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The Commonwealth of Massachusetts

ANNUAL REPORT

OF THE

TRUSTEES

OF THE

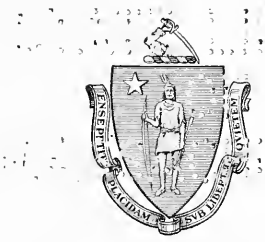
WORCESTER STATE HOSPITAL

FOR THE

YEAR ENDING NOVEMBER 30,

1933

DEPARTMENT OF MENTAL DISEASES



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WORCESTER STATE HOSPITAL

Post Office Address: Worcester, Mass.

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TRUSTEES' REPORT

To His Excellency the Governor, and the Honorable Council:

The Trustees of the Worcester State Hospital respectfully submit the one-hundred and first annual report of the hospital together with the report of the Superintendent, Dr. William A. Bryan, and report of the Treasurer, Miss Margaret T. Crimmins, and other statistical information.

It is the duty of the members of the board to again call to the attention of your Excellency certain imperative needs of the hospital. Chief among these is the matter of fire protection. The costly fire which occurred this year in the roof of the Lincoln building has brought out a fact that has been repeatedly stressed in these reports. More effort should be made by the Legislature to make the Worcester State Hospital buildings safe for the housing of patients. This fire, which destroyed the entire roof of one building and cost the State $40,000, was caused by defective wiring, and could have been prevented had steps been taken to correct a condition that has existed for many years. The wiring of the main hospital is in a deplorable state. Much of it is exposed in an open attic, and the wood construction of the roof constitutes a fire menace that may cause a catastrophe some day, which will not only mean costly repairs, but may mean the loss of one or more lives. The Board therefore recommends that measures be immediately taken to correct all of the conditions which go to make up this situation. In offering to your Excellency a complete program looking towards the elimination of fire hazards, your board is not unmindful of the economic situation. But the responsibility is with us, nevertheless, and it would seem that if a beginning be made, at least the State would have recognized and made some effort to meet what is a real emergency. It would be impossible to do all the necessary things in a short period of time. The program that we offer would be carried on over a period of at least ten years, but it is our earnest hope that such a plan of betterment can be agreed upon and start at once. If a definite plan could be outlined with the understanding that a portion of the money be appropriated each year, the entire situation could be corrected with a minimum drain on the financial resources of the Commonwealth. We therefore recommend to your Excellency the following proposals which are, in our opinion, essential in making this hospital a proper place in which to house the mental patients who are committed to the care of the Commonwealth.

1. Replacement of Wood Floors Throughout the Main Hospital with Concrete. This project alone would bring the hospital a long ways toward the goal of complete safety. It would be impossible to do more than one, or possibly two, buildings at a time. If two could be done each year it would require five years to complete the entire project, but at the end of that time we would have a fireproof building which would stand for all time. The relative cost of this would not be great. The floor joists of each floor could be cut and the entire floor lowered to use as a form for the concrete. There are only a few places in the building where the span is greater than ten feet, therefore, beams would not be essential except in

these particular places. This project would also include the renovation of the wiring and the installation of all wires in proper conduits.

2. Replacement of all Wood Stairways by Fireproof Stairways. The Main Hospital is a four-story building and in it are a large number of stairs constructed of wood. These should be replaced by fireproof construction without delay. If a fire broke out near one of these stairways it would be impossible to get the patients out of the building. The project is a necessary part of any program to correct fire menace.

3. Fire Alarm System. At the present time there is no way of giving a signal to employees in the different parts of the hospital to inform them of the location of a fire. The only way the information can be sent is by means of the telephone system. This installation should be connected with the fire alarm system of the city of Worcester and would automatically notify the Department where, in the institution, the fire was. It is an important part of the fire equipment of any hospital.

4. Installation of Suitable Ducts with Fans to connect all Heat Shafts in the Attic. This hospital has an indirect system of heating by which the warm air is carried from the radiators in the basement to the four floors through ducts which open in the attic. These open ducts form flues through which fire can spread from one floor to another. They should all be tied into pipes in the attic, and a suitable fan installed in each building. This would not only remove a real fire risk, but would give the hospital a better system of ventilation.

5. Renovation of the Summer Street Department along the lines indicated by the four projects noted above. This department of the hospital is one hundred years old, and while the building is in excellent condition, it needs certain changes to make it safe for patients. The wood floors should be replaced by concrete, the electric wiring renovated, and the heat ducts which open into the attic tied up in a system of pipes as described in project number four.

The board earnestly feels that this program should be started at the earliest opportunity, and it recommends to your Excellency your thoughtful consideration of the entire matter of fire protection at the Worcester State Hospital.

It is also the desire of the Board to direct your attention to another matter which has a direct bearing upon the welfare of the patients, and even more than this upon the money invested by the Commonwealth in the hospital plant. For a number of years, due to the economic conditions which have prevailed, repairs on the buildings have not been kept up in the way they should have been. This is due to no fault of any one, but is caused by the diminishing income of the State, and yet your Trustees would be remiss in their duty if they did not point out to your Excellency the direction in which we are heading as a result of a continuance of this policy. The main hospital building is fifty-six years old, and the Summer Street Department has been in operation one hundred years. The battle to keep these two buildings in the best state of repair is an increasingly difficult one. The appropriations which the hospital has received yearly for the past few years have not been sufficient to do what is vitally necessary. Essential repairs have had to be deferred year by year because of insufficient funds, until there has developed an accumulation of needed things which is beginning to seriously affect the efficiency of the institution.

As a case in point, the roofs of both the Main Hospital and Summer Street Department have had to be left with only a minimum amount of work done on them, until it will now require a considerable sum of money to put them into condition to even keep out the weather.

Both buildings need repointing. Surely, after the years of service these buildings have seen, it is fair to assume that rather extensive repointing should be done as soon as possible.

