attended by those students, gave full time instruction in health education. The greater percentage taught the subject as a "side line." Illinois is still far behind in having its teaching of hygiene and sanitation of a quality comparable to their importance to the individual and to the State.

The survey (see Appendix G) reveals, furthermore, that students who do not attend college do not receive sufficient training in high schools in regard to personal health, nutrition, sanitation, the control of communicable disease, and healthful living to meet intelligently the demands of our highly complex society. The seriousness of this situation becomes apparent when we recall that only 10 per

cent of those graduating from high school attend institutions of higher learning, and that science can only be applied to the general welfare in a democracy by support of the people. This educational deficiency assumes the aspects of a menace in a chaotic world of rapid transportation, shifting troops, demolished cities, and life in bomb shelters.

Proficiency Examination: A total of thirty-three students passed the proficiency test in hygiene and received credit in the subject. None of the students were from out of the State. The distribution by colleges of those who passed the proficiency test during the past year is given in Table 13.

Table 10

Classification of Those who Passed Hygiene 2 and 5 Proficiency Examinations by College

Liberal Arts and Sciences	24
Engineering	2
Agriculture	4
Commerce	1
Fine and Applied Arts	1
Physical Education	-
Education	1
Total	33

Elementary Hygiene 1: To cooperate with the newly organized General Division of the College of Liberal Arts and Sciences in the formation of its special curriculum for selected freshmen, the regular course, Hygiene 5, meeting twice a week for one semester with two hours' credit was split into a two-semester course meeting once a week

for an hour's credit each semester. This course extended over a full year and was given to 127 students the first semester and 120 the second semester.

This arrangement seemed necessary to help the College of Liberal Arts and Sciences in its experimental program but it is distinctly not in the interest of better instruction in freshman Hygiene and Sanitation. With the course meeting only once a week, continuity is exceedingly difficult because, with the intervention of holidays, the class may meet but once in two weeks, or even three weeks. Courses conducted on this plan lose prestige, are likely to prove uninteresting to the student and discouraging to the instructor because it is necessary to so condense subject matter in order to complete each topic at a session that inadequate instruction occurs in a number of instances. This is peculiarly unfortunate in a course like Hygiene and Sanitation, which is not only essential in normal times, but may prove life-saving to students who in a few months may find themselves in the Army serving in tropical or sub-tropical climates.

Elementary Hygiene 2 and 5: In the first semester, elementary hygiene and sanitation were taught to 1,562 students, of which 1,167 were men and 395 were women. The total registration for both semesters in elementary hygiene was 3,291. There were 25 sections for the men and 10 for the women each semester.

Advanced Hygiene: The advanced course in hygiene for coaches, physical education majors, and teachers had a total registration for the year of 157 students. During the first semester the enrollment was 37 students; in the second, 120.

Hygiene X3: In cooperation with the Director of the University Extension Service, a correspondence course in hygiene has been offered, which has had a registration of twenty-nine students. The quality of the work presented by those taking it was most satisfactory. This training should better prepare them to protect themselves and their families and to function more intelligently as citizens interested in improving living conditions in their community.

SANITATION

Swimming Pools: Immediate attention has been given to reports which have been received concerning the conditions of the swimming pools and water supply. No colon bacilli were reported found during the year. The pools and water supply of the University have been well supervised by an able and conscientious Sanitary Engineer.

FIRST AID

A total of 144 first aid cabinets is being maintained in the various buildings on the campus. They are much used and are visited weekly or twice weekly, depending upon their location, to replace supplies as needed.

It has been customary for a number of years for members of the Health Service staff upon request, to attend certain University functions in order to render first aid if necessary. This service was given at the Electrical Engineering Show, the Physical Education Tournaments, Farm and Home Week Programs, and the Commencement Exercises.

In cooperation with other departments, the offices of the Health Service were also made available in emergencies to guests of the University. Its facilities were offered to those attending Farm and Home Week, 4-H Club Conventions, and short courses given by the University.

LABORATORY SERVICE

As a part of the routine work of the Health Service, various laboratory services were given the students and Civil Service employees. In many instances these tests were essential either in making effective the regulations of the University concerning foodhandlers or in diagnosing and controlling communicable disease. The bacteriological tests recorded herewith were largely made by the branch laboratory of the State Department of Health on specimens submitted by members of the medical staff of the Health Service. It is a pleasure to acknowledge our indebtedness to it.

Table 11

Laboratory Tests

Urinalyses	11,094
Kahn tests	2,619
Wassermann tests	21
Bacteriological examinations of excreta	1,605
Diphtheria cultures	223
Smears for Vincent's angina	131
Smears from the urethra	162
Blood examinations (white cells)	18
Basal metabolism tests	91
Sputum examinations	69
Agglutination tests for undulant fever	4
Blood smear for malaria	3
X-ray examinations	26
Eye cultures	3
Hemolytic streptococcus	7
Endomoeba histolytic	1
Telebinocular examinations	75
Streptococcus viridans	18
Heart-O-Meter examinations	116
Audiometer Tests	21
Total	16,307

Table 12

Positive Laboratory Tests

Smears for Vincent's angina	64
Kahn tests for syphilis	23
Bacteriological examinations of excreta	4
Smears from the urethra for gonorrhea	8
Throat swabs for diphtheria	16
Streptococcus viridans	18
Hemolytic streptococcus	6
Total	139

REQUESTS FOR INFORMATION

A total of 221 citizens of the State have requested information on various aspects of public health. Requests were also received for reprints of articles by

members of the department and for copies of forms used by the Health Service. Questionnaires from numerous sources have been many, varied and often quite comprehensive. This form of survey seems to be increasing in popularity.

THE GENERAL PRACTITIONER AND THE HEALTH SERVICE

The medical staff of the Health Service has had the most helpful cooperation of local and family physicians in caring for students. A total of 212 letters have been received concerning the physical conditions of students who are or have been patients of these doctors. From Table 16 it is seen they have made 461 certifications relative to communicable disease.

Table 13

Certificates of Immunity

Smallpox	
By illness	4
By vaccination	96
Typhoid fever	
By illness	2
By inoculation	68
Diphtheria	
By immunization	2
Scarlet fever	
By illness	269
By immunization	2
Dick test given	18
Total	461

The number of students admitted to local hospitals during the academic year was 3,569. Of this number, 2,899 were sent to the hospitals by local doctors, and

670 went directly from the Health Service Station. The 670 who went to the hospitals from the Health Service Station chose fifty-three different doctors to attend them while ill.

STUDENT DEATHS

It is with much regret that I report the death of six students during the year. Of these deaths, one was caused by an automobile accident, one died of streptococcus pneumonia, one by suicide, one by agranulocytic angina, one by accidental electrocution, and one after appendectomy.

TWENTY-FIFTH ANNUAL REPORT

APPENDIX A

APPENDIX A

A BRIEF RECORD OF THE CREATION AND DEVELOPMENT OF THE HEALTH SERVICE OF THE UNIVERSITY OF ILLINOIS

The Health Service of the University of Illinois was conceived in the throes of an epidemic and brought forth in a world at war. Its quarter of a century of existence, official and actual, almost coincides with the period between the sinking of the Lusitania and the attack upon Pearl Harbor. Although there was some medical service to students and employees from February 1915, to September 1, 1916, it was not until the latter date that this University activity assumed the dignity of the name which now characterizes such work throughout the colleges and universities of the country.

An Epidemic Contributes to Progress

In February 1915, virulent scarlet fever appeared among the students. Within seventy-two hours, the first two attacked died. One of their nurses acquired the disease and promptly succumbed a few days later. The wife of the barber whose shop was in the basement of the old Y.M.C.A. building, now Illini Hall, also became infected and lost her life.

Excitement was intense; the wildest rumors flew thick and fast. "The towns are quarantined. Trains do not stop. Ten miles out they increase their speed and go through at 60 miles an hour with blasting whistles to make their next stop twelve miles away." There were even those who had heard many students had died and like Sir John Moore had been buried without a "funeral note,"

> "By the struggling moonbeam's misty light,
> And the lantern dimly burning."

Telephone calls, telegrams, and letters of inquiry from anxious parents arrived in a steady stream. It became apparent that reassurance and

a sedative to calm the needless fear of students and others were imperative. A committee composed of Deans David Kinley, Eugene Davenport, and Thomas Arkle Clark met in the office of the Dean of Men at that time located on the north side of the corridor in the southeast corner of the Natural History Building. The situation was thoroughly reviewed with a representative of the Illinois State Department of Health and a statement was given to the press to the effect that everything possible was being done, and there was no cause for alarm.

An instructor in histology and physiology in the first year curriculum for premedical students was called into the conference and directed to fumigate such rooms and buildings as the Committee might deem desirable. It was recognized at the time that fumigation with formaldehyde as usually done or could be carried out in many of the laboratories with their numerous vents left much to be desired as effective disinfection. Nevertheless, it was felt that such a procedure, at least, would be a good preliminary to subsequent thorough cleaning and both impressive and reassuring.

Within a few evenings, through the fine cooperation of the Physical Plant and the able foremanship of Thomas J. ("Shorty") Fay, some three and half million cubic feet of space in classrooms, offices, laboratories, shops, and gymnasiums had been exposed to formaldehyde gas. These places were then aired, cleaned, and given as much sunlight as possible. The result was as confidence restoring as music to passengers on a storm-tossed ship. Something was being done. Those who caught a good whiff of formaldehyde on entering a building or as it escaped from windows of classrooms seemed immediately convinced that strenuous efforts were being made to combat the disease.

Fortunately, the peak of virulence of the scarlet fever had been passed in the first week of its occurrence. Students who developed the disease later had it in a milder form and in a month the epidemic had become an unhappy memory of seventeen cases, four deaths, and no serious complications.

The methods for controlling scarlet fever over a quarter of a century ago were quite different from many of those being used in the Furious Forties. Isolation, quarantine, and disinfection were the only dependable means at hand and they were often too late and inadequate. Even the cause of the disease was still in the realm of debate. The Dick test was yet to be discovered and immunization was still experimental. Antitoxin was not being manufactured and general knowledge concerning the types and behavior of streptococci was very meager.

Like all epidemics which cause severe illness, deaths, alarm, much inconvenience and expense, this one of scarlet fever was a milestone in the application of preventive medicine and sanitation to University life:

1. Illinois now held all collegiate records for speed and amount of cubic air space fumigated with formaldehyde without the interruption of instruction.
2. The engine room of the old Floriculture Building at the south end of Sixth Street had been used as a hospital and a movement had been initiated which led to the conversion of the remainder of the building and the horse stable fifty feet south of it into a reasonably well-equipped hospital of fifty-five beds. This hospital served a most useful purpose for over ten years.
3. This scarlet fever epidemic led Professor T. A. Clark, Dean of Men, to express a determination to present to the Hon. Wm B. McKinley the need of a hospital for the students and faculty of the University. The Dean was successful and this distinguished alumnus, his lifelong friend, donated funds for the erection of the main section of what is now the McKinley Memorial Hospital.
4. The urgent need of the service of a college physician to prevent and control communicable disease was clearly demonstrated.

5. It became very apparent that epidemics are fought with great difficulty unless the public understands the cause, mode of spread, and methods of prevention of disease. Thus from an unhappy experience, there were laid the foundations of two hospitals, a health service, and regular instruction in hygiene and sanitation.

When the scarlet fever epidemic was over, the part-time instructor in physiology and histology was directed by President Edmund J. James to report to the office of the Dean of Men daily from 4:00 to 6:00 P.M. "to see such students as might be referred to him by the Dean" for the rest of the second semester of 1915-16. This physician became available in the office of Mr. A. R. Warnock, the Assistant Dean of Men, for such advice as certain students might seek. During this period, he received approximately 1,000 calls from students.

A Foodhandler has Typhoid Fever

The second semester of 1914-15 was a period of epidemics. The last student who had had scarlet fever had hardly been released from quarantine when one of his schoolmates was found to have typhoid fever. Within ten days twelve students and three townspeople had developed the disease. From the appearance of the second case it was apparent that the one thing which all the sick had in common was eating at a certain restaurant in Urbana. A thorough inspection of the place revealed a very cooperative proprietor who had had the disease twenty years before, a rather well-kept kitchen and lunchroom, and employees who insisted they were in good health. A cook was absent from work because of severe burns of her foot caused by spilling boiling lard upon it.

As the proprietor had been serving food for a number of years and none of his patrons had been known to have had typhoid fever while eating at his restaurant, it was not believed he would prove to be a typhoid carrier. This assumption was confirmed by a negative bacteriological examination of his feces and urine. A special visit was made to the home of the disabled cook. In

response to a rap on the door, she appeared at the second story front window with the question, "What do you want?" When asked if she were ill or had been, she replied "There is nothing wrong with me except my foot and that is gradually getting better."

As all the other workers at the restaurant had been found to be apparently normal, its water supply and its sources of food and milk were thoroughly checked. Not only the dairy which supplied the milk was inspected but all the farms from which the milk came were visited, their sanitary condition noted, and the health of the members of the family of the producers ascertained. This inspection and investigation, however, was without result.

The local health officer stated that no cases of typhoid fever had been reported to him for several months. All the practicing physicians in Champaign-Urbana were contacted but none were found to have patients with typhoid fever. When all evidence to locate the source of the epidemic seemed to be unsuccessful and a thorough recheck was being made, a doctor that had been previously interviewed, telephoned to report that he had found the source of the disease. The second cook, who had been at home because of her burned foot, had become so ill that her fiance insisted upon a doctor being called. She was found to have typhoid fever. Her mother who was employed at the restaurant was stopped from working there. No other cases developed. The cook had caused fifteen cases, twelve of whom were students who had hospital and doctors' bills totaling approximately $1,500.

With the close of the academic year, Health Service work was officially suspended for twelve months. The physician whose services had been drafted during the scarlet fever epidemic was appointed as examiner of Civil Service employees in the summer of 1915. He opened his office in the southeast room on the second floor of the dwelling at 1205 West Springfield Avenue with equipment consisting of a scale and a measuring rod. He provided his own stethoscope,

thermometer, sphygmomanometer, and tape. His office hours were from three to five daily, except Saturday.

The Formal Beginning of the Health Service

During 1915-16, students were seen only occasionally for medical advice at the special request of the Dean of Men, but in the summer of 1916 the Health Service was created and the examiner appointed health officer as of September 1. In the late fall, an office was equipped for him in the southwest corner of the first floor of the Men's Old Gymnasium. At this location students and employees were seen in ever increasing numbers until the dwelling at Green and Wright Streets, which had been the residence of the President of the University, was converted into a Health Service Station.

In the fall of 1916, a somewhat comprehensive study was made of the present and future needs of a Health Service adequate for the students of a large University. On February 17, 1917, the late Mr. Kendrick C. Babcock, formerly Dean of the College of Liberal Arts and Sciences and first Provost of the University, transmitted its results and recommendations to President Edmund J. James with the following comment.

> "The accompanying report of Dr. J. H. Beard on 'A Proposed Health Service for the University of Illinois' is transmitted at his request with my strong endorsement. This should have been sent on several days ago. I understood that it was a copy for my information and not the original for transmission to you.
>
> "This report is the result of a careful investigation of the practice of other institutions, made by Dr. Beard and summarized in the attached chart, and a judicious survey of the need and opportunities here at Illinois. Dr. Beard has had several conferences with me on the matter, as well as with Dean Clark and others. The report in its present form seems to me at once comprehensive and concise. The provisions and arrangements for examination, dispensary treatment, hospital for medical, surgical, contagious, and isolation cases, sanitary supervision of the University community, and the conduct of investigation of problems arising from these different branches of the Health Service, as well as direct instruction to students, have been carefully considered. In my judgment the provisions recommended are sufficiently elaborated to provide for a much larger student body than we now have. For example a hospital provision of fifty beds, if judged by the experience of the University of California as described

in the valuable and interesting paper by Dr. Legge which I have attached to the report, would be larger than the immediate needs of our student community. If a semester fee of $2.50 or $3.00 for the Health Service can be charged, I believe the Service, once established and well equipped, would be self-supporting save for the salary of the Director and for charges for major operations in surgery where the assistance of outside help would be necessary. Even in the last group of cases it might be possible to arrange for regular consultations either here or in Chicago with the experts on the staff of the College of Medicine without involving the students in the mesh of high professional charges.

"The nature of the service to be rendered by the dispensary or clinical division of the infirmary makes it desirable to locate the new building where it will be readily accessible to the great mass of the student population. Merely as a hospital, it might go out on the Augustus tract; as an agency of the Health Service it ought to be within four or five blocks of Green Street and Burrill Avenue if possible to find a site which would be at once spacious enough and quiet enough for the combination of purposes under consideration."

A UNIVERSITY HEALTH SERVICE

"An efficient University Health Service and a great school of preventive medicine are complements. The former creates public sentiment by teaching future community leaders to know and to appreciate the relation of good health to efficiency, economy, happiness, and personal success; the latter trains experts for leadership in hygiene and sanitation. Limited will be the success of one without the other. A Health Service to meet properly its obligation to the University and to society should be conservatively advanced, and to be adequate must have a four-fold function:

1. The prevention of disease.
2. Means for caring for the sick.
3. Education.
4. Investigation.

PREVENTION OF DISEASE

"1. A preliminary examination of all freshmen and new students by competent medical examiners is the most essential part of any system of prevention of disease among students.

a. For the detection of disease in its incipiency and the giving of treatment when the greatest number of cures are possible.

b. For the discovery of communicable diseases and their early isolation and cure.

c. For the complete co-operation between the Department of Physical Training and the Health Service.

d. For the detection of defects of vision, or hearing, or abnormalities of the nose and throat, and for provision for their early treatment by specialists.

e. For advice as to need of dental service.

f. There should be not only a thorough 'follow up' system to ascertain whether the student has been effectively treated, but there should be a 'follow back' system that would definitely determine how it is possible for a student to pass through high school and come to the University with a vision of only 4/20 and uncorrected, with untreated discharging ears, deforming adenoids or neglected tuberculous glands of the neck. The records of a University Health Service will always show the efficiency of the medical supervision of schools of the State.

"2. Employees.

a. Physical examination of all Civil Service employees. (Now being done)

b. All Civil Service employees be required to be vaccinated against smallpox. (Now being done)

c. All Civil Service employees who come in contact with the food or milk products of the University be required to undergo an examination to exclude them from being typhoid carriers. (Now being done)

d. All Civil Service employees who handle the food or milk products of the University be required to be inoculated against typhoid fever. (Now being done)

e. Greater effort should be made to adapt the work to the physical condition of the employees. (Now being done in a small way)

f. An employee should be required to undergo a physical examination when he does not seem able to do his work or there is evidence that he may have an infectious disease.

"3. Faculty.

a. Members of the faculty should be required to report infectious diseases in their families or on their premises. (Now being done)

b. All faculty members who come in contact with food or milk products of the University should be required to fill out a blank stating whether they have had

typhoid fever, have been associated with typhoid patients, or have been exposed to an infectious disease within three weeks before beginning to handle the food or milk products. (Now being done)

"4. Systematic Inspection of Lodging Houses as to:

a. Ventilation, bath and toilet facilities, heating and lighting, general appearance of comfort, cleanliness, etc.

b. Stables, privies, piggeries, chicken coops, wells, garbage disposal, etc.

c. Protection against fire.

d. The houses inspected should be classified as 'Accredited' and 'Unaccredited' and the list of classification should be available for the information of the students.

"5. Eating Places Should be Systematically Inspected.

a. All students of the University who cook, serve food, or wash dishes should be required to furnish a certificate that they have no transmissable disease and are not typhoid carriers.

b. That student organizations be encouraged to insist that all proprietors of lunch-rooms catering to student patronage should show evidence that their help other than students are not 'typhoid carriers' and are not suffering from a transmissable disease.

c. That the Health Service of the University should permit proprietors of lunch-rooms at which students eat regularly to have their help other than students tested against being typhoid carriers without cost. (This is open to some objections, but in the light of experience of other schools its adoption would save lives and avoid much illness.)

"6. Swimming Pools.

Swimming pools may readily become a medium for the transmission of typhoid fever and dysentery, respiratory diseases, infections of the ear and eye, and according to some sanitarians, of venereal diseases. I should recommend that the Director of the State Water Survey be requested to assign one of his assistants to assume charge of the sanitation of the swimming pools permanently, and that the assistant shall make weekly examinations of the sanitary condition of the pools and send the Health Service of the University a result of his findings.

"7. Immunization.

a. That the unvaccinated student be vaccinated, if he submits a request in writing and is twenty-one years old, or if he is less than twenty-one years old, provided his request is endorsed by his parent or guardian.

1. The value of vaccination against smallpox is unquestioned by scientific men.

2. If the University is to avoid an epidemic of smallpox, the number of unvaccinated students must be kept at a minimum.

3. The cost of vaccination is small.

b. That the student be inoculated against typhoid fever, if he submits a request in writing and is twenty-one years old, or if he is less than twenty-one years old, provided his request is endorsed by his parent or guardian.

1. The great value of typhoid inoculation as a means of prevention is well established.

2. The Illinois State Board of Health, recognizing the great value of typhoid inoculation as a preventive measure, and at the cost of the State, furnishes the vaccine free of charge.

3. The self-supporting student working his way and many times with little choice as to the sanitary conditions of the place at which he works is unable to enjoy this protection offered by the State unless he pays a physician $5-$10.

4. As the Military Training at the University is extended and the students go to rifle ranges, encampments, and on marches, the danger from typhoid fever is increased.

PHYSICAL EDUCATION.

"1. Physical Training.

It is obvious that four years of life in a University should mean for the average young man or young woman a distinct gain in physical efficiency. The flat chests, the slight musculature, the abnormal shoulders, and the underweight for age and height, in men who have completed the period of physical training at the University are conclusive evidence that many of the students at the University of Illinois have not obtained the physical benefit they should receive during their four years at school.

We should, therefore, recommend:

a. That, beginning with September, 1917, a student's physical proficiency be determined by definite measurements of development and strength, rather than by exercise for an hour twice a week for two semesters.

b. That all students who on entrance show by physical examination normal strength and development for their age be excused from physical training.

c. That all students who are below the normal development and strength for their age be required to pursue a course of physical training until their development and strength are normal.

d. That examinations be held during the month of May of each year for subnormal students who may desire to qualify as proficient in physical training.

e. That the Department of Physical Training make provision for the physical education of the student who may be unable, on account of some physical defect, to take the regular course. Such a course should not only include general exercise, but it should be given with a view of correcting the physical defect of the individual student.

f. As swimming may be life saving, as well as an excellent form of exercise, the present requirements should be retained.

"2. Athletics.

In athletics the danger of over-doing when carried out along lines of extreme specialization makes it advisable that all athletes should have medical supervision. By such care it would be possible to keep out of strenuous competitive events those unequal to the strain, but who under ordinary circumstances would be able to keep up athletic work with benefit to themselves.

a. Men desiring an athletic career should be carefully examined to exclude unsuspected heart disease, dangerous hernias, kidney disease, or incipient tuberculosis.

b. During training it would be of advantage both to the health of the athlete and to the efficiency of his team, if his physical condition was carefully followed in reference to physical measurements, condition of heart, blood pressure, lung capacity, weight, function of kidneys, etc.

"Practically all participants in major athletics have physiologically hypertrophied hearts and muscles--hearts and muscles that are likely to undergo detrimental retrogressive changes. For this reason, the athlete should be encouraged to engage in some sport or form of exercise between seasons which he would likely pursue beyond his university days, since he must consider the great reaction that will follow the change from the physical tension of strenuous athletic competition to the physical passitivity of a sedentary occupation.

CARE OF THE SICK.

"To take care of the sick a building will be needed. It must have wards for men and for women, a ward with separate rooms for the isolation of those that might be ill with various infectious diseases, and a detention ward so arranged as to take care of those exposed to contagious diseases. A 'group building' could be used more effectively and economically than one large structure.

"1. The building should provide for:

a. A University Hospital of not less than fifty beds, to be divided as follows:

1. Separate wards for men and women.
2. Isolation wards for infectious diseases.
3. Private rooms for the isolation of the very ill.

b. A Detention Ward for those exposed to infectious diseases, an attractive place, where the students would be willing to go and to remain until it was safe for them to mingle with other students.

c. Dispensary for the treatment of local injuries and minor ailments.

d. Examination rooms.

e. An Operating Room to meet the needs of the modern surgeon who might be called in cases of injury or in emergency cases of illness.

f. An Actinographic Room for medical and surgical diagnosis.

g. Diet kitchen.

h. Clinical Laboratory for the examination of urines."

World War I Delays Health Service Development

Before "A Proposed Health Service for the University of Illinois" could be adopted, the United States entered World War I on April 6, 1917, and the University put its facilities at the disposal of the Federal Government.

In the spring of 1918, however, men students desiring a complete physical examination, were offered an opportunity to get one. With the assistance of certain local physicians, a total of 404 students were examined in three days without interference with their class work.

As expected, the examination revealed that the physical condition of those examined did not differ materially from draftees in the number and type of their defects. Defective vision (much of it uncorrected), partial deafness, carious and missing teeth, diseased tonsils, flat feet, hernias, cardiac lesions, underweight, and postural defects were found to be common and in need of attention from the viewpoint of their prevention in future classes and their correction as far as possible in those already in college. A large per cent (97.5) were not vaccinated against smallpox.

In 1919 the Board of Trustees passed a regulation requiring all new students to be examined on matriculation. This requirement, however, was not enforced immediately because all men students matriculating in the University in the fall of 1918 were prospective inductees of either the Student Army Training Corps or the Student Navy Training Corps.

Members of the Medical Corps of the Army and Navy were to be assigned to the University to examine the students in September 1918. The day before the examinations were to begin, President James was notified that the Army and Navy did not have surgeons available for such an assignment; he was authorized to employ contract surgeons for the purpose. As a result of this direction, the local physicians who had assisted in the optional examination in the spring of 1918 were appointed contract surgeons to make the examinations for the Army; the Navy sent a member of its medical staff to the Campus from Peoria to conduct the examinations for it.

Influenza Pandemic

The physical examinations were conducted for the Army with as much dispatch as the greatly reduced number of physicians remaining in Champaign-Urbana, classes, and the military training of the S.A.T.C. and S.N.T.C. would permit. By the last week of September all of the men students had been examined with the exception of about fifty who had not registered at the regular time.

September 30, 1918 marks a milestone in the epidemiological history of student health at Illinois, because influenza which had been reported in many places throughout the world and in the United States made its first appearance in the student body. During the next six weeks over 2000 students had the disease. Seventy were known to have acquired pneumonia and nine died, a low mortality rate for the period antedating typing, serum treatment and the sulfonamides.

The first "wave" of the pandemic presented some striking features. Women students were attacked much less frequently than men, the ratio being about 1 to 3. They developed pneumonia less often and none of them died. The disease spread with less rapidity in students housed in small groups and on the whole appeared less virulent. This may have had some bearing upon the incidence and mildness in women since they lived in smaller groups than the men. This fact may also have had some effect upon the spread of virulent secondary invaders and upon the amount of sleep, fatigue, and resistance of those attacked.

The pandemic extended almost explosively. Within seventy-two hours, students were being hospitalized at the rate of one hundred a day. To meet this demand, the University had only the hospital on the South Campus of fifty-five beds. All available space was quickly filled, and the improvisation of

hospitals was an immediate and imperative need. College Hall was promptly converted into a hospital, equipment obtained locally or by telephone and trucked from distant centers of supply. The dance hall immediately east of College Hall was used for convalescents. The Beta Theta Pi fraternity at 202 East Daniel Street and Osborne Hall (now the Chi Omega sorority) were requisitioned for hospital purposes. The gymnasium in the Woman's Building was also prepared as a ward to care for women who acquired influenza. The total facilities, including that of the hospital, provided approximately 450 beds for the emergency.

To combat a rapidly developing pandemic, various groups had to be found to assume special duties. The Department of Physical Education, ably directed by Mr. George Huff, volunteered to procure, prepare, and equip the buildings selected for hospital purposes with beds, mattresses, linen, etc., and to see that they were ready when needed. Mr. Ralph Jones, the basketball coach and an athletic scout of experience, was assigned the duty of locating and hiring such necessary personnel as cooks, maids, dishwashers, and nurses.

Dean Clark, in addition to the many demands of his office, informed, consoled, advised, and generally looked after excited, anxious and distressed parents. He obtained the assistance of many faculty townsmen and women who were willing, without thought of themselves, to risk acquiring influenza to care for sick students. The Business Office was taxed to its capacity to obtain equipment at once, to insure its delivery, to provide food and medical supplies, and to keep an account of services being rendered. A number of local citizens, outstandingly Mr. Isaac Kaufman, generously provided transportation for physicians. Mr. Stanley Kaufman, his son, who was then a member of the S.A.T.C., rendered a most valuable service as a chauffeur of his father's car in transporting nurses and doctors from hospital to hospital or from their lodging houses to the hospitals.

Many who volunteered became ill of influenza in a few days after reporting for duty and had to be cared for in the hospital or in their homes. Their spirit and courage were beyond praise. Their attitude was well expressed by Miss Ella Crawford, a citizen of Urbana, who had offered her services to assist in nursing ill students. When asked if she were afraid of getting influenza, she replied, "If I have it, I can get over it," both of which she did.

The nurses available locally were soon overwhelmed either by work or influenza. A great many usually available were in military service, and the demand for those that remained was so great that it was impossible for them to do more than partly meet it. Mr. Ralph Jones and Mr. Orville Davis, then head of the local Red Cross, visited near-by towns and telegraphed many nursing agencies in distant cities to procure nurses. They succeeded in getting eight or ten from Bloomington, Peoria, Danville, and Decatur. Unfortunately, most of them came down with influenza three or four days after their arrival for duty and thus increased the patients in the hospital to be nursed.

Luckily, most of the cases in the first "wave" of influenza were mild, did not require a great deal of medical care or nursing, and could be released from the hospital in four to six days. Patients were usually kept in bed in the hospital until their temperatures had been normal for twenty-four hours and then carefully removed to the convalescent ward and kept two days more to reduce to the minimum the possibility of recurrences or of complications. If they continued to improve, they were then discharged and taken to their lodging houses.

In dealing with influenza in 1918, the most valuable procedure was early diagnosis of the disease, getting the patient to bed, keeping him warm and giving him symptomatic treatment. This reduced the likelihood of pneumonia

to a minimum and did the maximum to insure an uneventful recovery. The low death rate and relatively few complications proved the soundness of such a program.

To insure the detection of the disease in its incipiency, a student in each lodging house was designated as a captain in charge of it and was instructed to report any of his associates who began to show any sign of illness. When the reports were made a physician went to the house in an ambulance and examined the suspect. If there were any reason to suppose he was developing the disease, he was warmly wrapped, put in the ambulance and taken to a hospital. In the case of women students, an ambulance containing a doctor and a nurse went to the house, examined the patients and took them to the hospital.

By the middle of November the first "wave" of influenza was history. The number of patients had been reduced to the capacity of the hospital on the South Campus. It was evident a second "wave" was in the making, so arrangement was made to use Busey Hall as an emergency hospital. About November 25, the cases of influenza began to increase again, and during the next month some three hundred cases occurred. This time the complications were more severe. Thirty-six patients were known to have had pneumonia; of these, nine died, a mortality rate about normal for that period of medical knowledge. A part of this increased mortality was probably caused by the tendency of secondary invaders of the respiratory tract to become more virulent with the approach of winter. In some instances, influenza assumed a severe form in students who had been fatigued in intensive military training. Their resistance seemed to have been reduced. Another factor that may have had some significance was the housing of students in larger quarters, notably in those constructed in the Armory. These students had common food supplies, eating and drinking utensils, etc. Such a situation probably made it easier both for the virus of influenza and for virulent secondary invaders to pass from one individual to another by both direct and indirect contact.

When one looks on the pandemic of influenza twenty-five years after its occurrence, one is struck by the tremendous amount of literature that has accumulated in regard to it, and the fewness of the facts that were gleaned which would be really useful to combat such an epidemic today. Early diagnosis, getting the patient to bed quickly and keeping him warm are still the best means to insure a prompt cure and to reduce the likelihood of complications. Happily, the introduction of typing of pneumococci and the discovery of the great value of the various members of the sulfonamide group are tremendous progress in fighting secondary pneumonia, the principal cause of death in influenza.

Health Program Begins

During the fall of 1919 plans of the Health Service, which had been delayed on account of the war, were brought to materialization. The Department was moved into the President's old house which had been vacated by the Y.M.C.A. This building provided ample room and many conveniences it had not previously enjoyed. The location at Wright and Green Streets was almost in the center of student activity.

In August of 1919 Dr. Gertrude E. Moulton, the former head of the Department of Physical Education for women and a recent graduate of the Illinois College of Medicine, was appointed to the Health Service staff to be in direct charge of its Division for Women. Dr. Max Lammert, who was also a graduate of the Illinois College of Medicine, joined its staff as a part-time assistant to the University Health Officer.

With the beginning of school, the regulation passed by the Board of Trustees on March 18, 1918, requiring all new students to be examined on matriculation, was put into effect with the assistance of local physicians and several women doctors from Chicago to help in the examination of women students. At this time a total of 3,214 students were examined, of which 850 were women and 2,364, men. The findings in the case of men were similar to those of the draft noted in individuals of the age of college freshmen.

Health Education

A formal course in hygiene had never been given at the University of Illinois. Freshmen, however, were required to attend certain lectures dealing with health at the beginning of the first semester. Originally they were given by an instructor in physical education, but for a number of years preceding the establishment of the Health Service three or four lectures in personal hygiene, etiquette, and University regulations were given by Professor T. A. Clark, Dean of Men. He had obtained permission from the Department of Physical Education to use one hour a week for three or four weeks of its class periods for freshmen for this purpose. The women students received similar talks from the Dean of Women who also utilized time allotted to her by the Department of Physical Education for Women.

In 1916 the Physical Education Department permitted Dean Clark to extend his lectures from four to seven periods at the commencement of the first semester. He invited the recently appointed University Health Officer to lecture to freshmen men on hygiene, and specified that the subject matter should deal with venereal disease. By this arrangement the freshmen were exposed to a short composite course called hygiene which consisted of two lectures on personal hygiene, one on manners, one on University regulations, and three on venereal disease. Such lectures were a distinct advance over no instruction in health education, but obviously were only a very modest sample of what a course in hygiene should be.

No text book or outside reading was required. The men students had to hand in notebooks; in passing the course, the lack of absences was a highly important consideration. The women, however, were required by the Dean of Women to read a text entitled The Woman Citizen in which they learned of the duties of women as prospective voters, members of juries, etc. This was clearly not hygiene, but preparation to meet the anticipated responsibilities of women on the ratification of the Susan B. Anthony, or Nineteenth, Amendment.

After a year or two of discussion, hygiene was finally extended to include lectures for one hour a week for a semester, four periods of which were to be used by the Dean of Men and the Dean of Women to make such contacts and to give men and women such information as might be desirable for students on entering the University.

Lectures were given to groups so large that it was not uncommon to exceed the seating capacity of the classrooms assigned for the purpose. Even in Room 228 Natural History students often had to sit on the window ledges, and some sat on the radiators when their temperature would permit. This type of instruction was better than nothing, but not a great deal. In 1922 the course was extended to one hour for two semesters. Over-crowding of sections, the impossibility of giving attention to the individual student, and the lateness of the hour in the afternoon at which the lectures were held make the course in hygiene unpopular with the students and even more so with those attempting to teach it. Continuity was very poor since with vacation periods, class intervals were commonly two weeks and sometimes three or even four weeks.