The present dining-room facilities at Summer Street may have been, and probably were at one time, adequate, but the old dining-rooms have outlived their usefulness. More modern methods of cafeteria service should be substituted. Alterations of this kind would produce a distinct saving to the State because of the better food supervision and the elimination of waste.

The windows of both buildings need to be completely overhauled. We are wasting many tons of coal each year because of loose window casings and windows.

An expenditure of money, even though it may seem large, would pay for the project within a short time in the amount of coal saved.

Other alterations which have a direct bearing upon the care and treatment of patients will be mentioned in the report of the Superintendent, but the Board desires to impress upon your Excellency the need for additional funds for repairs as quickly as the financial condition of the State will permit. An appropriation of approximately $1,000 per month is a small amount of money to keep buildings as old as these are in a state of good repair.

The Board recommends that the salary cut of the hospital personnel be restored as soon as possible. In the lower grades of the service the remuneration is now so low that it seriously interferes with the efficiency of the hospital. Questions such as this must be thought of in their relation to the treatment and cure of patients. Surely any investment will be profitable that will increase the discharge rate of the hospital, and it seems obvious that personnel is the important factor in accomplishing this. The more patients discharged to their homes, able to carry on their work in the world, the less the economic burden on the taxpayers. It would also add much to the efficiency of the hospital if the present personnel quotas were abolished. To arbitrarily decide that a certain number of a particular class of workers is needed for a hospital, is decidedly uneconomical, and does not lead to efficiency. Hospitals are dynamic organizations, and the loads carried vary from time to time. To say that the quota of ward workers required should be the same at all times, regardless of the kind of patients that happen to be in the hospital, is shortsighted. The uniform wage scale should, of course, be maintained. To set this aside would invite much competition between hospitals. Grades and uniform salaries should be continued as at present, but it is our recommendation that a careful survey be made to ascertain whether it would not be possible to appropriate a lump sum for personal service and leave the decision as to the numbers of each grade to the hospital officials. This would give flexibility to the service which would increase efficiency. It would seem that those dealing with the problems should know the needs of the individual hospital better than any one else.

In conclusion, the Board wishes to call the attention of your Excellency to the loyalty and cooperation of the officers and employees of this institution during the troublesome times we are passing through. They have continued to carry on in spite of many difficulties. We also wish to again register our satisfaction with, and approval of, the policies of extending the work of the hospital to include research, preventive work and teaching. The hospital has many responsibilities to the community it serves, and it is the recommendation of this Board that these activities be broadened and amplified as rapidly as can be done.

Respectfully submitted,

Edward E. Fletcher	William J. Delahanty
Josephine Rose Dresser	Anna C. Tatman
Howard W. Cowee	John G. Perman
George D. Morse	*Trustees.*

SUPERINTENDENT'S REPORT

To the Trustees of the Worcester State Hospital:

I herewith respectfully submit the following report of the hospital for the year ending November 30, 1933, it being the one hundred and first annual report.

There remained on the hospital books October 1, 1932, 2,542 patients, 1,242 men and 1,300 women. Seven hundred and ninety-nine patients, 433 men and 366 women were admitted during the year. Seven hundred and forty-five patients, 399 men and 346 women were discharged from the hospital. Of this number 478 patients, 254 men and 224 women were discharged; 233 patients, 123 men and 110 women died, and 34 patients, 22 men and 12 women were transferred, leaving at the end of the statistical year 2,596 patients, 1,276 men and 1,320 women.

The past two years have been particularly trying to hospital administrators. To maintain proper standards of care and treatment on the curtailed budgets that have been necessary by the decreased income of the state have presented problems that were well nigh insurmountable. No administrator could possibly meet this situation alone. It is only through the united efforts of all members

of the hospital organization that we have been able to keep up the volume of work on the money available.

This period of retrenchment and the careful scrutiny of expenditures that it necessitated has been good for us. Many leaks have been corrected and more efficient methods of doing things have been devised. The entire program has been built around the idea that waste was the logical place to attack the problem. To make any impression it was felt that the idea of watching the waste must be sold to everyone in the organization. To do this an organized campaign for all employees was carried on through the year. In this campaign new ways of eliminating waste were constantly stressed. The response of the personnel was excellent. Each member of the organization has become waste conscious and each one has made a real effort to contribute something. Careful supervision of expenditures has been necessary. There is a real danger that in the enthusiasm of cutting down one item of the budget another will be increased. For instance in the report of the medical and surgical service and comparing it with similar reports of past years one cannot help but notice the yearly general increase in activity of the medical and surgical services. This increase is both in the volume and variety of activities. In other words, the need for general medical and surgical care is not only present in this hospital, but it becomes more apparent and even more necessary from year to year. In view of this need, our present standards for medical and surgical care must not be lowered the slightest. To lower them would have far-reaching effects on the welfare of our patients. It is obvious that in order to do the operations and dressings noted above, a tremendous amount of gauze is necessary, it is necessary to replace and repair instruments, supply medicinal solutions, etc. To medically examine and treat the patients, medicines and laboratory supplies must be provided, upkeep of x-ray and physical therapy apparatus is necessary, etc. A further relative curtailment in expenditures for such items is bound to result in lowered medical and surgical standards to the final detriment to the patient.

As has been the custom of former years the details of the medical, psychiatric, research and preventive work of the hospital are embodied in the reports of the several directors of these services. Therefore, any elaborate discussion of them would be superfluous. But there are certain points to which I wish to call attention. In the report of the clinical director it will be noted that the visit and discharge rate of the hospital has been higher than in previous years. This is probably due in part to the constant stress that has been put upon discharging patients. It is my belief that this is the true record of achievement of any hospital. It is of small importance whether the records are well kept, whether the systems used are good and whether good custodial care is maintained unless they lead directly to the discharge of more and more patients. Unless this is made the aim and end of psychiatry it becomes little more than an academic thing. The real test of the importance of the psychiatrist is in this result and in no other.