With the phenomenal advances in preventive medicine and sanitation, demand for instruction in them increased throughout the country. In other universities, as well as at Illinois, the feeling grew that all instruction in an institution of higher learning should be given under conditions which experience had shown were essential for successful teaching. In 1924 the unwieldy sections in hygiene were discontinued, and sections were formed of the size considered desirable in the University for other subjects. Enough members were added to the Health Service staff to make it possible to give instruction in hygiene under satisfactory conditions.

Objectives of the Health Service Have Been Well Defined

The realization of a University Health Service as outlined on February 17, 1917 had been the objective for student health since that date.

The program for applying the principles of preventive medicine and sanitation to a college community has taken seven general directions.

1. A Healthful Environment

The provision of a safe, healthful environment is necessary to prevent epidemics, to eradicate fire hazards, and to insure against avoidable accidents. Surroundings must be clean and attractive; illumination, both artificial and natural, must be adequate; and proper ventilation must be assured. A safe water supply, proper disposal of sewage, wholesome food, and a good, clean milk supply are essentials of a healthful environment.

First Aid must be available in cases of illness or accidents. Cabinets with supplies for giving it must be at hand in strategic locations where accidents may occur. Proper facilities must be provided to protect those who handle injurious substances, use lethal gases or come in contact with plants or animals capable of causing disease.

2. Medical Examinations

In accord with the recommendation creating a Health Service, the Board of Trustees of the University passed a regulation on March 12, 1918 requiring a physical examination of all students entering the University for the first time. The purpose of an examination is to provide an inventory of the physical and mental health of students and to initiate the correction, cure or alleviation of their defects. The information obtained through it is also essential in the classification of students for military service and physical education. In ascertaining whether or not students have physical defects, the risk is avoided of requiring compulsory exercise without the adoption of proper safeguards. By requiring a medical examination of each student on matriculation, it is possible to avoid the futile procedure of giving men military training who would later be rejected for military service--thus there is a saving in both effort and money.

A medical examination is recognized as an excellent means of health education. It makes the student aware of his defects and abnormalities which need attention, and offers a chance to refer him to competent physicians and specialists for treatment. The examination reveals to him the many benefits to be derived from a periodic check of his physical and mental condition. This knowledge can prove of great help to him in keeping physically fit and at his highest efficiency. A medical examination is of tremendous importance in making an early diagnosis and adopting measures for the prompt control of communicable disease. By having the student correct his physical handicaps and functional abnormalities at his

earliest opportunity in his college career, he is materially assisted in making the most of the facilities available for his education. It prevents students from carrying a study schedule which threatens, if it does not actually precipitate, a physical or mental breakdown.

In September 1930, at the direction of the president, all pupils entering the University High School were required to take a physical examination. This requirement gave them the benefit of a physical inventory and provided the administrators of the High School with the necessary information to assign their pupils to classes in physical education and to modify their scholastic schedules when necessary on account of physical handicaps.

Form its beginning the Health Service has examined Civil Service employees to insure that they are able to do the work for which they are applying and to give them a chance to seek medical treatment if needed. Such examinations also give the University information which is essential in the case of accidents involving loss of time from work or requiring compensation.

On the recommendation of the president of the University in July 1915, with the endorsement of the Director of the State Department of Health, and the approval of the State Civil Service Commission, successful vaccination against smallpox was made a part of the regular medical examination of all employees. In May 1916, a regulation was passed by the Board of Trustees requiring all employees coming in contact with food distributed by the University to be immunized against typhoid fever as well as smallpox and to undergo such laboratory examinations as will discover and exclude disease carriers from handling food.

To protect the public, the driver, and University property, the Board of Trustees, in March 1928, approved a regulation requiring all drivers of University cars to be examined with special reference to acuity of vision, color sensation, acuteness of hearing, condition of their reflexes and physical ability to operate a car at an ordinary rate of speed.

By the direction of the president, in May 1936 a medical examination was provided for all students who were to become "educational internes"; that is, for those who intended to spend considerable time in practice teaching in certain of the large high schools of the State. The purpose of this examination was to insure that graduates certified to certain high schools would be physically able to perform their duties, were free from communicable disease, had no defects which might render their success doubtful, and were immunized against smallpox, typhoid fever, and diphtheria.

During summer sessions, the college of Education planned to use pre-school children in connection with instruction of prospective teachers. Bringing together such children highly susceptible to certain communicable diseases involved responsibility, and made daily medical supervision of them imperative. Therefore, in June 1936 the President of the University directed that the Health Service provide such daily inspection.

At the request of the director of athletics, and with the approval of the president, all students wishing to participate in major athletics are required to take a physical examination to reduce the risk of the unfit participating in strenuous sports, and to protect the Athletic Association against unwarranted claims. To this end all students desiring to participate in athletics are examined each semester; those wishing to engage in football, basketball, and wrestling are examined before participating in each of these sports. The same procedure has been applied also to those engaging in intramural sports. The classification of those for intramural sports, however, is modified to insure that each student can have an opportunity to enjoy sports within his ability. Students are grouped according to whether they are able to engage in mild, semi-strenuous, or strenuous physical activity.

For a number of years the University had placed certain restrictions on the use of automobiles by students. In August 1936, to insure greater safety to the student himself, to the public, and to property, the President of the University directed that all student drivers who wished to obtain a permit to use motor vehicles must show that they are physically and neurologically able to drive a car. Students, therefore, like users of University cars, are given a complete examination before being given a motor vehicle permit.

3. First Aid in Illness and Accident

In 1916 the University approved the establishment of First Aid cabinets in strategic locations throughout its buildings to provide supplies and equipment essential to the prompt rendering of First Aid. The articles supplied to the cabinets are those which represent the consensus of leaders in industrial surgery--the object being to provide all the items necessary for the efficient rendering of First Aid preliminary to seeking medical attention, but not supplying materials or drugs which might prove harmful to the injured in case the person rendering First Aid was inclined to exceed his training and experience.

By direction of the president on June 29, 1928, in case of injury, First Aid was provided for faculty members who suffered accidents in the line of duty as well as for

students and employees. The purpose of this provision is to reduce infection to the minimum, prevent complications, and protect life.

The provision of dispensary service for cases of illness and accident makes it possible to ascertain the occurrence of communicable disease at the earliest opportunity. It also decreases the likelihood of minor injuries assuming serious aspects. By this arrangement students are seen early and quickly referred to competent physicians and specialists when necessary. Early diagnosis makes prompt hospitalization possible, which in turn does much to reduce the severity and duration of illness and injury, and the loss of time from the classroom.

4. Prevention and Control of Communicable Disease

It is the duty of the Health Officer, who is Director of the Health Service, to use every practicable means to prevent and control communicable disease among students, faculty, and employees. This rule not only makes prevention of unnecessary illness and deaths obligatory, but it is based upon the sound economics of keeping the maximum number of students in the classroom by the reduction of absences from preventable disease.

The Health Service consistently and continually promotes immunization against smallpox and typhoid fever by conducting a program of education. Its staff has also immunized against diphtheria, scarlet fever, typhus fever, Rocky Mountain spotted fever, Asiatic cholera, and yellow fever. Immunization for the latter diseases are confined to those individuals who for valid reasons have to visit localities where they are occurring.

Every effort has been made through the years to diagnose communicable disease in its incipiency to insure prompt isolation and quarantine, where required, and to see that the sick receive treatment at the earliest opportunity.

With the approval of the Illinois State Department of Public Health, modified quarantine has been made possible and contacts with communicable disease have been given daily inspection and permitted to attend school. This arrangement saves students from the loss of thousands of classroom hours without endangering any of their associates.

5. Promotion of Mental Health

It has been recognized from the beginning of the Health Service that students need not only highly efficient bodies, but sound minds and wholesome emotions. Efforts are made at the time of the physical examination to detect students who are emotionally unstable or give evidence of being maladjusted.

This quest is continued through personal questionnaires in hygiene, and conferences concerning the findings on the student's medical record made on matriculation. By frequent contacts and follow-up students are helped to adapt themselves to their surroundings and to achieve satisfaction in their work.

6. Health Education

As the functions of the Health Service at Illinois are preventive and educational rather than therapeutic, it tries to take advantage of every opportunity to stimulate and to encourage students to acquire good health habits and to adopt an attitude towards personal and community health which will carry over into life and prove an advantage to them, their families, their communities, and the Nation.

Emphasis is placed on the promotion and attainment of good physical health, mental toughness to withstand the strenuousness of modern life, moral responsibility, and social vigor. Through education in community health, effort is made to lay the foundation for the student to participate intelligently in the enterprises for the welfare of the community in which he lives.

7. Health for Teacher and Other Personnel

In institutions of higher learning as well as primary and secondary schools, it is of paramount importance that the health of teachers and other personnel should be of such a grade as to insure that they will not become a source of disease for pupils or students, but will possess the vigor essential to pursue their work effectively and to set an example of vitality and accomplishment which will be a wholesome influence upon their associates and those under their direction.

TWENTY-FIFTH ANNUAL REPORT

APPENDIX B

APPENDIX B

Table I

TYPES OF MEDICAL ATTENTION TO STUDENTS AND EMPLOYEES

	1939-40	1940-41
Advice in case of illness	3138	3552
First aid in injury and infection	2938	2946
Sent to hospital	576	773
Referred to specialist	1898	1812
Urinalyses	9261	11094
Complete physical examinations of students and employees	3727	5551

Table II

MONTHLY DISTRIBUTION OF VISITS

	Student		Civil Service		Miscellaneous		Total
	Men	Women	Men	Women	Men	Women	
July	1082	750	189	17	5	--	2043
August	2083	518	218	12	1	--	2832
September	8073	2028	94	9	8	--	10212
October	4853	1628	129	83	12	--	6705
November	3009	1284	72	53	8	--	4426
December	2804	1346	127	23	18	--	4318
January	2985	995	138	41	16	--	4175
February	4226	1956	104	100	24	--	6410
March	3757	1408	120	81	16	2	5384
April	2888	1334	182	38	10	1	4453
May	2697	1165	202	24	12	--	4100
June	904	590	305	25	4	--	1828
Totals	39361	15002	1880	506	134	3	56886

Table III

CLASSIFICATION OF INJURIES TO CIVIL SERVICE EMPLOYEES FOR FIVE YEARS

	1936-1937	1937-1938	1938-1939	1939-1940	1940-1941
Abrasions	12	13	11	16	14
Bites	2	--	--	--	1
Blisters	1	--	--	1	1
Broken bones	--	--	--	--	1
Bruise	7	1	2	4	8
Burns, acid	5	1	--	3	6
others	8	9	7	5	14
Contusions	21	13	12	13	16
Excoriations	2	--	--	--	3

Table III (Cont'd)

	1936-1937	1937-1938	1938-1939	1939-1940	1940-1941
Finger nail torn loose	1	--	--	--	1
Foreign body, eye	17	14	14	8	7
Fractures	7	3	1	2	3
Gas inhaled	2	--	--	--	1
Gunshot wound	--	--	--	--	1
Heat stroke	2	--	--	2	1
Hernia	3	--	--	--	2
Incisions	--	--	--	1	2
Infections	9	11	4	12	6
Inflammations	2	--	--	--	12
Injuries	--	7	?	22	18
Lacerations, incisions	32	22	--	34	29
abrasions, and puncture wounds	--	6	1	--	--
Muscle soreness	--	1	--	--	1
Pain	--	--	--	--	3
Poison ivy	1	--	--	--	--
Puncture wound	9	4	5	3	3
Sliver and splinter	5	4	5	7	7
Sprain and strain	11	7	17	10	32
Torn ligament	2	--	--	--	2

Table IV

LABORATORY EXAMINATIONS

	Positive	Negative	Total
Urinalyses	--	--	11094
Kahn test for syphilis	20	2599	2619
Bacteriological examinations of excreta	4	1601	1605
Throat cultures, diphtheria	16	207	223
Urethral smears	8	154	162
Smear, Vincent's Angina	64	67	131
Heart-O-Meter examination	--	--	116
Basal metabolism test	--	--	91
Telebinocular examination	--	--	75
Sputum for tuberculosis	--	69	69
X-ray examinations	--	26	26
Wassermann tests	--	21	21
Blood examinations (white cells)	--	--	18
Throat cultures, hemolytic streptococcus	6	1	7
streptococcus viridens	18	--	18
Agglutination tests for undulant fever	--	4	4
Malaria blood smear	--	3	3
Eye cultures	--	--	3
Entomoeba histolytic	--	1	1

Table V

CASES CARED FOR AT MC KINLEY HOSPITAL

	Communicable		Non-Communicable		Total	
	Cases	Days	Cases	Days	Cases	Days
July	--	--	--	--	--	--
August	--	--	--	--	--	--
September	2	4	132	306	134	310
October	6	22	357	906	363	928
November	11	63	258	766	269	829
December	28	207	337	897	365	1104
January	60	292	334	1061	394	1353
February	82	401	372	1196	454	1597
March	206	1074	343	1191	549	2265
April	122	644	245	663	367	1307
May	45	285	224	554	269	839
June	2	42	46	136	48	178
Total	564	3034	2648	7676	3212	10710

Table VI

AVERAGE HOSPITAL STAY
Percentage of Students Using Hospitals

Year	Average Hospital Stay	Percent of Students Using Hospitals
1935-1936	3.89	24.3
1936-1937	3.81	24.8
1937-1938	3.39	21.43
1938-1939	3.45	25.31
1939-1940	3.34	24.07
1940-1941	3.42	27.3

Table VII

CASES CARED FOR AT MC KINLEY HOSPITAL

	1938-1939		1939-1940		1940-1941	
	Cases	Days	Cases	Days	Cases	Days
Angina	3	9	2	16	5	17
Chickenpox	3	25	1	3	6	74
Diphtheria	--	--	2	28	--	--
Influenza	889	3007	276	1111	107	443
Lagrippe	--	--	--	--	89	325
Malaria	--	--	1	2	--	--
Measles	3	14	--	--	104	558
Mumps	13	104	13	104	13	124
Pneumonia	8	51	--	--	8	87
Scarlet fever	8	211	20	440	13	309
German measles	--	--	--	--	219	1097
Total	927	3421	315	1704	564	3034

Table VIII

ELEMENTARY HYGIENE

	Number of Students	Number of Sections
Hygiene V		
Men, First Semester	1168	25
Men Second Semester	1139	25
Hygiene II		
Women, First Semester	392	10
Women, Second Semester	364	10
Hygiene I		
Men, First Semester	56	3
Women, First Semester	54	2
Men, Second Semester	55	3
Women, Second Semester	47	2

ADVANCED HYGIENE

	Men	Women	Total
Hygiene X			
First Semester	33	8	41
Second Semester	110	12	122

Table IX

FAMILY HISTORY OF INHERITABLE DISEASES

	1943		1944					
	Men	Women	Men		Women		Total	
	%	%	No.	%	No.	%	No.	%
Apoplexy	.68	1.4	25	.6	25	1.74	50	.96
Cancer	8.77	14.94	308	8.2	210	14.64	518	10.0
Goiter	3.95	8.43	129	3.4	93	6.46	222	4.28
Mental disturbances	1.1	.81	22	.58	6	.41	28	.54
Diabetes	5.42	9.83	215	5.74	149	10.39	364	7.02
Kidney disease	1.91	2.59	58	1.54	37	2.58	95	1.83
Epilepsy	.23	.44	5	.13	1	.06	6	.11
Tuberculosis	5.06	6.88	196	5.23	99	6.90	295	5.69

Table X

INJURIES

	1943		1944					
	Men	Women	Men		Women		Total	
	%	%	No.	%	No.	%	No.	%
Head	4.25	1.7	222	5.92	27	1.87	249	4.87
Chest	2.39	.51	160	4.27	13	.90	173	3.34
Abdomen	.48	--	24	.64	2	.13	26	.50
Arm	13.95	7.16	581	15.51	89	6.20	670	12.93
Leg	9.67	4.65	287	7.66	60	4.18	347	6.70
Others	5.32	2.7	38	1.01	49	3.41	87	1.67

Table XI

OPERATIONS

	1943		1944					
	Men	Women	Men		Women		Total	
	%	%	No.	%	No.	%	No.	%
Head								
Tonsils	53.57	61.31	1962	52.38	769	53.62	2731	52.71
Adenoids	34.02	6.87	948	25.31	105	7.32	1053	20.33
Others	2.78	3.24	147	3.92	71	4.95	218	4.20
Chest	.32	.29	12	.32	4	.27	16	.30
Abdomen	9.16	10.68	395	10.54	162	11.29	557	10.75
Circumcision	8.35	--	327	8.73	--	--	327	6.31
Others	4.04	3.1	182	4.85	78	5.43	260	5.03

Table XII

USE OF TEA, COFFEE, AND TOBACCO

	1943		1944					
	Men	Women	Men		Women		Total	
	%	%	No.	%	No.	%	No.	%
Tea	24.71	44.30	834	22.25	683	47.62	1517	29.28
Coffee	41.51	44.30	1546	41.28	623	43.44	2169	41.88
Tobacco	34.24	23.08	1288	34.39	358	25.02	1646	31.78
None of 3	33.57	16.49	1297	34.40	364	25.30	1661	32.07

Table XIII

SLEEPING HABITS

	1943		1944					
	Men	Women	Men		Women		Total	
	%	%	No.	%	No.	%	No.	%
Under 6 hrs.	.74	.15	8	.21	6	.41	14	.27
6 to 7 hrs.	10.63	11.39	440	11.74	188	13.11	628	12.12
8 to 9 hrs.	82.12	81.13	3092	82.56	1144	79.77	4236	81.79
10 hrs. & over	6.50	7.32	206	5.50	96	6.69	302	5.83