The increase in the number of cases under family care is in the nature of an experiment. This State has had family care for many years but it has only been in the past two years that it has been expanded to the point where the influence of it is really felt in the hospital population. The whole movement is in a transitional stage. The goal to be worked for is to utilize family care for the convalescent patient and make the home a half-way station between the artificial environment of the hospital and the comparative freedom of the community.

An adult clinic should be the next step in the work of the hospital along the lines of mental hygiene. In my opinion the future of the mental hygiene movement is in the hands of the State hospital. If mental hygiene is to make any real progress in the prevention of mental disease it must be done largely by the State. This is the only agency that is sufficiently large and powerful to treat the psychoses as a real public health problem. Therefore, it is to the State hospital that mental hygiene must turn to carry on. A full time adult clinic would be a wise and far-seeing investment for the Commonwealth and such a clinic would pay handsomely in the years to come.

I am more and more impressed by the necessity of staff members following up their own patients who leave the hospital. With this in mind an appointment

system has been worked out and fully 50% of our patients on visit return, at regular intervals to see the psychiatrist. The social worker cannot carry on alone any more than any other technician can. The staff member who is not sufficiently interested in the results of his own psychiatric treatment to follow up his patients is not making the best contribution to the hospital. Certain careful studies have been made by the social service department the results of which are not yet available but will be reserved for the 1935 report. These studies indicate that patients leaving the hospital under social service supervision remain well longer than those who leave without such supervision. The influence is obvious. If social service supervision will prevent patients from having to be returned to the hospital it would be economically sound to double or treble our number of social workers.

This hospital continues to stress the need of a proper kind of religious ministration. The clergy has a real contribution to make both in the actual hospitalized mental patient and in the field of prevention. The teaching efforts of the Chaplain's department have all been directed towards the goal of making the undergraduate theological student more understanding of the problems of the human being. In order to serve people, clergymen must have a real understanding of their mental processes, and the factors which motivate their behavior.

As one of the treatment resources of the hospital the radio system continues to fill a real need. It is not only a diversion but is therapeutic. It is of great assistance in keeping up the morale of patients. Used as a means of disseminating indirect and direct suggestion to patients, it is a valuable aid in group therapy. It is important that everything be done to maintain as good a rapport between patient and hospital as is possible in order that the psychiatrist may not be handicapped in his attempts at individual psychotherapy. The administrative routine of every mental hospital should be carefully studied in its relationship to the patient. This routine is the foundation upon which individual therapeutic results are achieved.

The emphasis which has been placed upon research for the past five years has been continued and strengthened. To go on erecting more buildings to house more patients is, in my opinion, a short sighted policy. It would be better to let the crowded condition continue for a period and put the money that would be used for additional accommodations for patients into personnel and equipment for treatment and research. Surely continuous effort to get at causes will reap a rich reward in the end. The community must be patient while this research is progressing. To expect results in a short time is to ask the impossible. Psychiatric research has been neglected so much in the past that it will take many years to throw much light upon the psychoses but results will come if the policy of encouraging research in State hospitals is continued.

A well organized psychological service is a valuable adjunct to any mental hospital. The psychologist has many important contributions to make to psychiatry. In this connection it might be pointed that the real attack on the problems of psychiatry can only be made by the concerted efforts of all disciplines. To say that any one profession can handle the situation alone is to speak without knowing the facts. The sooner quibbling over trivial non-essentials, such as to what group the work belongs, is stopped and a real cooperative effort by all groups working in harmony is begun the sooner we will achieve results.

The increasing importance of biochemistry in the study of the psychoses has been recognized by the installation of additional facilities. Increased personnel has made it possible to do more careful research. In my opinion the biochemist has an important contribution to make in the search for the causes of many of the psychoses.

Our autopsy rate is the highest in the history of the hospital. But it should be pointed out that mere numbers of autopsies mean nothing. The important thing is whether they serve to throw more light on the problems of the psychiatrist. This percentage of autopsies reflects the scientific interest of the staff. In addition it is to some extent an indication of the better relationship existing between the hospital and the public it serves. It is my belief that the autopsy rate of any hospital is an indication of the amount of good will that has been built up between the hospital and relatives during the period of the patient's illness.

We have stressed the importance of attendance at autopsies and have kept

accurate records in order to check the interest of staff members in following their cases into the autopsy room. The monthly clinico pathological conference is one of the most important staff meetings in this hospital. It serves to corelate the clinical and pathological in a way that nothing else could.

We have continued to give much time and thought to the expansion of our library facilities. It will be noted in the librarian's report that not only is this expansion in the form of additional books and periodicals but in better service to the medical staff. A medical library without a well trained librarian is like a ship without a rudder. It is not everyone who knows how to use a library without assistance. The service rendered in abstracting and translation work by the trained librarian is an invaluable contribution to the hospital. Research could not be carried on without this important department.

I am more and more impressed by the importance of the State hospital working with children. Childhood is the golden age for mental hygiene and if any real preventive work will achieve results this is the time when it must be applied. But I cannot refrain from pointing out a real danger. To make the clinic only a classification mechanism is to defeat its purpose. Treatment must follow in all cases if it is to make a real contribution to mental hygiene. Another danger is the casual way in which such clinics are organized. In the first place skillful and continuous work in the community is needed to get the proper interest in the work. In the second place the personnel cannot have divided duties. Child guidance is a real specialty. To expect a psychiatrist to spend one half his time dealing with the problems of the adult psychotic and one half considering the problem of the child is asking more than the human mind is capable of.

Psychiatric Service

Morris Yorshis, Clinical Director

Hospital Procedure

The teaching and research programs have been the incentives to a more progressive psychiatry in the last twelve month period. The changes effected by these stimuli involved many systems especially the hospital case record and a few examples of its modifications will be given in detail.

1. Abstaining from the usual state hospital vocabulary and in its place stressing "content of thought" and psychiatrists' attitude toward the presenting problem.
2. The challenge of a progress note. By this is meant a very detailed analysis of factors operating in a patient's protracted stay in the hospital. This was accomplished by contacting every individual in the patient's immediate environment such as supervisors, nurses, foremen in industry, other patients and most important, a careful scrutiny of the frequency and number of visitors. The necessity for this last procedure, although obvious, was woefully neglected in the past but owing to the increasing number of new admissions the medical staff could ill afford to allow patients to become institutionalized. Wherever relatives had been slack in their attention to the needs of a particular patient a letter from the Superintendent helped tremendously in awakening interest.
3. The effect of hydrotherapy was periodically recorded.
4. With the growing interest in therapy and recording of the interviews made the case record more "alive".
5. The *diagnostic* summary was revised and the formulations were arranged in the following order:

1. The complaint or problem
2. The present illness
3. Past history
4. Personality
5. Family history
6. Mental status
7. Physical status
8. Laboratory data
9. Consultations
10. Progess note — Clinical course
11. Etiology
12. Differential diagnosis
13. Prognosis
14. Treatment

Clinical Facilities

This has proven helpful in analysis of clinical material.

The introduction of encephalographic technique to clinical psychiatry although not new has been formally added to the aymementarium at the hospital and with

the new x-ray equipment the possibilities are manifold. Spinal punctures are performed with more precision, care being given to manometric readings; the chemistry and cytology of the fluid undergoes careful analysis. The excellent service supplied by the laboratory has made it easier for more thorough case study.

The psychological department as in the past has rendered excellent service in examining patients presenting complex clinical problems. The Rohrsdsch Test as given by Dr. Rickers in addition to the psychometric examinations given by others of the department have been of inestimable value to the clinical psychiatrist.

The social service department continued to provide data without which the medical staff would have found itself seriously handicapped. The anamensis, an important part of the case record was taken, in each case under the direction of this department. Summarizing each history into a chronological account has facilitated analysis.

The occupational therapists during the past year made ward rounds with the resident psychiatrists — thus bringing this technical group more in contact with different types of patients and making the psychiatrists conscious of the possibilities of industrial therapy. Their case reports at the staff conferences about each patient considered at the time depicted an aspect of the behavior of the patients which aided the psychiatrists to correlate these observations with their own clinical impressions.

The nursing services have made forward strides in their careful notations of ward behavior on the newly admitted and also the acutely ill. The advantages of this service to the physician in attendance is too obvious to need any more extensive amplification.

Both treatment suites, the physio and hydrotherapy have increased in scope. In the former with the aid of added personnel more patients were treated for various conditions and in the latter the addition of colonic irrigation equipment had made it convenient to treat a larger number of acute psychiatric cases.

The medical library has supplied the medical staff abundantly with abstracts from the literature both on current medical topics and those of interest to each individual physician.

The medical service has investigated the serious and more puzzling problems dealing with the psychotic. More neurological examinations were done than in any previous year — the total exceeding 125.

Clinical Material

The economic situation has changed the economic status of our newly admitted patients. More patients were committed to the hospital from poor farms — and other such institutions. The hospital still continues to receive patients from Boston and also from Worcester County but the Boards of Public Welfare in and about the county have utilized the resources of the State hospital to a greater degree than in previous years. There has been no perceptible increase in any one type of mental disorder such as dementia praecox, general paresis or manic depressive psychoses. What has been noticed was a slow rise in the number of reactive depressions and in the number of personality problems — psychoneuroses, and without psychosis. More patients have asked to be allowed to remain in the hospital — owing to the economic insecurity in the community. The increase in rate of cerebral arteriosclerosis and senile psychoses has been gradual. Of the 165 autopsies performed during the year, approximately 45% were on seniles and arteriosclerotics. The total number of general paretics coming to autopsy was about 10%; psychosis with somatic disease, 10%; and dementia praecox about 15%.

It is encouraging to note that only one case of dementia paralytica had to be readmitted during the course of the year among the 20 that were discharged. This is an example of the strides that psychiatry has made in the treatment of this organic brain condition. Among the psychoses with somatic diseases a single patient returned to the hospital — although there were twenty-nine admitted.

A goodly number of patients were referred by agencies in and about Worcester and from clinics in Boston for out-patient department treatment. A growing need for the establishment of psychotherapeutic clinics is definitely indicated if the amount of extra-mural work that was referred to this hospital in the past year is an index. It has been the director's observation that the incidence of such referrals has been gradually but steadily increasing in the past few years.

Admissions, Visits and Discharges
(Oct. 1, 1932 to Oct. 1, 1933)

	Admissions	Visits	Out at End of Month Per cent	Discharges	Discharge rate Per 100 admitted
1932					
Oct.	65	39	84.6	37	56.9
Nov.	50	46	73.9	36	72.0
Dec.	55	72	80.6	47	85.4
1933					
Jan.	62	27	74.1	39	62.9
Feb.	59	46	71.7	32	54.2
Mar.	55	36	77.8	42	76.3
Apr.	55	50	68.0	37	67.2
May	69	62	74.2	47	68.1
June	76	60	73.3	43	56.5
July	78	66	75.7	44	56.4
Aug.	72	39	84.6	28	38.8
Sept.	68	59	69.5	45	66.1
Total	764	602	Av. 75.6	477	Av. 63.4

In a resume of the total admissions, visits and discharges over the past ten years — the visit rate of 1933 exceeds that of any previous year. 75% of the patients released on indefinite visit still were out at the end of the year. The discharge rate per 100 admitted was 63.4%. This was .2% better than for the full calendar year of 1932.