Table XIV

STUDENTS GIVING HISTORIES OF TYPHOID FEVER

Class of 1931	2.79	Class of 1938	2.57
Class of 1932	2.83	Class of 1939	1.46
Class of 1933	3.02	Class of 1940	1.14
Class of 1934	2.09	Class of 1941	.69
Class of 1935	2.08	Class of 1942	.94
Class of 1936	2.21	Class of 1943	.94
Class of 1937	2.28	Class of 1944	.77

Table XV

RELATIVE OCCURRENCE OF CERTAIN DISEASES IN HISTORIES OF THE CLASS OF 1944

	1943		1944					
	Men	Women	Men		Women		Total	
	%	%	No.	%	No.	%	No.	%
Appendicitis	10.18	13.53	380	10.14	231	16.10	611	11.79
Asthma	2.	1.77	109	2.91	29	2.02	138	2.66
Chickenpox	58.22	72.7	2311	61.71	915	63.80	3226	62.29
Chorea	.90	--	3	.08	1	.06	4	.07
Constipation	1.13	7.39	41	1.09	81	5.64	122	2.35
Diabetes	.09	.51	6	.16	1	.06	7	.13
Diphtheria	4.76	4.43	172	4.59	53	3.69	225	4.34
Discharging ear	3.98	7.39	167	4.45	97	6.76	264	5.11
Dysentery	.47	.88	11	.29	11	.76	22	.42
Epilepsy	.06	--	6	.16	--	--	6	.11
Heart trouble	1.73	2.36	73	1.94	37	2.58	110	2.12
Hay fever	6.85	8.13	271	7.23	103	7.18	374	7.22
Hernia (rupture)	3.32	.51	108	2.88	7	.48	115	2.22
Infantile Paralysis	.68	.59	26	.69	13	.90	39	.75
Influenza	15.45	22.33	469	12.52	271	18.89	740	14.28
Kidney trouble	1.16	3.1	32	.85	47	3.27	79	1.52
Malaria	2.57	2.07	85	2.26	25	1.74	110	2.12
Measles	89.09	87.05	3029	80.88	1099	76.63	4128	79.70
German measles	15.00	36.24	667	17.81	490	34.10	1157	22.34
Meningitis	.21	.22	5	.13	2	.13	7	.13
Mumps	52.32	53.24	1975	52.73	766	53.41	2741	52.92
Nervous breakdown	.02	.96	3	.08	15	1.04	18	.34
Pleurisy	1.58	2.21	53	1.41	29	2.02	82	1.60
Pneumonia	9.58	10.28	410	10.94	167	11.63	577	11.14
Rheumatism	1.88	2.44	68	1.81	42	2.93	110	2.12
Scarlet Fever	17.51	17.52	651	17.38	268	18.68	919	17.74
Sinusitis	3.92	6.06	148	3.95	76	5.29	224	4.32
Smallpox	2.99	2.66	179	4.77	53	3.69	232	4.47
Tonsillitis	19.76	24.70	677	18.07	364	25.38	1041	20.10
Trachoma	.06	.29	3	.08	1	.06	4	.07
Tuberculosis	.29	.22	16	.42	8	.55	24	.46
Typhoid fever	.92	.96	26	.69	14	.97	40	.77
Undulant fever	.02	.14	4	.10	3	.20	7	.13
Whooping cough	48.69	63.98	1850	49.39	892	62.20	2742	52.94
Others	9.1	1.62	82	2.18	26	1.81	108	2.08
IMMUNIZATIONS:								
Diphtheria	39.71	38.97	1599	42.69	606	42.25	2205	42.57
Scarlet fever	16.29	15.82	688	18.37	385	26.84	1073	20.71
Smallpox	79.3	84.76	3034	81.01	1239	86.40	4273	82.50
Typhoid fever	19.67	14.12	799	21.33	329	22.94	1128	21.78
TESTS:								
Schick	23.33	26.99	1087	29.02	457	31.86	1544	49.12
Dick	9.99	11.90	488	13.02	204	14.22	692	3.70

Table XVI

GENERAL DEVELOPMENT

	1943		1944					
	Men	Women	Men		Women		Total	
	%	%	No.	%	No.	%	No.	%
Excellent	.47	1.92	83	2.21	30	2.09	113	2.10
Good	84.60	94.89	2942	78.55	1346	93.16	4288	82.79
Fair	14.43	3.10	666	17.78	55	3.83	721	13.92
Poor	.47	.07	54	1.44	3	.20	57	1.10
BUILD:								
Stocky	6.55	11.01	297	7.93	175	12.20	472	9.11
Medium	68.85	48.96	2566	68.51	731	50.97	3297	63.66
Slender	24.58	40.01	882	23.55	528	36.82	1410	27.22

Table XVII

COLOR OF EYES

	1943		1944					
	Men	Women	Men		Women		Total	
	%	%	No.	%	No.	%	No.	%
Blue	48.21	37.79	1632	43.57	557	38.84	2189	42.24
Gray	4.04	8.65	205	5.47	96	6.69	301	5.83
Greenish	7.31	9.31	268	7.15	130	9.06	398	7.64
Hazel	5.45	8.65	347	9.26	137	9.55	484	9.34
Brown	34.11	32.54	1282	34.23	499	34.79	1781	34.38
Black	.56	2.95	11	.29	15	1.04	26	.50

Table XVIII

COLOR OF HAIR

	1943		1944					
	Men	Women	Men		Women		Total	
	%	%	No.	%	No.	%	No.	%
Flaxen	5.36	12.79	228	6.08	135	9.41	363	7.00
Reddish	2.43	4.14	115	3.07	87	6.06	202	3.90
Light Brown	27.34	23.10	967	25.82	382	26.63	1349	26.04
Brown	13.35	20.11	1439	38.42	419	29.21	1858	35.87
Dark Brown	39.59	27.83	688	18.37	296	20.64	984	18.00
Black	11.85	6.95	308	8.22	115	8.01	423	8.16

Table XIX

TEETH

	1943		1944					
	Men	Women	Men		Women		Total	
	%	%	No.	%	No.	%	No.	%
Cavities	16.35	12.28	733	19.57	331	23.08	1064	20.54
Absent	44.71	25.44	1805	41.19	392	27.33	2197	42.42
Need cleaning	11.35	4.22	716	19.11	51	3.55	767	14.80
Diseased gums	.30	1.11	19	.50	4	.27	23	.44
No cavities, none absent	43.25	60.66	1560	41.65	767	53.48	2327	44.93
Teeth devitalized	2.13	1.78	125	3.33	62	4.32	187	3.61

Table XX

ABNORMALITIES OF THE HEART

	1943		1944					
	Men	Women	Men		Women		Total	
	%	%	No.	%	No.	%	No.	%
Abnormalities	.84	.22	30	.82	13	.96	43	.83
Irregular pulse	.18	--	9	.24	6	.48	15	.28

Table XXI

THYROID ENLARGEMENT

	1943		1944					
	Men	Women	Men		Women		Total	
	%	%	No.	%	No.	%	No.	%
Enlarged								
Slight	.74	10.50	31	.82	181	12.62	212	4.09
Moderate	.02	1.47	1	.02	18	1.25	19	.36
Marked	.02	.07	--	--	--	--	--	--
Evidence of toxicity	.02	.22	2	.05	5	.34	7	.13

Table XXII

CHEST AND LUNGS

	1943		1944					
	Men	Women	Men		Women		Total	
	%	%	No.	%	No.	%	No.	%
Lungs, abnormal	.35	.66	17	.45	3	.20	20	.38
Chest:								
Flat	9.04	4.06	137	3.65	55	3.83	192	3.70
Funnel	.75	.44	26	.69	7	.48	33	.63
Pigeon	.29	1.10	5	.13	27	1.88	32	.61

Table XXIII

CONDITION OF ABDOMINAL WALLS

	1943		1944					
	Men	Women	Men		Women		Total	
	%	%	No.	%	No.	%	No.	%
Abnormal	.09	.44	3	.08	11	.76	14	.27
Hernia	.86	.37	26	.69	7	.48	33	.63

Table XXIV

INCIDENCE OF ENLARGED LYMPH GLANDS

	1943		1944					
	Men	Women	Men		Women		Total	
	%	%	No.	%	No.	%	No.	%
Epitrochlear	.65	.07	27	.71	2	.13	29	.56
Axillary	1.43	.14	66	1.76	4	.27	70	1.35
Cervical	3.77	4.73	86	2.29	83	5.78	169	3.26
Inguinal	15.03	1.18	423	11.29	15	1.04	438	8.45

Table XXV

HERNIA IN MEN

Class of 1931	1.26	Class of 1938	1.16
Class of 1932	1.41	Class of 1939	.76
Class of 1933	1.74	Class of 1940	.70
Class of 1934	1.30	Class of 1941	1.20
Class of 1935	1.71	Class of 1942	.86
Class of 1936	.71	Class of 1943	.90
Class of 1937	1.19	Class of 1944	.69

Table XXVI

GENITO-URINARY ORGANS

	1943	1944	
	%	No.	%
Testes Abnormal	.89	25	.62
Circumcision	8.35	1574	42.02

Table XXVII

CRYPTORCHIDISM

Class of 1931	.38	Class of 1938	.43
Class of 1932	.60	Class of 1939	.03
Class of 1933	.32	Class of 1940	.29
Class of 1934	.70	Class of 1941	.18
Class of 1935	.48	Class of 1942	.12
Class of 1936	.28	Class of 1943	.83
Class of 1937	.32	Class of 1944	.67

Table XXVIII

URINALYSIS

	1943		1944					
	Men	Women	Men		Women		Total	
	%	%	No.	%	No.	%	No.	%
Acid	79.28	78.4	2458	65.63	1024	71.40	3482	67.23
Alkaline	20.36	15.97	1232	32.89	378	26.35	1610	31.08
Neutral	1.37	4.43	55	1.46	23	1.60	78	1.50
Sugar	--	.37	15	.40	26	1.81	41	.79
Albumin	.089	.97	137	3.65	71	4.95	208	4.01

Table XXIX

GLYCOSURIA AND ALBUMINURIA OVER A PERIOD OF YEARS

	Sugar		Albumin	
	Men	Women	Men	Women
	%	%	%	%
Class of 1931	.58	1.86	5.71	2.75
Class of 1932	.06	.48	3.6	2.1
Class of 1933	.09	.85	2.62	1.44
Class of 1934	.21	.79	5.65	2.97
Class of 1935	.22	1.29	5.40	4.2
Class of 1936	.52	1.19	6.7	2.87
Class of 1937	.52	--	4.97	1.15
Class of 1938	.86	2.13	4.59	3.66
Class of 1939	.42	.59	4.94	4.69
Class of 1940	.43	.78	6.06	2.47
Class of 1941	.13	4.81	3.74	6.24
Class of 1942	.11	1.38	1.42	4.51
Class of 1943	.0	.37	.089	.97
Class of 1944	.40	1.81	3.65	4.95

Table XXX

FOOT ABNORMALITIES

	1943		1944					
	Men	Women	Men		Women		Total	
	%	%	No.	%	No.	%	No.	%
Long Arches								
1st degree	9.04	22.7	470	12.55	369	25.03	839	16.20
2nd degree	6.37	13.68	379	10.12	181	12.62	560	10.81
3rd degree	1.28	4.36	65	1.73	71	4.95	136	2.62
Anterior arches	7.46	35.5	561	14.97	460	32.07	1021	19.71
Abnormalities of feet	--	.96	1	.02	17	1.18	18	.34

Table XXXI

FOOT ABNORMALITIES OVER A PERIOD OF YEARS

	Long Arches						Anterior Arches Flat	
	1st Degree		2nd Degree		3rd Degree			
	Men	Women	Men	Women	Men	Women	Men	Women
	%	%	%	%	%	%	%	%
Class of 1934	19.5	11.68	9.73	9.3	2.03	1.51	22.31	28.41
Class of 1935	15.9	19.2	9.5	8.7	1.08	1.6	19.6	35.9
Class of 1936	18.3	36.4	9.5	10.0	.99	2.18	28.3	29.0
Class of 1937	14.3	32.9	7.1	12.3	2.4	2.72	22.2	34.0
Class of 1938	15.82	25.21	6.98	7.84	2.36	1.68	18.98	20.49
Class of 1939	11.92	32.16	5.52	7.03	2.46	1.98	14.47	7.47
Class of 1940	7.84	27.83	2.26	9.95	1.08	2.08	10.29	29.01
Class of 1941	10.48	25.39	5.40	12.76	1.39	4.60	10.28	34.89
Class of 1942	9.92	27.21	5.49	10.94	1.62	2.70	9.78	2.96
Class of 1943	9.04	23.52	6.38	13.76	1.29	4.36	7.46	35.50
Class of 1944	12.55	25.03	10.12	12.62	1.73	4.95	14.97	32.07

Table XXXII

SPINE ABNORMALITIES

	1943		1944					
	Men	Women	Men		Women		Total	
	%	%	No.	%	No.	%	No.	%
Kyphosis	1.26	2.81	92	2.45	28	1.95	120	2.31
Lordosis	1.23	1.78	26	.69	19	1.32	45	.86
Scoliosis	.81	3.11	76	2.02	35	2.44	111	2.14

Table XXXIII

NOSE ABNORMALITIES

	1943		1944					
	Men	Women	Men		Women		Total	
	%	%	No.	%	No.	%	No.	%
Spur	2.67	.15	181	4.83	4	.27	185	3.57
Deviated Septum	8.06	10.36	416	11.10	152	10.59	568	11.31
Atrophied	.06	--	6	.16	--	--	6	.11
Hypertrophy	2.19	2.66	79	2.10	37	2.68	116	2.23

Table XXXIV

THROAT ABNORMALITIES

	1943		1944					
	Men	Women	Men		Women		Total	
	%	%	No.	%	No.	%	No.	%
TONSILS:								
Removed	48.58	46.52	2140	57.10	918	64.01	3058	59.04
Tags	3.59	8.88	141	3.76	163	11.36	304	5.86
Pathological	5.48	3.06	238	6.35	123	8.64	361	6.97

Table XXXV

PERCENTAGE OF STUDENTS WITH TONSILS REMOVED OVER A PERIOD OF YEARS

	Men	Women		Men	Women
Class of 1931	35.77	42.42	Class of 1938	52.19	57.19
Class of 1932	37.3	37.2	Class of 1939	49.20	56.26
Class of 1933	42.48	45.56	Class of 1940	46.59	57.54
Class of 1934	42.41	41.1	Class of 1941	51.51	59.71
Class of 1935	45.4	52.2	Class of 1942	50.0	59.62
Class of 1936	44.0	50.1	Class of 1943	48.55	46.52
Class of 1937	45.3	52.1	Class of 1944	57.10	64.01

Table XXXVI

EARS

	1943		1944					
	Men	Women	Men		Women		Total	
	%	%	No.	%	No.	%	No.	%
Perforated	.47	.52	23	.61	9	.62	32	.61
Cerumen	12.67	20.64	724	19.33	263	18.34	987	19.05
Hearing abnormal	.87	1.25	39	1.04	31	2.16	70	1.35

Table XXXVII

EYES

	1943		1944					
	Men	Women	Men		Women		Total	
	%	%	No.	%	No.	%	No.	%
Abnormal								
Color vision	.18	--	9	.24	--	--	9	.17
Refraction								
O. D. only	5.42	6.5	133	3.54	137	9.55	270	5.21
O. S. only	5.98	6.58	141	3.76	119	8.29	260	5.02
Both O.D. & O.S.	23.09	23.44	920	24.56	332	23.15	1252	24.17
Corrected								
with glasses	10.21	14.05	498	13.29	216	15.06	714	13.78

Table XXXVIII

POSTURE

	1943		1944					
	Men	Women	Men		Women		Total	
	%	%	No.	%	No.	%	No.	%
Restricted								
flexibility	.06	.96	3	.08	16	1.11	19	.36
Excellent	.03	1.77	42	1.12	27	1.88	69	1.33
Good	84.06	89.49	2949	78.74	1270	88.56	4219	81.46
Fair	15.09	8.21	717	19.14	133	9.27	850	16.41
Poor	.8	.51	37	.98	4	.27	41	.79

Table XXXIX

INCIDENCE OF HISTORY OF VENEREAL DISEASE

	1944					
	Men		Women		Total	
	No.	%	No.	%	No.	%
Gonorrhea	3	.08	-	--	3	.05
Syphilis	-	--	-	--	-	--
Chancroid	-	--	-	--	-	--

Table XL

INCIDENCE OF VACCINATION SCARS

1944

	Men		Women		Total	
	No.	%	No.	%	No.	%
Arm	3251	26.80	868	60.53	4119	77.53
Leg	10	.26	383	26.64	393	7.58
None	484	12.92	183	12.76	667	12.87

Table XLI

SKIN DISEASES

1944

	Men		Women		Total	
	No.	%	No.	%	No.	%
Acne	462	12.33	439	30.61	901	17.39
Mycosis	588	15.70	81	57.36	669	12.91
Others	44	1.17	8	.55	52	1.00