Disposition At End of One Year of Committed First Admissions Exclusive of Deaths

	First Court Admissions	Remaining in Institution	Discharged	Out of Institution
1932				
Oct.	40——100%	17——42.5%	5——12.5%	9——22.5%
Nov.	30——100%	10——33.3%	7——23.3%	13——43.4%
Dec.	27——100%	11——40.7%	3——11.1%	13——48.2%

Patients Discharged from Visit

A more careful scrutiny of patients to be discharged from visit was carried out during the year. Those patients who in the opinion of the psychiatrist and social worker were adjusting well were given their discharge; the others wherever possible were returned to the hospital and after a few days residence the visit was renewed. In this way only will it be possible to reduce the number of readmissions and avoid unnecessary inconveniences on the part of relatives, patients and hospital.

Family Care

Up to 1931 the chief use of boarding homes in this state as well as in this hospital was to care for chronic patients who were sufficiently well to leave the hospital, but who had no relatives to care for them. Since then a policy has been formulated whereby boarding homes are made a stepping stone to mental health, independence and self-support. The idea of mental patients being cared for in private homes is an old one but using such homes in a therapeutic way is new. The goal in the past year and in the years to come will be to place patients in homes with the view of helping them to recover from their illness and take their place in society.

Before any patient is released from the hospital to family care — the following data is critically studied: 1. Reasons for commitment. 2. Assets—Physical, Mental. 3. Clinical course during hospital stay. 4. Reasons for placement. 5. Possibilities of discharge.

One social worker has given all her time to the placing of patients and supervision of these homes. The success or failure of this new therapeutic approach depends upon placing the patient in the right situation. In that caretakers assume some responsibility in this method of handling convalescent patients, the following was devised as a guide.

Instructions to Caretakers

1. Your patients should be treated as members of your family and made to feel at home so far as possible.

2. Study the dispositions of your patients, but do not discuss or encourage their peculiarities or fancies. Their habits should be observed and any wrong tendencies discouraged.

3. Keep careful oversight of your patients. Some responsible person must always be with them.

4. Never threaten your patients or lock them in their rooms. Every form of punishment is *strictly prohibited* under all circumstances.

5. Patient's failure to eat enough should be reported at once, unless good reason is obvious. Take notice whether they are gaining or losing weight. See that patients' bowels move daily.

6. More than one patient must never be allowed to sleep in one bed, nor should sleeping rooms be above the second floor unless special permission be obtained.

7. Patients should be encouraged to do suitable work, according to their strength, but never beyond it. Light outdoor occupation, such as gardening, caring for hens, and so forth, is suitable for women patients.

8. All clothing must be kept clean and in good repair and subject to the inspection of the visitor. When patients are removed, all clothing belonging to them must be taken with them.

9. Patients should have a thorough bath at least once each week.

10. For State boarding patients. Payments for board are made monthly, as soon after the first of the month as bills can be approved. Bills are made up to the beginning of the month and not up to the time when you receive payment. Private patients will be paid for according to agreement with relatives.

11. No bills, except in emergencies, should be contracted or expenditures made without authority from the superintendent.

12. Be self-reliant in dealing with emergencies; act promptly in accordance with your best judgment as you would for yourself and then report as soon as possible to the hospital. Do not allow a continuance of anything which seems *wrong to you* without calling it to the attention of the visitor from the hospital. Try to foresee difficulties and seek advice beforehand.

13. If a patient is ill, report this at once to the hospital. In case of death, telephone or telegraph to the hospital. In an emergency call a local physician and then the hospital.

14. If a patient escapes, search for her. If she cannot be found, immediately notify the local police and the superintendent.

15. If a patient becomes dangerous or unmanageable, notify the hospital at once. If necessary in order to care for her safely, call on the local authorities to assist you until the hospital responds.

16. Patients must not visit friends at a distance without permission from the superintendent. They must not be removed to another house, family or town without approval from the superintendent.

17. The visitors of the hospital will expect to see each patient alone, to inspect her room and clothing thoroughly and to make such other examination as may be necessary. Please do not be sensitive nor regard this as any reflection on you or your care of the patient. The visitor is required to do it as a part of her duty in all cases.

18. Record in ink, any important information especially dates of visits of friends, or of the patient to friends. Note change of habits and of mental or physical condition of the patient.

19. We must be kept informed of any additions to the boarding family, i.e., if they take any convalescent cases from other hospitals, especially general hospitals, if they take children to board, etc. Would be better if we knew about these things before the actual changes took place as the Department does not generally approve of mixing mental with other types of patients.

20. These patients will from time to time be seen by a physician from the hospital.

Boarding homes for women patients were more easily found than for men, although the experience in this hospital for the past few years has been that more men are discharged than women. Why this is true is not yet clear.

In addition to medical students serving in the capacity of clinical clerks during

the school year, an affiliation was arranged with the Worcester City Hospital whereby the internes would spend at least two months on a psychiatric service. Although this is wholly voluntary on the part of the individual more than half of the newly appointed internes have made arrangements to serve in the capacity of psychiatric internes. This is another milestone in the history of the modern state hospital.

During the coming year there are indications that the number of encephalographies, personality studies and psychotherapeutic cases will increase. There is a vital need for electro-cardiographic and neuropathological investigations. The medical and surgical service should be equipped with hydrotherapeutic apparatus and a colonic irrigation apparatus on the male psychiatric wards is essential.

Eventually with the increase in out-patient department cases a special extra-mural staff will have to be organized.

There is an increasing demand on the part of the community for extra mural psychiatry. Inasmuch as any mental hygiene program must include an adult clinic it would seem that sooner or later the hospital should add to its personnel sufficient physicians and social workers to attack this most promising and important field of prevention.