TWENTY-FIFTH ANNUAL REPORT

APPENDIX C

APPENDIX C

Table I

SUMMARY OF MEDICAL HISTORIES

	Men	Women	Class of '44 Total	Class of '43 Total
Total number examined.....	3745	1434	5179	4691
Total number re-examined...	3070	1161	4231	3816
Inheritable diseases				
Apoplexy (family history)	25	25	50	42
Cancer (" ")	308	310	618	495
Goiter (" ")	129	93	222	246
Mental disturbances (family history).....	22	6	28	48
Diabetes (family history)	215	149	364	314
Epilepsy (" ")	5	1	6	15
Kidney disease (family history).....	58	37	95	99
Tuberculosis (family history).....	196	99	295	262
Birthplace				
Illinois.....	2686	1023	3709	3287
Elsewhere.....	1059	311	1370	1404
Work for self-support during college.....	1972	338	2310	2138
Use laxatives frequently...	81	114	195	199
Sleep				
Under 6 hours.....	8	6	14	27
6-7 hours.....	440	188	628	509
8-9 hours.....	3092	1144	4236	3839
10 hours and over.....	206	96	302	316
Habits				
Coffee.....	1546	623	2169	1985
Tea.....	834	683	1517	1424
Tobacco.....	1288	358	1646	1455
None of the three.....	1297	364	1661	1344
Age started smoking				
Younger than 10 years....	2	2	4	1
10-14 years.....	52	12	64	73
15-19 years.....	1107	305	1412	1216
20-24 years.....	125	31	156	152
25 years and over.....	3	9	12	13
Meals per day				
One.....	---	2	2	---
Two.....	55	77	132	106
Three.....	3675	1341	5016	4575
More than three.....	15	14	29	10
Weight the past year				
Gained.....	1397	380	1777	1648
Lost.....	273	274	547	548
Stationary.....	2075	780	2855	2495

Table I--Continued

	Men	Women	Class of '44 Total	Class of '43 Total
Easily fatigued	138	235	373	344
Subject to frequent colds in				
Nose	544	319	863	663
Throat	154	148	302	207
Lungs	23	39	62	42
When reading, bothered with				
Headaches	138	176	314	282
Blurring of vision	81	86	167	181
Burning of eyes	118	121	239	215
Squinting of eyes	58	60	118	107
Watering of eyes	89	48	137	139
Twitching of eyes	42	38	80	79
Persistently worry	102	85	187	170
Have the "blues"	123	161	284	233
Injuries				
Head	222	27	249	165
Chest	160	13	173	87
Abdomen	24	2	26	16
Arm	582	89	671	563
Leg	287	60	347	386
Others	38	49	87	201
Operations				
Head				
tonsils	1962	769	2731	2620
adenoids	948	105	1053	1229
others	147	59	206	137
Chest	12	4	16	15
Abdomen	395	162	557	464
Circumcision	327	---	327	279
Others	182	78	260	195
Arches of feet painful	74	75	149	139
Possible reasons for not				
taking Physical Education.	129	141	270	159
Military Science	156	---	156	100
Diseases had				
Appendicitis	380	231	611	523
Asthma	109	29	138	91
Chickenpox	2311	915	3226	2927
Chorea	3	1	4	3
Constipation	41	81	122	138
Diabetes	6	1	7	10
Diphtheria	172	53	225	219
Discharging ear	165	97	262	233
Dysentery	11	11	22	28
Epilepsy	6	---	6	2
Heart trouble	73	37	110	90
Hay fever	271	103	374	339

Table I--Continued

	Men	Women	Class of '44	Class of '43
Diseases had (Cont'd)				
Hernia	108	7	115	118
Infantile paralysis	26	13	39	31
Influenza	469	271	740	821
Kidney trouble	33	48	81	81
Malaria	85	25	110	114
Measles	3029	1099	4128	4152
German measles	667	490	1157	991
Meningitis	5	2	7	10
Mumps	1975	766	2741	2467
Nervous breakdown	3	15	18	20
Pleurisy	53	29	82	83
Pneumonia	410	167	577	459
Rheumatism	68	42	110	96
Scarlet fever	651	268	919	822
Sinusitis	148	76	224	213
Smallpox	179	53	232	136
Tonsillitis	677	364	1041	994
Trachoma	3	1	4	6
Tuberculosis	16	8	24	13
Typhoid fever	26	14	40	44
Undulant fever	4	3	7	9
Whooping cough	1850	892	2742	2492
Others	82	26	108	326
Immunizations				
Diphtheria	1599	606	2205	1853
Scarlet fever	688	385	1073	758
Smallpox	3061	1239	4273	3803
Typhoid fever	799	329	1128	848
Tests				
Schick	1087	457	1544	1154
Dick	488	204	692	493

Table II

SUMMARY OF PHYSICAL EXAMINATIONS

	Men	Women	Class of '44 Total	Class of '43 Total
Color of hair				
Flaxen	228	135	363	352
Reddish	115	87	202	139
Light brown	967	382	1349	1293
Dark brown	688	296	984	718
Brown	1439	419	1858	1699
Black	308	115	423	489
Gray	---	---	---	1

Table II--Continued

	Men	Women	Class of '44 Total	Class of '43 Total
Color of eyes				
Black	11	15	26	59
Blue	1632	557	2189	2121
Gray	205	96	301	252
Greenish	268	130	398	371
Hazel	347	137	484	299
Brown	1282	499	1781	1589
Vision abnormal without glasses				
Both eyes	920	332	1252	1088
Right eye (O.D.)	133	137	270	269
Left eye (O.S.)	141	119	260	289
Corrected with glasses	498	216	714	531
Color vision abnormal	9	---	9	6
Ears				
Right ear				
Cerumen	354	135	489	367
Perforated drum	14	6	20	12
Hearing abnormal	22	17	39	23
Left ear				
Cerumen	370	128	498	335
Perforated drum	9	3	12	11
Hearing abnormal	17	14	31	23
Nose				
Spur	181	4	185	91
Deviation	416	152	568	409
Chronic hypertrophy	79	37	116	109
Atrophy	6	---	6	2
Tonsils				
Removed	2140	918	3058	2251
Tags	141	163	304	240
Pathological	238	123	361	292
Teeth				
No cavities or absent	1560	767	2327	2264
Cavities	733	331	1064	712
Absent	1805	392	2197	1837
Need cleaning	716	51	767	436
Devitalized	125	62	187	95
Gums diseased	19	4	23	25

Table II--Continued

	Men	Women	Class of '44 Total	Class of '43 Total
Weight				
Below 100 pounds	*	65		
100-115 incl		434		
116-130		488		
131-145		279		
146-160		114		
161-175		36		
176-190		14		
191-over		4		
Height				
below 50 inches	*	---		
50-59 incl		28		
60-62		366		
63-65		702		
66-68		298		
69-71		39		
72-over		1		
Skin				
Acne	462	439	901	704
Mycosis	588	81	669	543
Other skin diseases	44	8	52	23
Vaccination scar				
Arm	3251	868	4119	3756
Leg	10	383	406	361
None	484	183	667	574
General development				
Excellent	83	30	113	42
Good	2942	1332	4352	4108
Fair	666	69	735	524
Poor	54	2	56	17
Build				
Stocky	297	175	472	368
Medium	2566	731	3297	2961
Slender	882	528	1410	1362
Chest				
Flat	137	55	192	357
Funnel	26	7	33	31
Pigeon	5	27	32	25
Vertebral Column				
Kyphosis	92	28	121	80
Lordosis	26	19	45	65
Scoliosis	76	35	111	69

Table II--Continued

	Men	Women	Class of '44 Total	Class of '43 Total
Posture				
Excellent	42	27	69	25
Good	2949	1270	4219	4017
Fair	717	133	850	615
Poor	37	4	41	34
Restricted flexibility	3	16	19	15
Lymph nodes				
Axillary	66	4	70	50
Cervical	86	83	169	190
Epitrochlear	27	2	29	23
Inguinal	423	15	438	518
Thyroid				
Enlarged				
Slight	31	181	212	167
Moderate	1	18	19	21
Marked	---	---	---	2
Evidence of toxicity	2	5	7	4
Lungs, abnormal	17	3	20	21
Heart				
Abnormal	30	13	43	31
Irregular pulse	9	6	15	6
Abdomen, abnormal	3	11	14	9
Reflexes				
Patellar	8	33	41	47
Romberg	1	1	2	2
Pupillary	2	6	8	5
Penis, circumcised	1574	---	1574	1205
Testes, abnormal	25	---	25	30
Hernia, present	26	7	33	34
Hemorrhoids, present	36	14	50	30
Varicocele, present	182	---	182	58
Flat feet				
Long arches				
first degree	470	369	839	620
second degree	379	181	560	399
third degree	65	71	136	102
Anterior arches flat	561	460	1021	729
Abnormalities	1	17	18	13
Had venereal disease				
Gonorrhea	3	---	3	2
Syphilis	---	---	---	1
Chancroid	---	---	---	---
Physical defects				
Amputations	8	7	15	3
Atrophies	10	4	14	18
Unusual scars	186	108	294	256
Deformities	16	39	55	31

Table II--Continued

	Men	Women	Class of '44 Total	Class of '43 Total
Urine				
Acid	2458	1024	3402	3673
Alkaline	1232	378	1610	896
Neutral	55	23	78	106
Albumin				
Persistent	4	10	14	16
Transitory	44	50	94	143
Unclassified	89	11	100	69
Sugar				
Persistent	3	3	6	5
Transitory	6	22	28	35
Menses				
Regular	---	1078	1078	1113
Irregular	---	355	355	239
Pain				
Severe	---	293	293	213
Slight	---	657	657	587

SUBNORMAL DEVELOPMENT OF MEN STUDENTS AS DETERMINED BY MINIMUM STANDARDS OF THE WAR DEPARTMENT

	Urban	Rural	Out-S	Grand Total
Underheight and underweight (under 64" and 120 lbs.).....	7	4	7	18
Underheight (under 64"; 120 lbs. or over).....	27	6	5	38

Height	Weight	Chest at Expiration	Satisfactory				Underdev. Chest			
			Urban	Rural	Out-S	Total	Urban	Rural	Out-S	Total
64	120	30	26	11	3	40	--	--	-	--
65	121	30	59	24	20	103	3	--	-	3
66	122	30¼	135	43	37	215	--	1	-	1
67	124	30½	203	80	56	339	1	--	-	1
68	126	30 3/4 ..	302	103	85	490	--	1	-	1
69	128	31	330	117	85	532	2	--	-	2
70	130	31¼	312	130	62	504	5	2	2	9
71	133	31 3/4 .	236	86	59	381	8	5	1	14
72	138	32¼	200	53	35	288	6	5	2	13
73	143	32 3/4 .	127	40	18	185	4	2	2	8
74	148	33½	48	11	8	67	1	--	1	2
75	155	34¼	14	2	5	21	1	--	-	1
76	161	34 3/4 .	6	2	3	11	2	--	-	2
77	168	35¼	5	--	1	6	--	--	-	--
78	175	35 3/4 .	1	--	--	1	1	--	-	1
79	...	...	1	--	--	1	--	--	-	--
		Totals	2005	702	477	3184	34	16	8	58

SUBNORMAL DEVELOPMENT OF MEN STUDENTS
AS DETERMINED BY MINIMUM STANDARDS
OF THE WAR DEPARTMENT
(cont'd)

Height	Weight	Chest at Expiration	Underweight				Underdev. Chest and Underweight			
			Urban	Rural	Out-S	Total	Urban	Rural	Out-S	Total
64	120	30	4	3	2	9	--	1	--	1
65	121	30	17	9	4	30	2	--	--	2
66	122	30¼	19	10	14	43	11	1	1	13
67	124	30½	34	11	4	49	10	2	2	14
68	126	30 3/4	27	13	12	52	12	4	--	16
69	128	31	20	4	13	37	7	4	--	11
70	130	31¼	26	8	3	37	18	6	1	25
71	133	31 3/4	19	1	3	23	13	1	5	19
72	138	32¼	10	--	2	12	9	3	--	12
73	143	32 3/4	5	6	1	12	2	2	1	5
74	148	33½	6	1	--	7	5	2	1	8
75	155	34¼	1	--	1	2	2	1	--	3
76	161	34 3/4	--	--	--	--	--	--	--	--
77	168	35¼	--	--	--	--	2	1	--	3
78	175	35 3/4	1	--	--	1	--	--	--	--
79			--	--	--	--	1	--	--	1
		Totals	189	66	59	314	94	28	11	133

SUBNORMAL DEVELOPMENT OF MEN STUDENTS
AS DETERMINED BY MINIMUM STANDARDS
OF THE WAR DEPARTMENT
(cont'd)

Height	Weight	Chest at Expiration	Grand Totals Urban	Rural	Out-S	Total
64	120	30	4	4	2	10
65	121	30	22	9	4	35
66	122	30¼	30	12	15	57
67	124	30½	45	13	6	64
68	126	30 3/4	39	18	12	69
69	128	31	29	8	13	50
70	130	31¼	49	16	6	71
71	133	31 3/4	40	7	9	56
72	138	32¼	25	8	4	37
73	143	32 3/4	11	10	4	25
74	148	33½	12	3	2	17
75	155	34¼	4	1	1	6
76	161	34 3/4	2	--	--	2
77	168	35¼	2	1	--	3
78	175	35 3/4	2	--	--	2
79			1	--	--	1
		Totals	317	110	78	505

TWENTY-FIFTH ANNUAL REPORT

APPENDIX D

UNIVERSITY HIGH SCHOOL EXAMINATIONS

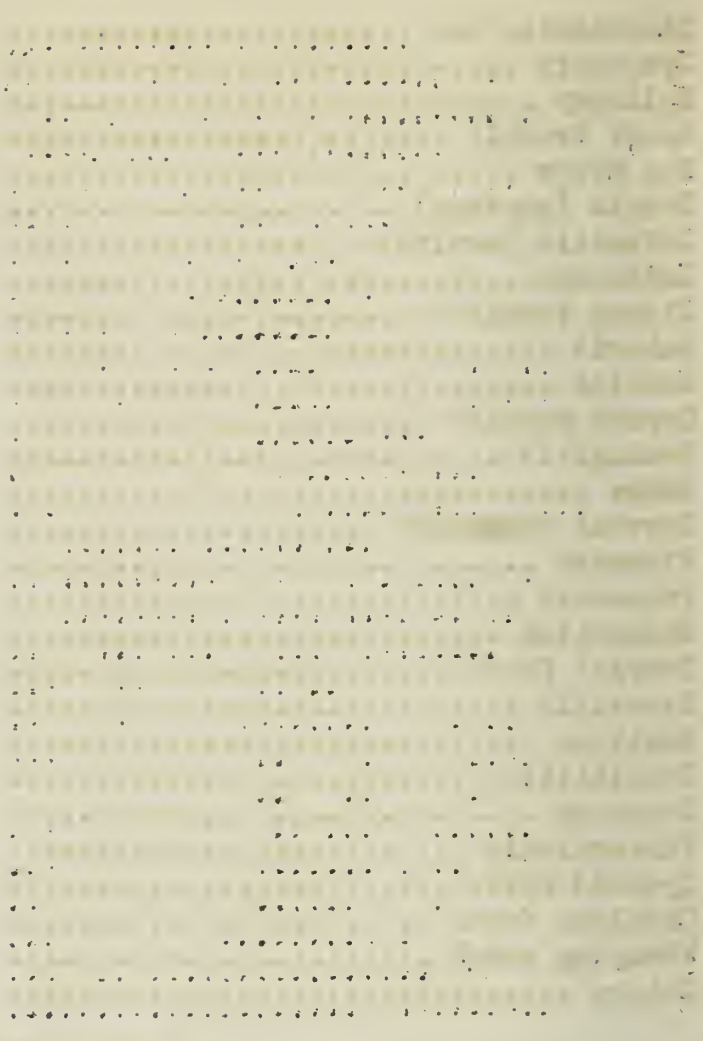
	Men	Women	Total
Total number examined	34	39	73
Total number reexamined	19	6	25
Inheritable diseases			
Apoplexy	--	--	--
Cancer	5	4	9
Goiter	--	1	1
Mental disturbances	--	--	--
Diabetes	--	2	2
Epilepsy	--	--	--
Kidney disease	--	1	1
Tuberculosis	3	2	5
Birthplace			
Illinois	25	29	54
Elsewhere	9	10	19
Work for self-support	5	--	5
Use laxatives frequently	--	3	3
Sleep			
Under 6 hours	--	--	--
6-7 hours	--	1	1
8-9 hours	17	23	40
10 hours and over	17	15	32
Habits			
Coffee	9	6	15
Tea	8	12	20
Tobacco	9	--	9
None of the three	17	21	38
Age started smoking			
Younger than 10 years	--	--	--
10-14 years	2	--	2
15-19 years	7	--	7
Meals per day			
One	--	--	--
Two	1	1	2
Three	32	38	70
More than three	1	--	1
Weight the past year			
Gained	24	23	47
Lost	--	5	5
Stationary	10	11	21
Easily fatigued	--	3	3
Menses			
Regular	--	19	19
Irregular	--	5	5
Pain			
Severe	--	--	--
Slight	--	5	5
Menses not started	--	15	15

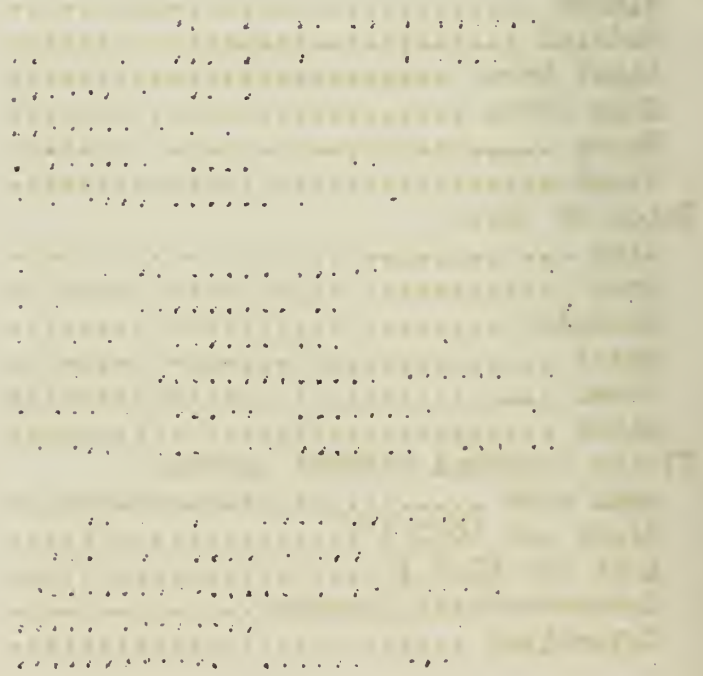
	Men	Women	Total
Subject to frequent colds in			
Nose	4	9	13
Throat	1	6	7
Lungs	1	4	5
Injuries			
Head	1	1	2
Chest	--	--	--
Abdomen	1	--	1
Arm	5	3	8
Leg	2	--	2
Others	1	1	2
Operations			
Head			
Tonsils	16	15	31
Adenoids	8	2	10
Others	1	1	2
Chest	--	--	--
A bdomen	4	3	7
Circumcision	1	---	1
Others	--	--	--
Immunizations			
Diphtheria	22	25	47
Scarlet fever	11	9	20
Smallpox	27	31	58
Typhoid fever	6	7	13
Tests			
Schick	17	17	34
Dick	13	16	29
Persistently worry	--	1	1
Have the "blues"	--	2	2
Arches of feet painful	--	5	5
Possible reasons for not taking			
Physical Education	--	1	1
When reading, bothered with			
Headaches	--	2	2
Blurring of vision	--	1	1
Burning of eyes	--	--	--
Squinting of eyes	--	1	1
Watering of eyes	1	--	1
Twitching of eyes	--	--	--
Diseases had			
Appendicitis	2	5	7
Asthma	--	1	1
Chickenpox	24	29	53
Chorea	--	--	--
Constipation	1	4	5
Diabetes	--	--	--
Diphtheria	1	--	1

	Men	Women	Total
Discharging ear	1	4	5
Dysentery	--	--	--
Epilepsy	--	--	--
Heart trouble	1	--	1
Hay fever	1	1	2
Hernia (rupture)	1	--	1
Infantile paralysis	1	--	1
Influenza	6	7	13
Kidney trouble	1	1	2
Malaria	--	1	1
Measles	30	30	60
German measles	8	7	15
Meningitis	--	--	--
Mumps	23	18	41
Nervous breakdown	--	--	--
Pleurisy	--	--	--
Pneumonia	4	9	13
Rheumatism		1	1
Scarlet fever	4	5	9
Sinusitis	1	--	1
Smallpox	1	--	1
Tonsillitis	7	7	14
Trachoma	--	--	--
Tuberculosis	--	--	--
Typhoid fever	--	--	--
Undulant fever	--	--	--
Whooping cough	19	22	41
Others	22	1	23

SUMMARY OF PHYSICAL EXAMINATIONS

Color of hair			
Flaxen	4	2	6
Reddish	2	3	5
Light brown	9	13	22
Dark brown	7	7	14
Brown	10	13	23
Black	2	1	3
Color of eyes			
Blue	15	17	32
Gray	1	1	2
Greenish	--	1	1
Hazel	11	6	17
Brown	6	14	20
Black	1	--	1
Vision abnormal without glasses			
Both eyes	6	6	12
Right eye (O.D.)	3	4	7
Left eye (O.S.)	2	3	5
Corrected with glasses	2	2	4
Colorblind	--	--	--

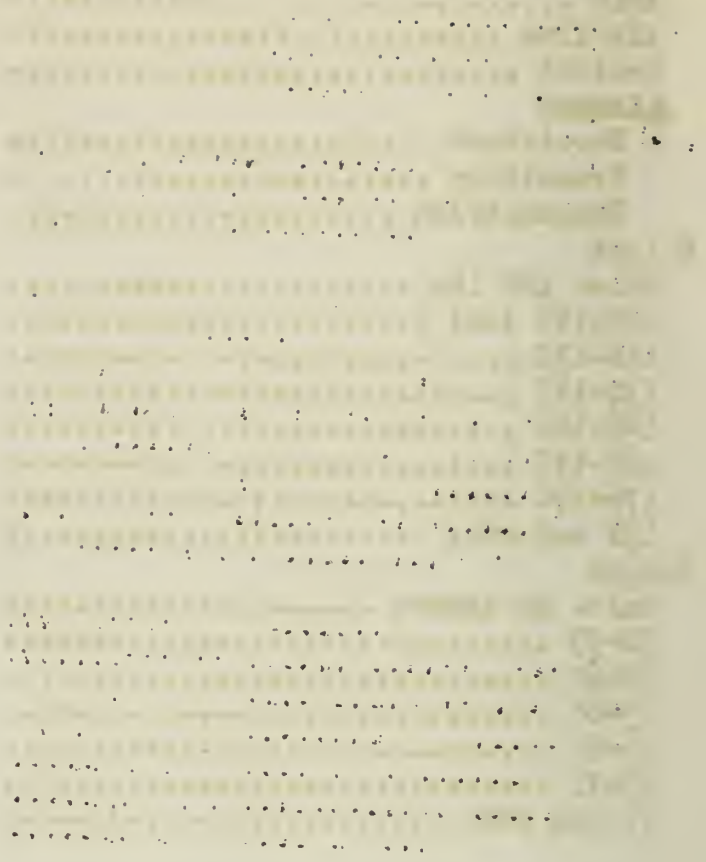




	Men	Women	Total
Ears			
Right ear			
Cerumen	5	4	9
Perforated drum	--	--	--
Hearing abnormal	--	1	1
Left ear			
Cerumen	3	3	6
Perforated drum	--	--	--
Hearing abnormal	--	1	1
Nose			
Spur	--	--	--
Deviation	3	3	6
Chronic hypertrophy	--	--	--
Atrophy	--	--	--
Tonsils			
Removed	17	18	35
Tags	--	4	4
Pathological	2	2	4
Teeth			
No cavities or absent	18	29	47
Cavities	1	5	6
Need cleaning	2	2	4
Devitalized	--	--	--
Absent	13	5	18
Skin			
Acne	2	3	5
Mycosis	1	2	3
Other skin diseases	--	--	--
Vaccination scar			
Arm	29	24	53
Leg	1	12	13
None	4	3	7
General Development			
Excellent	--	--	--
Good	27	37	64
Fair	8	2	10
Poor	--	--	--
Build			
Stocky	1	2	3
Medium	24	18	42
Slender	10	19	29
Chest			
Flat	1	--	1
Funnel	9	--	9
Pigeon	--	--	--
Vertebral column			
Kyphosis	1	--	1
Lordosis	1	--	1
Scoliosis	--	--	--

	Men	Women	Total
Posture			
Excellent	--	1	1
Good	28	34	62
Fair	6	4	10
Poor	--	--	--
Restricted flexibility	--	1	1
Lymph nodes			
Axillary	1	--	1
Cervical	1	--	1
Epitrochlear	1	--	1
Inguinal	--	--	--
Thyroid			
Enlarged			
Slight	--	8	8
Moderate	--	1	1
Marked	--	--	--
Evidence of toxicity	--	--	--
Lungs, abnormal	--	1	1
Heart, abnormal	--	2	2
Irregular pulse	1	--	1
Reflexes			
Patellar	--	1	1
Romberg	--	--	--
Pupillary	--	--	--
Penis, circumcised	12	--	12
Testes, abnormal	--	--	--
Varicocele, present	--	--	--
Hernia, present	1	--	1
Hemorrhoids, present	--	--	--
Flat feet			
Long Arches			
First degree	3	6	9
Second degree	1	6	7
Third degree	1	1	2
Anterior arches flat	5	9	14
Abnormalities	--	--	--
Had venereal disease			
Gonorrhea	--	--	--
Syphilis	--	--	--
Chancroid	--	--	--
Obvious defects			
Amputations	--	--	--
Atrophies	--	--	--
Unusual scars	1	3	4
Deformities	--	--	--

	Men	Women	Total
Urine			
Acid	25	25	50
Alkaline	8	14	22
Neutral	1	--	1
Albumin			
Persistent	--	--	--
Transitory	--	1	1
Unclassified	--	--	--
Weight			
Below 100 lbs	9	12	21
100-115 incl	5	14	19
116-130	11	8	19
131-145	6	3	9
146-160	1	1	2
161-175	1	1	2
176-190	--	--	--
191 and over	1	--	1
Height			
Below 50 inches	2	--	2
50-59	6	5	11
60-62	7	16	23
63-65	8	16	24
66-68	8	2	10
69-71	6	--	6
72 and over	2	--	2



TWENTY-FIFTH ANNUAL REPORT

APPENDIX E

CIVIL SERVICE EXAMINATIONS

	Men	Women	Total
Total number examined	286	86	372
Married	209	41	250
Widower, widow	8	24	32
Single	69	21	90
Age			
Under 20	23	6	29
20-29 years	95	14	109
30-39 years	74	16	90
40-49 years	49	35	84
50 years and over	45	15	60
Inheritable diseases			
Tuberculosis	17	6	23
Cancer	30	15	45
Neurasthenia	--	1	1
Epilepsy	--	--	--
Others	1	--	1
Birthplace			
Illinois	211	58	269
Elsewhere	75	28	103
Injuries			
Head	14	2	16
Chest	11	--	11
Abdomen	4	--	4
Arm	49	3	52
Leg	21	4	25
Others	7	2	9
Operations			
Head			
Tonsils	65	24	89
Adenoids	35	6	41
Others	1	4	5
Chest	--	--	--
Abdomen	34	18	52
Circumcision	9	--	9
Others	10	20	30
Vaccinations			
Typhoid fever	34	18	52
Smallpox	259	70	329
Age of vaccination scar			
Under 10 years	121	21	142
10-20 years	81	12	93
Over 20 years	57	37	94
Sleep			
Under 6 hours	--	--	--
6-7 hours	42	8	50
8-9 hours	225	76	301
10 hours and over	19	2	21

	Men	Women	Total
Habits			
Tea	53	34	87
Coffee	229	69	298
Tobacco	226	7	233
Alcohol	50	1	51
Drugs	--	--	--
None of the above	21	11	32
Diseases Had			
Measles	249	81	330
Rubella	4	34	38
Mumps	207	58	265
Chickenpox	139	67	206
Whooping cough	154	65	219
Scarlet fever	35	14	49
Typhoid fever	19	4	23
Diphtheria	8	8	16
Meningitis	--	1	1
Malaria	5	1	6
Smallpox	22	2	24
Pneumonia	37	11	48
Asthma	3	3	6
Pleurisy	7	4	11
Rheumatism	6	7	13
Tonsillitis	36	32	68
Chorea	--	1	1
Influenza	56	42	98
Otitis media	--	3	3
Gonorrhea	9	--	9
Syphilis	2	--	2
Chancroid	--	--	--
Constipation	2	17	19
Dysentery	--	--	--
Appendicitis	25	15	40
Neurasthenia	--	1	1
Poliomyelitis	--	--	--
Tuberculosis	1	--	1
Glasses	38	57	95
Others	8	3	11

SUMMARY OF PHYSICAL EXAMINATIONS

Color of hair			
Flaxen	12	1	13
Reddish	5	3	8
Light brown	81	8	89
Dark brown	47	30	77
Brown	94	22	116
Black	19	6	25
Gray	28	16	44

	Men	Women	Total
Color of eyes			
Blue	155	24	179
Gray	38	18	56
Greenish	10	6	16
Hazel	11	8	19
Brown	72	27	99
Black	--	3	3
Vision abnormal without glasses			
Both eyes	79	26	105
Right eye (O.D.)	17	10	27
Left eye (O.S.)	14	6	20
Corrected with glasses	19	19	38
Colorblind	--	--	--
Manifest Astigmatism	--	17	17
Ears			
Right ear			
Cerumen	30	8	38
Perforated drum	3	--	3
Hearing abnormal	4	6	10
Left ear			
Cerumen	31	9	40
Perforated drum	2	--	2
Hearing abnormal	3	5	8
Nose			
Spur	16	1	17
Deviation	33	8	41
Chronic hypertrophy	4	1	5
Atrophy	--	--	--
Tonsils			
Removed	74	24	98
Tags	--	5	5
Pathological	14	10	24
Teeth			
No cavities or absent	37	8	45
Cavities	68	17	85
Absent	236	73	309
Need cleaning	164	3	167
Devitalized	39	--	39
Gums diseased	45	1	46
Skin			
Acne	14	9	23
Mycosis	36	3	39
Other skin diseases	5	--	5
Vaccination scar			
Arm	232	69	301
Leg	--	4	4
None	54	13	67
General Development			
Excellent	3	--	3
Good	254	78	332
Fair	28	6	34
Poor	1	2	3

	Men	Women	Total
Build			
Stocky	40	21	61
Medium	183	49	232
Slender	63	16	79
Chest			
Flat	6	3	9
Funnel	3	--	3
Pigeon	--	3	3
Vertebral column			
Kyphosis	15	4	19
Lordosis	8	3	11
Scoliosis	7	3	10
Posture			
Excellent	1	1	2
Good	234	61	295
Fair	46	24	70
Poor	5	--	5
Restricted flexibility	1	1	2
Lymph nodes			
Axillary	14	--	14
Cervical	8	4	12
Epitrochlear	11	--	11
Inguinal	48	--	48
Thyroid			
Enlarged			
Slight	1	7	8
Moderate	--	1	1
Marked	--	--	--
Evidence of toxicity	--	--	--
Lungs, abnormal	1	2	3
Heart, abnormal	7	3	10
Irregular Pulse	2	--	2
Abdomen, abnormal	1	--	1
Reflexes			
Patellar	3	2	5
Romberg	1	--	1
Pupillary	2	--	2
Penis, circumcised	48	--	48
Testes, abnormal	6	--	6
Hernia, present	19	1	20
Varicocele, present	9	--	9
Hemorrhoids, present	17	5	22
Flat feet			
Long arches			
First degree	34	26	60
Second degree	20	18	38
Third degree	3	10	13
Anterior arches flat	30	37	67
Abnormalities	--	--	--
Had venereal disease			
Gonorrhea	9	--	9
Syphilis	2	--	2
Chancroid	--	--	--

	Men	Women	Total
Physical defects			
Amputations	6	--	6
Atrophies	1	--	1
Unusual scars	22	7	29
Deformities	4	4	8
Urine			
Acid	228	60	288
Alkaline	54	21	75
Neutral	4	1	5
Albumin			
Persistent	--	1	1
Transitory	--	--	--
Unclassified	6	--	6
Sugar			
Persistent	--	--	--
Transitory	--	--	--
Unclassified	8	--	8
Weight			
Below 100 lbs	--	2	2
100-115 incl	7	9	16
116-130	41	13	54
131-145	79	21	100
146-160	68	17	85
161-175	56	13	69
176-190	16	9	25
191 and over	19	2	21
Height			
Below 50 inches	--	--	--
50-59	--	3	3
60-62	6	17	23
63-65	24	54	78
66-68	113	12	125
68-70	116	--	116
70-71	27	--	27
72 and over	19	--	19

TWENTY-FIFTH ANNUAL REPORT

APPENDIX F

CIVIL AERONAUTICS AUTHORITY

Total number examined	27
Inheritable diseases	
Cancer	1
Goiter	2
Diabetes	2
Kidney disease	1
Birthplace	
Illinois	23
Elsewhere	4
Work for self-support	14
Sleep	
6-7 hours	3
8-9 hours	24
Habits	
Coffee	9
Tea	3
Tobacco	13
None of the three	12
Age started smoking	
15-19 years	9
20-24 years	4
Meals per day	
Three	27
Weight the past year	
Gained	12
Stationary	15
Injuries	
Arm	4
Leg	1
Operations	
Head	
Tonsils	16
Adenoids	7
Others	1
Abdomen	5
Circumcision	3
Immunizations	
Diphtheria	10
Scarlet fever	4
Smallpox	22
Typhoid fever	14
Tests	
Schick	9
Dick	8
When reading, bothered with watering of eyes	1
Diseases had	
Appendicitis	3
Chickenpox	21
Heart trouble	2
Hay fever	2

Hernia (rupture)	2
Influenza	2
Malaria	2
Measles	22
German measles	7
Mumps	13
Pneumonia	2
Scarlet fever	1
Tonsillitis	9
Typhoid fever	1
Whooping cough	12

SUMMARY OF PHYSICAL EXAMINATIONS

Color of hair	
Flaxen	2
Reddish	1
Light brown	6
Dark brown	7
Brown	9
Black	2
Color of eyes	
Blue	10
Gray	4
Hazel	2
Brown	11
Vision abnormal without glasses	
Left eye (O.S.)	3
Ears	
Right ear	
Cerumen	4
Left ear	
Cerumen	4
Perforated drum	1
Nose	
Spur	3
Deviation	1
Tonsils	
Removed	17
Tags	3
Pathological	2
Teeth	
No cavities or absent	12
Cavities	1
Absent	15
Need cleaning	4
Skin	
Acne	4
Mycosis	6

Vaccination scar	
Arm	27
General Development	
Good	27
Build	
Medium	20
Slender	7
Chest	
Flat	2
Posture	
Good	27
Lymph nodes	
Axillary	3
Cervical	1
Inguinal	5
Heart, abnormal	1
Irregular pulse	1
Penis, circumcised	14
Hemorrhoids, present	1
Flat feet	
Long Arches	
First degree	4
Second degree	2
Third degree	1
Anterior arches flat	4
Urine	
Acid	21
Alkaline	6
Weight	
116-130	4
131-145	10
146-160	5
161-175	6
176-190	1
191 & over	1
Height	
63-65	1
66-68	7
69-71	15
72 and over	4