Social Service

Helen M. Crockett, Head Social Worker

This year the social service department worked on more than 1,800 cases, on which they held nearly 6,000 interviews. Although we believe that no statistics can give a correct evaluation of the extent or the value of social case work, since some interviews accomplish many times as much as others, yet a few tendencies seem to be indicated. The number of cases is only slightly larger than last year yet the number of interviews has increased by more than a thousand. Although no statistics are available, it is our impression that the interviews themselves tend to be longer. All this seems to indicate that cases are becoming more intensive. It was our purpose to make them so, when it was decided, in consultation with the clinical director, to give routine supervision to only an occasional patient released from the hospital, but to spend more time on those cases where social treatment was indicated. This change is possible because a larger number of patients "on visit" are reporting to the psychiatrists at the hospital. The type of treatment most suitable in a particular case is often a matter of staff consideration, the point of view of both psychiatrist and social worker being presented.

When we compare the statistics of 1933 with those of 1929 we find about 50% more cases referred while the number of interviews has more than doubled. In the past four years we have had one additional psychiatric social worker, making a total of four social workers and one historian. Instead of four students dividing their time with the child guidance clinic, we now have five students giving full time to hospital work. Considering the amount of supervision required, the work of the three additional students would be equal to that of one paid social worker. Besides the larger case load due to a larger staff, some of the increase in the amount of interviewing may be explained by the fact that more and more clients are seen at the hospital so that much of the time formerly spent in travel is saved. We have come to realize that the physical environment of the home has less significance to the patient than has the attitude of the family. Attitudes and relationships can be explored as easily in an office interview as in the home.

The number of investigations, 1,854, is more than twice as large as in 1932. Most of these are concerned with home conditions and the placement of patients. A recently completed statistical study of patients who left the hospital in 1931 shows a close correlation between the success of the visit and the amount of social service preparation for the patient's return. We believe, therefore, that much of our time can wisely be spent in this manner.

Another feature of the year's work has been the increased use of family care, sometimes because the patient has no other resources, and frequently as a temporary step in his social re-adjustment:—

Forty-four remained in family care from the previous year of whom 4 were changed to visit and 1 was discharged. One hundred and two were placed during the year of whom 55 are still out; 36 returned to the hospital; 4 escaped; 6 went on visit — 4 to relatives and 2 to jobs; 1 died.

Ninety-four patients remained in family care at the end of the year, of whom 64 were supported by the state and 30 by relatives or guardians.

Of the 26 who returned to the hospital 24 were mentally sick; 5 were physically sick; 4 were dissatisfied and preferred hospital life; 3 were returned because homes were given up. Before they were returned to the hospital, one was tried in three different homes and three in two homes.

An average of ten visits were made to each patient by social workers and one and one half by doctors. Twenty-two patients were returned to the hospital for more extensive medical examinations and treatment and later replaced in the same home.

A study of individual cases seems to indicate that a very hopeful group of boarding patients are the younger ones, many of whom are in school, and all of whom have shown remarkable improvement through this type of treatment. We have learned that certain deteriorated patients if placed in family care require a disproportionate amount of time in supervision, without showing much improvement. Although the placement may be a failure and the patient returned to the hospital, the effect upon the relatives is sometimes adequate reward for our efforts. If the patient were well enough to be given a trial, the case seems to the family less hopeless and their interest is quickened. For example, one father gave a Christmas party to the patients on his daughter's ward for the first time this year, although she has been in the hospital several years. She is not well enough to adjust to the simplest type of home and our family care placement was a failure. A family who had been asked repeatedly to take a patient from the hospital, made no move to do so, but accepted her quite willingly from a boarding home. Another family who had refused for two years to take a patient home felt it was their duty to take her when she had been in a boarding home for one year. At the present time little more expansion in boarding home activities is possible because we have not enough social workers to supervise any more patients than have already been placed.

There has been a great improvement in our follow-up on luetic patients and their families. Recently we have been re-checking all luetics now in the hospital no matter how long ago they were admitted, and have written letters and made calls to see that all members of their families have had Wassermanns and treatment as indicated.

Chaplain's Department

Rev. Carroll Wise — Protestant Chaplain

Religious work in a mental hospital may be carried on merely as formal activities which in a blind way aim to bring comfort and inspiration to the patients. Or they may be carried on more intelligently, that is, they may proceed from an understanding of the experiences through which the patients have gone and are going, and of the psychological relation of these experiences to certain kinds of valid religious experience. This type of religious work requires of the worker that he be trained, not only in the disciplines of religion, but also with those dealing with the social and psychological aspects of the development of both normal and abnormal types of personalities. This incidently is a type of training which is not being adequately given in any theological seminary in the country today.

It is from the second viewpoint that we are endeavoring to carry on the religious work in this hospital. The aim of the chaplain is not to seek miraculous cures through religion — a feat which many people seem to expect of him but rather to integrate the religious activities into the hospital organization so that they may take their proper place as part of the total situation in which the patient finds himself. In this way the chaplain's department takes its place along side of the other departments in making its contribution to the main purpose of the hospital, — the recovery and welfare of the patients. The close cooperation existing between this and the other departments also serves in making the religious activities an integral part of the hospital program rather than an isolated activity.

In the main, the religious activities assume the conventional patterns, but these are controlled by the understanding attitude mentioned above. Thus the worship services on Sunday morning, and the vesper service broadcast over the hospital

radio on Sunday evenings seek to bring to religiously minded patients an understanding of their own experiences in terms which they can comprehend. They proceed from the belief that religion, rightly understood and accepted, is one of the ways in which men may find a satisfactory adjustment to their total environment and to themselves. The resources and techniques of religion, and the personal attitudes which make them affective provide the themes for the sermons. Emphasis is always placed on the positive rather than the negative aspects of life. A specially prepared hymnal and order of worship for use in mental hospitals is used in these services. Special services are held at appropriate seasons of the year, such as Easter and Christmas, and a baccalaureate service for the Nurses Training School is conducted each spring.