TWENTY-FIFTH ANNUAL REPORT

APPENDIX G

CASES ENCOUNTERED DURING THE YEAR

Abdominal pain	..	42
Abscess		
Alveolar (gumboil)	3	
Unclassified	19	22
Acne		232
Adenitis		
Cervical	20	
Inguinal	6	
Unclassified	54	80
Adhesions	..	3
Albuminuria		
Accidental	36	
Unclassified	3	39
Allergy	..	35
Amenorrhea	..	3
Angina, Vincent's	30	30
Ankylosis	..	2
Appendicitis		
Acute	11	
Chronic	29	
Unclassified	34	74
Arthritis	..	44
Asthma	..	22
Atrophy	..	4
Autointoxication	..	4
Anorexia	..	2
Balanitis	..	2
Bites		
Animal	20	
Insect stings	38	
Unclassified	3	61
Blepharitis	..	25
Bromidrosis	..	7
Bronchitis		
Acute	14	
Chronic	1	
Unclassified	165	180
Bunion	..	6
Bursitis	..	51
Callosity	..	26
Cancrum, oris	..	69
Carbuncle	..	2

Caries		
Dental	..	10
Catarrh	..	3
Cellulitis	..	37
Ceruminosis	..	544
Chalazion	..	3
Chapped lips	..	3
Charley horse	..	3
Chickenpox	..	4
Chiggers	..	4
Clavus	..	35
Colitis	..	24
Color blindness	..	3
Conjunctivitis		
Acute	20	
Chronic	1	
Unclassified	131	152
Constipation	..	53
Coryza	..	724
Cough	..	32
Cramp	..	4
Cyst		
Sebaceous	40	
Unclassified	43	83
Cystitis	..	3
Dandruff	..	4
Deafness	..	13
Dermatitis		
Papillaris	2	
Venenata	21	
Unclassified	239	262
Deviation, nasal septum	..	41
Diabetes	..	2
Diarrhea	..	22
Dry skin	..	3
Dysmenorrhea	..	67
Dysuria	..	1
Ecchymosis	..	5
Eczema	..	15
Edema	..	15
Enteritis	..	38
Epidermophytosis	..	6
Epilepsy	..	1
Epistaxis	..	22

Erythema	..	5
Exostosis	..	4
Fainting (syncope)	..	8
Fatigue	..	68
Fissure	..	
Anus	5	
Unclassified	8	13
Flat foot (pes planus)	..	51
Folliculitis	..	5
Frostbite	..	1
Furunculosis	..	365
Ganglion	..	9
Gastritis	..	62
Gastroenteritis	..	21
Gingivitis	..	53
Glossitis	..	2
Granulated eye	..	1
Halitosis	..	1
Hay fever	..	65
Headache (cephalalgia)	..	70
Heart trouble	..	2
Heat rash	..	5
Heat stroke	..	1
Hematoma	..	6
Hematuria	..	1
Hemoptysis	..	1
Hemorrhage	..	8
Hemorrhoids	..	58
Hernia		
Femoral	1	
Inguinal	11	
Unclassified	24	36
Herpes		
Labilis	17	
Simplex	23	
Zoster	16	
Unclassified	19	75
Hordeolum	..	89
Hydrocele	..	2
Hyperhidrosis	..	7
Hypertension	..	1
Hypothyroidism	..	10
Ichthyosis	..	2
Impetigo		
Contagiosa	8	
Unclassified	65	73
Indigestion	..	53
Inflamation	..	14
Influenza	..	9
Ingrown nail	..	41
Insomnia	..	25

Iritis	..	1
Irritation		
Skin	16	
Unclassified	28	44
Jaundice	..	1
Lagrippe	..	69
Laryngitis	..	66
Lumbago	..	21
Malaise	..	20
Malaria	..	3
Menorrhagia	..	15
Metatarsalgia	..	23
Migraine	..	13
Miliaria	..	1
Mumps	..	8
Myalgia	..	8
Mycosis	..	939
Myopia	..	6
Myositis	..	141
Nausea	..	3
Nasal obstruction	..	1
Nervousness	..	13
Nephritis	..	3
Neuralgia		
Intercostal	1	
Unclassified	8	9
Neurasthenia	..	7
Neuritis	..	33
Neurosis	..	17
Nevus	..	4
Obesity	..	3
Obstruction, eustachian tubes	..	6
Orchitis	..	1
Otalgia	..	9
Otitis		
Externa	10	
Media	63	73
Overweight	..	26
Painful		
Arch	18	
Knee	4	
Miscellaneous	73	95
Paralysis		
Facial	1	
Unclassified	1	2
Paronychia	..	28
Pediculosis		
Corporis	1	
Pubis	22	
Unclassified	3	26
Periostitis		6

Pharyngitis		
Acute	187	
Chronic	12	
Naso	74	
Unclassified	1657	1930
Phimosis	..	7
Pityriasis	..	21
Pleurisy	..	32
Poisoning		
Ivy	11	
Unclassified	2	13
Poor posture	..	2
Pruritis	..	14
Psoriasis	..	8
Psychosis	..	1
Pustule	..	60
Pyorrhea	..	1
Rales	..	6
Rheumatism	..	6
Rhinitis		
Acute	137	
Chronic	6	
Unclassified	371	514
Rubella	..	31
Scabies	..	23
Scarlet fever	..	1
Sciatica	..	2
Scoliosis	..	1
Seborrhea	..	2
Sinusitis	..	185
Soreness, muscle	..	2
Sore throat	..	20
Stiff neck	..	2
Stomatitis		
Aphthous	95	
Unclassified	40	135
Synovitis	..	2
Swollen		
Face	2	
Gland	2	
Miscellaneous	7	11
Tachycardia	..	13
Tenosynovitis	..	18
Testicle, undescended	..	4
Tinea		
Circinata	1	
Cruris	97	
Versicolar	2	
Unclassified	35	135

Tinnitus aurium	..	2
Tonsillitis		
Acute	31	
Chronic	4	
Unclassified	121	156
Toothache	..	52
Torticollis	..	16
Tracheitis	..	5
Tumor	..	4
Ulcer	..	29
Underweight	..	87
Ureitis	..	25
Urethritis	..	10
Urticaria	..	33
Vaccinia	..	106
Varicocele	..	13
Varicose veins	..	39
Verruca (wart)	..	257
Vertigo	..	6
Vomiting	..	3
Wound	..	73

INJURIES, WOUNDS, SPRAINS

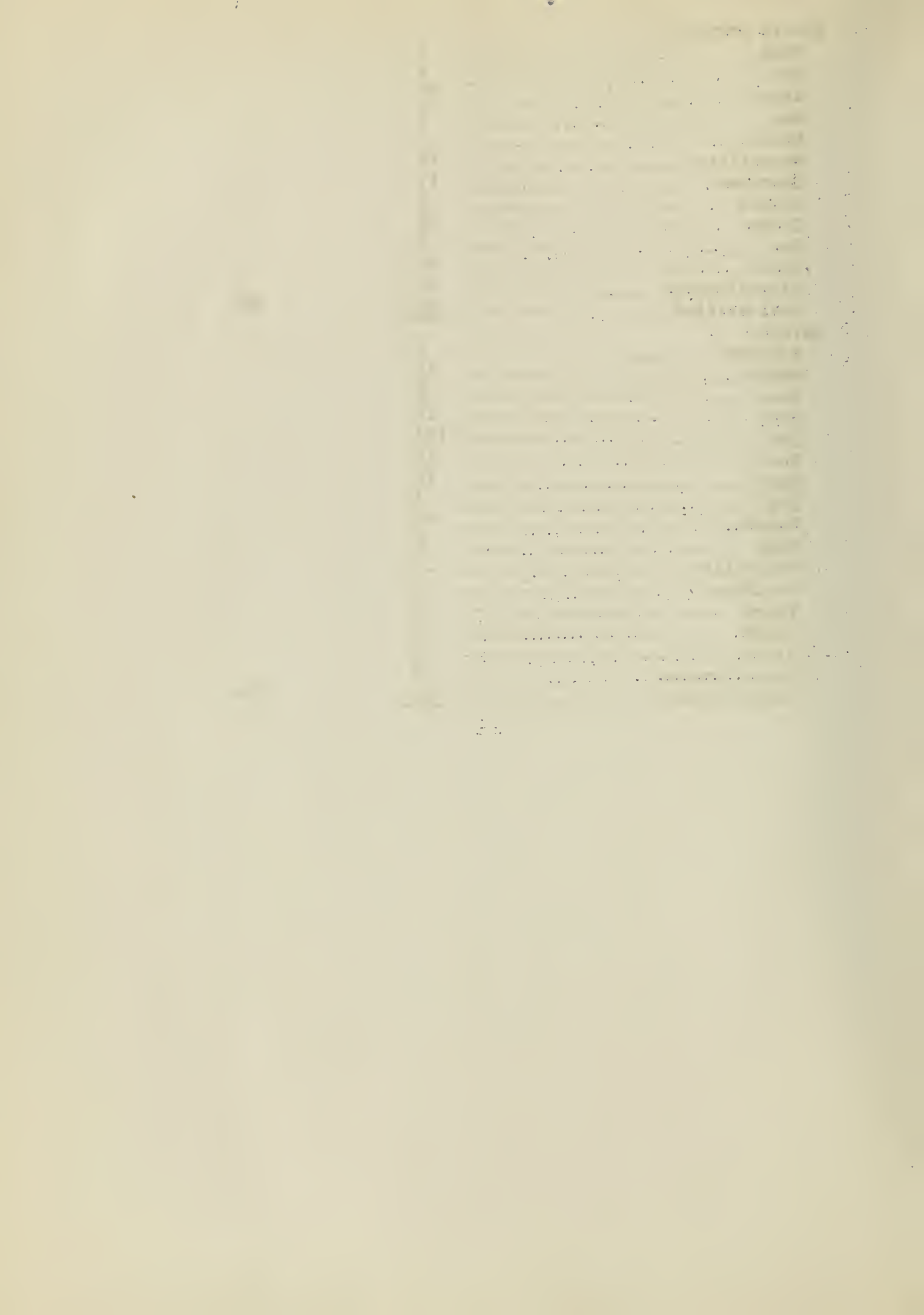
Abrasion		
Ankle	5	
Arm	16	
Buttock	3	
Chest	1	
Elbow	10	
Eyelid	13	
Face	8	
Finger	47	
Foot	11	
Gum	1	
Hand	19	
Head	11	
Heel	6	
Knee	56	
Leg	33	
Nose	2	
Shoulder	3	
Skin	1	
Thigh	9	
Toe	5	
Miscellaneous	14	
Unclassified	44	318
Avulsion, nail	..	2
Blister		
Hand	9	
Heel	45	
Foot	31	
Toe	24	
Miscellaneous	6	
Unclassified	20	135

Broken tooth		1
Burn		
Acid	4	
Chemical	9	
Sunburn	8	
Miscellaneous	10	
Arm	25	
Back	1	
Eye	6	
Face	5	
Finger	32	
Foot	4	
Hand	30	
Leg	7	
Mouth	1	
Wrist	2	
Miscellaneous	12	
Unclassified	15	171
Contusion		
Arm	6	
Back	4	
Buttocks	2	
Chest	15	
Ear	4	
Eye	9	
Face	5	
Finger	53	
Foot	27	
Forehead	1	
Head	7	
Hand	17	
Heel	10	
Hip	4	
Jaw	1	
Joint		
Elbow 11		
Knee 38	49	
Leg	22	
Lip	2	
Muscle	4	
Neck	4	
Nose	16	
Scrotum	1	
Shoulder	9	
Side	5	
Testicle	3	
Thigh	7	
Toe	37	
Miscellaneous	23	
Unclassified	11	358
Dislocation		
Elbow	1	
Finger	5	
Knee	3	
Shoulder	3	12

Foreign body		
Ear	1	
Eye	119	
Finger	26	
Hand	6	
Throat	1	
Miscellaneous	12	
Unclassified	12	177
Fracture		
Bones		
Ankle	3	
Clavicle	1	
Jaw	1	
Leg	3	
Rib	4	
Miscellaneous	2	32
Joints		
Elbow	5	
Finger	8	
Wrist	2	
Unclassified	3	18
Incisions		
Arm	1	
Finger	5	
Hand	1	
Wound	12	
Miscellaneous	1	20
Infections		
Abrasion	6	
Ankle	2	
Arm	16	
Blister	12	
Cheek	1	
Clavus	3	
Comedo	1	
Cyst	18	
Ear	16	
Eyelid	1	
Face	10	
Finger	71	
Foot	37	
Gum	9	
Hand	17	
Heel	11	
Knee	3	
Leg	11	
Mouth	5	
Nasal	8	
Neck	1	
Respiratory	64	
Sinus	4	
Skin	1	
Toe	61	
Tonsils	6	
Tooth	17	

Infections (cont'd)		
Wound	3	
Wrist	2	
Miscellaneous	41	
Unclassified	19	477
Injured		
Ankle	13	
Arm	2	
Chest	1	
Elbow	6	
Eye	5	
Finger	13	
Foot	7	
Hand	3	
Knee	21	
Leg	5	
Nose	1	
Rib	4	
Shoulder	3	
Testicle	1	
Toe	5	
Wrist	6	
Miscellaneous	29	
Unclassified	17	142
Lacerations		
Arm	4	
Chin	4	
Ear	2	
Eye	10	
Face	6	
Finger	95	
Foot	3	
Hand	32	
Head	4	
Knee	6	
Leg	6	
Lips	3	
Nose	2	
Scalp	8	
Thigh	2	
Toe	2	
Wrist	2	
Wound	16	
Miscellaneous	7	
Unclassified	16	230
Puncture, wound	..	15
Rupture	..	1
Sprain		
Ankle	231	
Arm	4	
Back	24	
Chest	1	
Elbow	5	
Finger	56	
Foot	47	

Sprain (cont'd)		
Hand	4	
Hip	4	
Knee	29	
Leg	3	
Neck	2	
Sacroiliac	11	
Shoulder	17	
Tendon	1	
Thumb	26	
Toe	9	
Wrist	60	
Miscellaneous	14	
Unclassified	12	560
Strain		
Abdomen	1	
Ankle	15	
Arm	5	
Back	15	
Eye	103	
Foot	16	
Knee	15	
Leg	3	
Muscle	53	
Neck	2	
Sacroiliac	19	
Shoulder	7	
Thigh	2	
Thumb	2	
Wrist	7	
Miscellaneous	8	
Unclassified	11	284



RECAPITULATION

Pharyngitis	1930
Mycosis	939
Coryza	724
Ceruminosis	544
Rhinitis	514
Furunculosis	365
Dermatitis	262
Verruca	257
Acne	232
Sinusitis	185
Bronchitis	180
Tonsillitis	156
Conjunctivitis	152
Myositis	141
Tinea	135
Stomatitis	125
Vaccinia	106
Painful	95
Hordeolum	89
Underweight	87
Appendicitis	84
Cyst	83
Adenitis	80
Herpes	75
Impetigo	73
Otitis	73
Wound	73
Headache	70
Cancrum oris	69
La grippe	69
Fatigue	68
Dysmenorrhea	67
Laryngitis	66
Hay fever	65
Gastritis	62
Bites	61
Pustule	60
Hemorrhoids	58
Gingivitis	53
Constipation	53
Indigestion	53
Toothache (Odontolgia)	52
Bursitis	51
Flatfoot	51
Irritation	44
Arthritis	44
Abdominal pain	42
Ingrown toe nail	41
Deviation, nasal septum	41
Albuminuria	39
Varicose veins	39

Enteritis	38
Cellulitis	37
Hernia	36
Allergy	35
Clavus	35
Neuritis	33
Urticaria	33
Cough	32
Pleurisy	32
Rubella	31
Angina	30
Ulcer	29
Paronychia	28
Overweight	26
Pediculosis	26
Callosity	26
Blepharitis	25
Insomnia	25
Ureitis	25
Colitis	24
Metatarsalgia	23
Scabies	23
Abscess	22
Asthma	22
Diarrhea	22
Epistaxis	22
Gastroenteritis	21
Lumbago	21
Pityriasis	21
Malaise	20
Sore throat	20
Tenosynovitis	18
Neurosis	17
Torticollis	16
Eczema	15
Edema	15
Menorrhagia	15
Inflammation	14
Pruritus	14
Deafness	13
Fissure	13
Migraine	13
Nervousness	13
Poisoning	13
Tachycardia	13
Varicocele	13
Swollen	11
Caries	10
Hypothyroidism	10
Urethritis	10

NINE CASES:
Ganglion, influenza, neuralgia, otalgia.

EIGHT CASES:
Fainting, hemorrhage, mumps, myalgia, psoriasis.

SEVEN CASES:
Bromidrosis, hyperhidrosis, neurasthenia, phimosis.

SIX CASES:
Epidermophytosis, rheumatism, vertigo, bunion, epidermitis, hematoma, myopia, obstruction, eustachian tubes, rales.

FIVE CASES:
Ecchymosis, erythema, folliculitis, tracheitis.

FOUR CASES:
Atrophy, autointoxication, chickenpox, chiggers, cramp, dandruff, exostosis, nevus, tumor, undescended testicle.

THREE CASES:
Adhesions, amenorrhea, catarrh, chalazion, chapped lips, charley horse, color blindness, dry skin, malaria, nausea, nephritis, obesity, vomiting.

TWO CASES:
Ankylosis, anorexia, carbuncle, glossitis, heat rash, heart trouble, hydrocele, ichthyosis, paralysis, poor posture, sciatica, seborrhea, soreness, muscle, stiffneck, synovitis, tinnitus aurium.

ONE CASE:
Balanitis, dysuria, epilepsy, frost-bite, granulated eye, halitosis, heat stroke, hematuria, hemoptysis, hypertension, iritis, jaundice, miliaria, nasal obstruction, orchitis, psychosis, pyorrhea, scarlet fever, scoliosis.

TWENTY-FIFTH ANNUAL REPORT

APPENDIX H

GENERAL SCIENCE

No. of teachers who taught General Science only	448
General Science, Accounting-Salesmanship	1
General Science, Agriculture	19
General Science, Agriculture, Chemistry	1
General Science, Agriculture, Physics, English	1
General Science, Art	2
General Science, Astronomy	1
General Science, Athletics	9
General Science, Auto-Mechanics	1
General Science, Band	2
General Science, Biology	100
General Science, Biology, Agriculture	4
General Science, Biology, Agriculture, Mathematics	1
General Science, Biology, Agriculture, Physical Education	1
General Science, Biology, Art	1
General Science, Biology, Athletics	2
General Science, Biology, Band	2
General Science, Biology, Band, Physics, Mathematics	1
General Science, Biology, Botany	1
General Science, Biology, Chemistry	18
General Science, Biology, Chemistry, Home Economics	1
General Science, Biology, Chemistry, Physics	16
General Science, Biology, Chemistry, Physics, Band	1
General Science, Biology, Civics	1
General Science, Biology, History	6
General Science, Biology, History, Athletics	2
General Science, Biology, History, Civics	1
General Science, Biology, History, Civics, Industrial Geography	1
General Science, Biology, Hygiene	1
General Science, Biology, Hygiene, Mathematics	1
General Science, Biology, Hygiene, Physical Education	1
General Science, Biology, Mathematics, Athletics	1
General Science, Biology, Mathematics, Physics	2
General Science, Biology, Physical Education	6
General Science, Biology, Physics	19
General Science, Biology, Physics, Agriculture, Physiology	1
General Science, Biology, Physiography	1
General Science, Biology, Zoology	6
General Science, Botany	3
General Science, Botany, Agriculture, Zoology	1
General Science, Business	2
General Science, Business Training, Physical Education	1
General Science, Chemistry	59
General Science, Chemistry, Athletics	1
General Science, Chemistry, English	3
General Science, Chemistry, History	2
General Science, Chemistry, Home Economics	2
General Science, Chemistry, Mathematics	4
General Science, Chemistry, Mathematics, Biology	1
General Science, Chemistry, Mathematics, Biology, Physics	1
General Science, Chemistry, Music	1
General Science, Chemistry, Other Courses	1
General Science, Chemistry, Other Sciences	1

General Science, Chemistry, Physical Education, Mathematics	1
General Science, Chemistry, Physics	63
General Science, Chemistry, Physics, Athletics	2
General Science, Chemistry, Physics, Band	1
General Science, Chemistry, Physics, Biology, Botany, Physical Education	1
General Science, Chemistry, Physics, Mathematics	8
General Science, Chemistry, Physics, Mathematics, Physical Education	1
General Science, Chemistry, Physics, Physiology	1
General Science, Chemistry, Physiology	1
General Science, Civics	4
General Science, Civics, Economics, Zoology, Biology	1
General Science, Civics, History, Economics, Athletics	1
General Science, Commercial Arithmetic	1
General Science, Commercial Arithmetic, Geography	1
General Science, Drama, Music	1
General Science, Driving	4
General Science, Economics	4
General Science, English	24
General Science, English, History	2
General Science, English, History, Mathematics	1
General Science, English, Social Science	1
General Science, English, Typing	1
General Science, Foreign Language, English	1
General Science, French	2
General Science, Geography	1
General Science, German	1
General Science, History	27
General Science, History, All Science	1
General Science, History, Botany, Zoology, Athletics	1
General Science, History, Civics	1
General Science, History, Civics, Mathematics	1
General Science, History, Civics, Science	1
General Science, History, Civics, Speech	1
General Science, History, Economics	3
General Science History, Home Economics	1
General Science, History, Mathematics	1
General Science, History, Physical Education	4
General Science, History, Physics	1
General Science, Home Economics	31
General Science, Home Economics, English	1
General Science, Home Economics, Physical Education	3
General Science, Home Economics, Physical Education, Mathematics	1
General Science, Hygiene	3
General Science, Hygiene, Physical Education	1
General Science, Hygiene, Mathematics, Physiology	1
General Science, Hygiene, Mathematics, Typing	1
General Science, Latin	1
General Science, Latin, History, English, Mathematics	1
General Science, Latin, History, Mathematics	1
General Science, Latin, Physical Education	1
General Science, Manual Arts	11
General Science, Manual Arts, English	1
General Science, Manual Arts, Physics	1
General Science, Manual Training, Coaching	1
General Science, Mathematics	76
General Science, Mathematics, Commercial Law	1

General Science, Mathematics, English	2
General Science, Mathematics, Home Economics	5
General Science, Mathematics, Manual Arts	1
General Science, Mathematics, Music	1
General Science, Mathematics, Physical Education	2
General Science, Mathematics, Other Sciences	1
General Science, Mathematics, Physics	15
General Science, Mathematics, Science, Athletics	1
General Science, Mathematics, Social Science	1
General Science, Mathematics, Social Science, Athletics	1
General Science, Other Sciences	9
General Science, Physical Education	10
General Science, Physical Education, Chemistry	2
General Science, Physical Education, Chemistry, Biology	1
General Science, Physics	70
General Science, Physics, Biology, General Business, Bookkeeping	1
General Science, Physics, Biology, Physical Education	1
General Science, Physics, English	1
General Science, Physics, Hygiene, Physical Education	1
General Science, Physics, Mathematics, German	1
General Science, Physics, Physical Education	5
General Science, Physics, Physical Education, Manual Arts	2
General Science, Physics, Physical Education, Mathematics	2
General Science, Physiography	2
General Science, Physiology	17
General Science, Physiology, Agriculture	1
General Science, Physiology, Biology, Physics, Manual Arts, Physical Ed.	2
General Science, Physiology, Botany	1
General Science, Physiology, Zoology, Physics	1
General Science, Religion, Mathematics	1
General Science, Social Science	1
General Science, Spanish	1
General Science, Vocational Guidance	1
General Science, Zoology	4
General Science, Zoology, Botany	2
General Science, Zoology, Geology	1

BIOLOGY

No. of teachers who taught Biology and nothing else 486

Biology, Agriculture	52
Biology, Agriculture, Athletics	2
Biology, Agriculture, Commercial Arithmetic, Physics	1
Biology, Athletics	7
Biology, Botany	9
Biology, Botany, Physiology	2
Biology, Botany, Zoology, Mathematics	1
Biology, Chemistry	25
Biology, Chemistry, Agriculture	1
Biology, Chemistry, Agriculture, Physical Education	1
Biology, Chemistry, General Science	7
Biology, Chemistry, Geography	1
Biology, Chemistry, Mathematics	2
Biology, Chemistry, Physics	23
Biology, Chemistry, Physics, Economics	4
Biology, Chemistry, Physics, General Science, Athletics	1
Biology, Chemistry, Physics, General Science, Athletics, Business Training, Physiology	1
Biology, Chemistry, Physics, Zoology	1
Biology, Civics	2
Biology, Civics, Agriculture	1
Biology, Civics, Geography	1
Biology, Commercial Geography	2
Biology, Commercial Geography, Mathematics	1
Biology, Economics, History	1
Biology, English	19
Biology, English, Civics	1
Biology, English, Civics, German	1
Biology, English, Commercial Arithmetic, Geography	1
Biology, English, Commercial Geography	1
Biology, English, Commercial Geography, Girls Athletic Association	2
Biology, English, History, Athletics	1
Biology, English, Physiology, Hygiene, Physical Education	1
Biology, English, Religion	2
Biology General Business	1
Biology, General Science	83
Biology, General Science, Agriculture	3
Biology, General Science, Athletics	2
Biology, General Science, Band	2
Biology, General Science, Botany	1
Biology, General Science, Chemistry, Physical Education	1
Biology, General Science, Civics	1
Biology, General Science, History	7
Biology, General Science, History, Athletics	1
Biology, General Science, History, Civics	1
Biology, General Science, History, Civics, Industrial Geography	1
Biology, General Science, Home Economics	3
Biology, General Science, Home Economics, Chemistry	1
Biology, General Science, Hygiene, Physical Education	1
Biology, General Science, Mathematics	1
Biology, General Science, Mathematics, Chemistry	1
Biology, General Science, Mathematics, Coaching	1

Biology, General Science, Mathematics, Physics	3
Biology, General Science, Physical Education	4
Biology, General Science, Physical Education, Civics	1
Biology, General Science, Physical Education, Physics	1
Biology, General Science, Physics, Agriculture, Physiology	1
Biology, General Science, Physics, Chemistry	8
Biology, General Science, Physics, Coaching	1
Biology, General Science, Physics, Hygiene	1
Biology, General Science, Physiography	2
Biology, General Science, Physiography, Hygiene	1
Biology, General Science, Physiology	3
Biology, General Science, Sociology, Civics	1
Biology, General Science, Zoology	2
Biology, Geography	2
Biology, German, English, Civics, Economics	1
Biology, History	15
Biology, History, Athletics	2
Biology, History, Civics, Economics	1
Biology, History, Economics, Coaching	1
Biology, History, English	1
Biology, History, Government	1
Biology, History, Geography, Physiology, Botany	1
Biology, History, Physical Education, Civics	1
Biology, Home Economics	16
Biology, Horticulture	2
Biology, Hygiene	6
Biology, Latin	6
Biology, Latin, Business Training	1
Biology, Latin, French	2
Biology, Latin, History	2
Biology, Latin, Speech	2
Biology, Law	1
Biology, Manual Arts	3
Biology, Mathematics	21
Biology, Mathematics, Athletics	2
Biology, Mathematics, Band, Physics	1
Biology, Mathematics, Commercial Law	1
Biology, Mathematics, History	2
Biology, Mathematics, Other Sciences	1
Biology, Mathematics. Social Science	1
Biology, Music	2
Biology, Music, Manual Training	1
Biology, Other Sciences	5
Biology, Physical Education	36
Biology, Physical Education, First Aid	1
Biology, Physical Education, History	5
Biology, Physical Education, Hygiene	1
Biology, Physical Education, Mathematics	3
Biology, Physical Education, Physics	1
Biology, Physical Education, Physiology	2
Biology, Physical Geography	3
Biology, Physical Geography, Physics, Physiology	1
Biology, Physics	16
Biology, Physics, Agriculture	1
Biology, Physics, Athletics	1
Biology, Physics, Chemistry, Biology	1

Biology, Physics, Chemistry, General Science, Latin	2
Biology, Physics, Chemistry, Mathematics	3
Biology, Physics, General Science	22
Biology, Physics, General Science, Chemistry	10
Biology, Physics, Manual Arts	1
Biology, Physics, Mathematics	2
Biology, Physiography	2
Biology, Physiology	7
Biology, Physiology, Civics, Physical Education	1
Biology, Physiology, Chemistry	3
Biology, Physiology, Commercial Geography	1
Biology, Physiology, English	2
Biology, Physiology, First Aid, Physiography	1
Biology, Physiology, Geography	1
Biology, Physiology, History	1
Biology, Physiology, Physiography	1
Biology, Photography	2
Biology, Social Science	2
Biology, Social Studies, Athletics	1
Biology, Spanish, Physiology, Typing	1
Biology, Typing	2
Biology, Typing, Bookkeeping	1
Biology, Typing, Mathematics	1
Biology, Zoology	4
Biology, Zoology, Botany	4
Biology, Zoology, Physiology	1

HYGIENE

No. of teachers who taught Hygiene only	33
Hygiene, Agriculture	1
Hygiene, Athletics	12
Hygiene, Biology	5
Hygiene, Biology and Commercial Geography	1
Hygiene, General Science and Physical Education	1
Hygiene, Biology and Physics	1
Hygiene, Bookkeeping	1
Hygiene, Chemistry	1
Hygiene, Chemistry, Physics, General Science, and Physiology	1
Hygiene, Civics	1
Hygiene, Commercial Geography	1
Hygiene, Cosmetology	1
Hygiene, Economics	1
Hygiene, English	10
Hygiene, English and Drama	1
Hygiene, English and Physical Education	3
Hygiene, First Aid	1
Hygiene, General Business and Coaching	3
Hygiene, General Business and Physical Education	1
Hygiene, General Science	6
Hygiene, General Science and Agriculture	1
Hygiene, General Science and Biology	1
Hygiene, General Science, Biology, Physiography	1
Hygiene, General Science, Mathematics, and Typing	1
Hygiene, History	4
Hygiene, History, Biology, English	2
Hygiene, History, General Science, Botany, and Zoology	1
Hygiene, History and Political Science	1
Hygiene, Home Economics	3
Hygiene, Home Economics, Geography, and Physiology	1
Hygiene, Literature and Physical Education	1
Hygiene, Mathematics	5
Hygiene, Mathematics and Athletics	2
Hygiene, Mathematics, Economics, Civics, and Physical Education	1
Hygiene, Mathematics, English, and Physical Education	1
Hygiene, Military	1
Hygiene, Music and Physical Education	1
Hygiene, Physical Education	298
Hygiene, Physical Education and Biology	2
Hygiene, Physical Education and Driving	1
Hygiene, Physical Education and English	2
Hygiene, Physical Education and Latin	1
Hygiene, Physical Education and Manual Training	1
Hygiene, Physical Education and Mathematics	3
Hygiene, Physical Education and ROTC	1
Hygiene, Physics and Athletics	1
Hygiene, Physiography	1
Hygiene, Physiology	5
Hygiene, Physiology, General Science, and Mathematics	1
Hygiene, Political Science	1
Hygiene, R. O. T. C.	1
Hygiene, Social Science	1
Hygiene, Typing	1
Hygiene, Typing and Bookkeeping	1

PHYSIOLOGY

No. of teachers who taught Physiology only	54
Physiology, Agriculture	3
Physiology, Agriculture, History	1
Physiology, Agriculture, Physics, English	1
Physiology, Anatomy, Zoology	1
Physiology, Art	1
Physiology, Athletics	1
Physiology, Biology	18
Physiology, Biology, Botany	2
Physiology, Biology, Botany, Zoology	1
Physiology, Biology, Chemistry	3
Physiology, Biology, Commercial Geography	2
Physiology, Biology, English, History	3
Physiology, Biology, English, Hygiene, Physical Education	1
Physiology, Biology, First Aid	1
Physiology, Biology, General Science	1
Physiology, Biology, Geography	1
Physiology, Biology, Physical Education	2
Physiology, Biology, Physical Education, Civics	1
Physiology, Biology, Physical Geography	1
Physiology, Biology, Physics	1
Physiology, Biology, Physics, Chemistry	1
Physiology, Physics, Physical Education	1
Physiology, Biology, Physiography	1
Physiology, Biology, Zoology	1
Physiology, Bookkeeping, Geography, Physical Education, Athletics	1
Physiology, Botany, Biology	1
Physiology, Botany, Zoology	2
Physiology, Business	1
Physiology, Business Law, Chemistry	1
Physiology, Chemistry	13
Physiology, Chemistry, Biology	3
Physiology, Chemistry, Biology, General Science	1
Physiology, Chemistry, General Science	2
Physiology, Chemistry, Physics	1
Physiology, Chemistry, Physics, Biology	1
Physiology, Chemistry, Physics, Business Training, Biology, Athletics	1
Physiology, Chemistry, Physics, General Science	1
Physiology, Civics	2
Physiology, Civics, Music	1
Physiology, Commercial Geography	2
Physiology, Commercial Geography, English	1
Physiology, Commercial Geography, Physical Education	1
Physiology, Commercial Geography, Typing, Shorthand	2
Physiology, Consumers Science	1
Physiology, English	11
Physiology, English, Biology	1
Physiology, English, Commercial Geography, Girls Athletic Association	2
Physiology, English, Economic Geography	1
Physiology, English, Geography	1
Physiology, English, History, Mathematics, Civics, Writing, Spelling	1
Physiology, English, Physical Education	1
Physiology, English, Religion	1

Physiology, French	1
Physiology, General Science	23
Physiology, General Science, Agriculture	1
Physiology, General Science, Latin	1
Physiology, General Science, Physics, Biology, Agriculture	1
Physiology, General Science, Physics, Biology, Manual Arts, Physical Ed.	1
Physiology, Geography	2
Physiology, Geography, History	1
Physiology, Geology	1
Physiology, Grade School Subjects	1
Physiology, History	7
Physiology, History, Biology, Geography, Botany	1
Physiology, Home Economics	16
Physiology, Home Economics, Geography	1
Physiology, Home Economics, Geography, Hygiene	1
Physiology, Home Economics, Physical Education	1
Physiology, Home Economics, Physiography	1
Physiology, Hygiene	7
Physiology, Hygiene, Physical Education	1
Physiology, Latin	1
Physiology, Manual Arts	1
Physiology, Mathematics	8
Physiology, Mathematics, Athletics	2
Physiology, Mathematics, Physical Education	4
Physiology, Mathematics, Speech, Athletics	1
Physiology, Other Sciences	1
Physiology, Philosophy	1
Physiology, Physical Education	31
Physiology, Physical Education, Chemistry	1
Physiology, Physical Education, Manual Arts	2
Physiology, Physical Education, Physiography, Biology	1
Physiology, Physical Geography	3
Physiology, Physical Geography, Physics, Biology	1
Physiology, Physics	1
Physiology, Physics, Botany	1
Physiology, Physics, Chemistry	1
Physiology, Physics, Mathematics, Civics	1
Physiology, Physics, Science	1
Physiology, Physiography	24
Physiology, Physiography, Mathematics	1
Physiology, Political Science	1
Physiology, Social Science	2
Physiology, Spanish, Biology, Typing	1
Physiology, Speech	1
Physiology, Varied Subjects	1
Physiology, Zoology	1
Physiology, Zoology, Biology	3
Physiology, Zoology, Chemistry	1
Physiology, Zoology, English	1
Physiology, Zoology, General Science	1
Physiology, Zoology, Physics, General Science	1