In his pastoral work the chaplain does not force his attentions on any patient, but rather seeks to make himself available for any patient who desires to see him. Visits are made to the medical wards, and to some of the psychiatric wards very frequently. Individual patients are seen more or less frequently according to their condition, their needs and their desires. Each new patient is seen shortly after admission in an attempt to establish friendly contacts and where possible to allay fear and bring reassurance. Patients whose names are put on the danger list are seen immediately.

Part of the function of a trained chaplain in a mental hospital is to assume his share of the hospital's obligation to the community at large. This obligation, in so far as he is concerned, usually takes the form of educational activities. During the past year the chaplain has made over twenty talks to various types of organizations, such as churches, men's clubs, women's clubs, and young people's organizations. These talks dealt with various aspects of mental health, and personality development. A number of groups of students were brought to the hospital for visits and lectures. During the year a seminar for ministers was conducted on Monday afternoons for sixteen consecutive weeks. This seminar, which was attended by twelve clergymen dealt with various problems arising in personality development and mental disorder, particularly as they relate to the work of the minister. It was organized and conducted by the hospital chaplain with the assistance of several hospital physicians.

A feature which combines hospital visiting with community education has been the continuance of a group of women visitors organzied last year by the social service committee of the Worcester County Federation of Church Women's Clubs. This group makes regular visits to the female wards which are greatly appreciated by the patients. Monthly meetings are now being held by this group in which a member of the staff talks about some phase of hospital life.

In addition to these teaching activities the chaplain gave a course in psychopathology at the Boston University School of Theology during the year.

It is felt that the greatest progress made by the department during the past year was in regard to the summer course for the clinical training of theological students. The first endeavor to give theological students clinical training occurred at this hospital in 1925. A few years later several other institutions had started this type of work, and a group of interested individuals incorporated the Council for the Clinical Training of Theological Students, for the purpose of fostering and developing it. Dr. Richard C. Cabot was president of this group for several years, but at present is headed by Dr. Earl Bond of Philadelphia. The training of theological students at this hospital is carried on in cooperation with this Council, and the revised program as used last summer follows briefly. For the first two weeks each student spent half of each day on the wards working as attendant. In a very natural way this introduced him to the hospital routine and also to the patients. After that period each student was assigned to a small group of patients with whom he was required to spend a definite amount of time each day. This work was carefully supervised by the ward physician and the chaplain. Careful notes were required of each student. Along with this definite clinical program, a carefully arranged teaching program was carried out which aimed at giving the student as thorough an understanding as possible of the physical and psychological aspects of personality development and of the pathologies of personality. Every attempt was made to relate their experiences and knowledge to the work of the minister in dealing with the infirmities of mankind. The work of the minister was carefully differ-

entiated from that of the psychiatrist. Problems regarding the adjustment of personality through religion were carefully considered. Methods and techniques which the minister might use were carefully considered, as were methods and techniques which belong properly to specialized groups, such as psychoanalysis and which therefore he should not try to use. The value of the experience for one of the students may be seen from his statement which follows:

> "There are a good many points in my work at the church where I'm finding application for some of the summer's training . . . As the weeks go along I can say emphatically that the summer's work was by all odds the most valuable experience I have had for my work in the church and for the future of my ministry . . . You ask us to tell you what difference the summer has made in our personal religious lives. As I look on religion in general, it has made me more critical and at the same time more appreciative. I am better able to understand, and evaluate religious experiences, to see when they are of significance and when not, to grasp what they mean in terms of the total personality picture. In regard to my personal practice — I can't say as there's been much change. My views of God, sin, prayer, etc., are about as they were before, only more so, and much more clearly so. Worship is increasingly vital and probably more intelligent, as I can understand now a good many of my moods and caprices, and am better able to see the details of my life in perspective, objectively."

Another student who found a great deal of personal value in the summer's experience writes:

> "I am amazed that the summer's work among broken lives should have had such a powerful integrative force on my own. It's far from completed, and that's why I wish I could stay on there longer."

These statements speak for themselves and indicate some of the values to be gained by theological students through a well-planned course of clinical training.

In addition to the above, the chaplain engages in a few miscellaneous activites, the most important of these being the editing of The Hospital Messenger, a four page pamphlet which appears monthly. The purpose of this pamphlet, which has a circulation of almost a thousand each month, is to acquaint the relatives of patients, and other interested people with the work of the hospital, and to spread information regarding mental disorder and mental hygiene. Enthusiastic comments from people who read it indicate that it is filling a need in the community.

Before closing this report I wish to acknowledge gratefully the financial support received during the year from the Massachusetts Congregational Conference and Missionary Society.

Music and Radio

Frederick Searle — *Musical Director*

Each year will necessarily bring about many changes in the manner of treatment of the mentally ill by music. Much experimentation has been carried on in the past with music and its relation to organic and psychic changes in normal persons. A great deal of this type of research will have to be done with abnormal persons before too definite musically therapeutic methods can be utilized. However, there have been sufficient indications that music does exert a therapeutic influence upon the mentally afflicted.

Our musical work with disturbed patients during the past year has not been entirely void of results. For several months we conducted daily experimental sessions musically, with a disturbed female group of about fifty patients. These sessions were about eight minutes in length. They consisted of five definite features each session: Group singing (1 min.); group reading (1 min.), group singing (1 min.); four minutes of music (instrumental or vocal) in which patients were not participating but were expected to Listen to; finally, group singing of one minute. An observer checked minute by minute upon the motor disturbances of individuals in the group such as talking to self, shouting, waving arms, etc. The following chart shows the trend of motor disturbance during these eight minute sessions for a period of three weeks. Reading from left to right we see the motor disturbance for each session minute by minute. Reading from top to bottom we see the difference in disturbance in some particular minute day by day.

	1st Min.	2nd Min.	3rd Min.	4th Min.	5th Min.	6th Min.	7th Min.	8th Min.
Day 1. . . .	11	–	–	9	9	11	11	–
Day 2. . . .	3	3	1	5	3	3	6	3
Day 3. . . .	2	1	–	8	7	6	5	5
Day 4. . . .	3	6	7	7	8	5	6	–
Day 5. . . .	4	7	6	8	12	7	13	–
Day 6. . . .	7	7	–	7	6	11	6	2
Day 7. . . .	3	1	1	7	7	4	3	3
Day 8. . . .	5	–	8	8	8	6	8	–
Day 9. . . .	4	5	4	7	9	7	7	5
Day 10. . . .	6	6	5	3	2	2	1	6
Day 11. . . .	5	7	5	13	8	11	10	7
Day 12. . . .	7	5	6	14	8	8	13	5
Day 13. . . .	2	1	4	5	8	7	5	3
Day 14. . . .	3	3	4	12	5	3	4	2
Day 15. . . .	6	6	5	9	10	9	4	3
Day 16. . . .	3	3	5	8	7	5	5	8
Day 17. . . .	2	3	4	4	7	7	6	3
Day 18. . . .	–	2	5	3	3	2	3	1
Day 19. . . .	8	9	8	11	5	5	7	–
Day 20. . . .	7	8	7	5	8	6	4	3
Day 21. . . .	1	2	3	6	5	4	1	3
Total. . . .	92	91	88	159	145	129	128	62

The outstanding points of interest concerning this chart are: First, the consistent lowering of disturbance during the first three minutes while the patients were participating; Second, the extraordinary motor increase when the music started; third, the consistent lowering of disturbance during the succeeding minutes until the final moment was more quiet than the first moment of the experiment. It is hoped that we may be able to continue these experiments over a longer period of time, and also to prolong the musical period in each session to seven or eight minutes thereby trying to ascertain if the seeming therapeutic influence will continue over a longer period and the disturbance fall to a still lower level.

The planning and engineering of all the musical and radio activities of the hospital are done by the musical director. However, it would be impossible for any one man to attend to the mechanics of these varied activites. It is so arranged that about eight patients lend almost their entire time in assisting in carrying out the many details connected with the musical department. A patient, being a piano tuner by profession has kept every piano in the institution and Doctor's cottages in perfect tune; a female patient broadcasts bi-weekly on the organ to the hospital as well as assisting in accompanying various musical features. Three patients alternate on a fifteen-hour schedule in the control room of our radio broadcasting station WSH. They announce features, call doctors, follow a set programme for the day, and control a very intricate board quite as accurately as one would at any commercial station. The control-room is entirely in their charge, under the supervision of the musical Director. Many improvements have been inaugurated on our control body, the two most advantageous being the installation of equipment which enables us to send at a given minute any programme to any segregated section of wards: male, female, locked, medical, parole, or industrial shops, special equipment for making our own recordings has been added.

In program making over our radio station we are making more effort to eliminate advertising and sundry commercial announcements and in its place to utilize educational methods via radio for both our patient and employee population. Thus announcements about movies, dances, church services, entertainments, waste, choir, etc., are given; progress notes of patients leaving the hospital on trial visits; the reading of patient promotions in the research wards; therapeutic and hygienic

suggestions and time signals — some one of these reach our wards every half hour.

Radio programmes by staff members have been carefully planned and carried out. There has been a series of talks relative to the various types of psychoses presented by the psychiatric department; another series explaining the functioning of the medical department by the head of that department; The chaplain has presented a weekly feature. At the present time there is in progress a series of talks by various staff members on definite subjects that are of interest to the hospital. Many local musicians have generously lent us their talents in broadcasting and it has been quite evident by several requests to broadcast to our wards that public approbation and interest is increasing. Also by the fact that many requests have come to the hospital for the musical director to speak at Rotary, Kiwanis and other clubs concerning the musical work at the hospital.

The coming year we plan to have some blood-pressure equipments with music as well as compile a manual of general practice for the operation of the radio equipment and the supervision of musical activities based on the experience of the past three years.

Medical and Surgical Service

Clifton T. Perkins, *Assistant Superintendent*

The following tables summarize briefly the chief activities of the medical and surgical services during the past hospital record year, extended from October 1, 1932 to September 30, 1933, inclusive.

Movement of Population	Female	Male	Total
Remaining October 1, 1932	134	79	213
Admitted	512	434	946
Discharged	415	338	753
Deaths	117	117	234
Escapes	–	–	–
Births	6	5	11
Remaining September 30, 1933	114	58	172

No particular comments are necessary relative to the distribution and movement of population on the medical and surgical wards. A total of 1,159 patients were taken care of on these services during the year, and at the end of the year there is an appreciable drop in the number remaining on the service, as compared with past years. It is particularly gratifying to know that of the 946 patients admitted during the past year, 102, representing 10.7% of these admissions, were primarily for study only. That is, the physicians on the psychiatric wards felt that these patients should undergo very thorough physical examinations and tests, even though obvious physical illnesses were not apparent. They were therefore referred to the medical service for these physical check-ups. A further study of the table below, relative to physical condition at time of discharge from the medical service reveals that half of these patients so referred actually did have some vague physical illness which were helped by the physicians on the medical service, and the remaining half, or 51 patients, were discharged from the service as having no discernible physical illness, and therefore not treated. The use of the medical and surgical services for such "study" cases referred by physicians from other services in the hospital, is very valuable, and is to be encouraged.

Discharged Detailed as to Physical Condition	Female	Male	Total
Recovered and improved	380	307	687
Not improved	9	6	15
Not treated	26	25	51
Total	415	338	753
Deaths Detailed			
Number of Medico-legal cases	11	12	23
Total number of autopsies	84	77	161
Autopsies confirmed ante-mortem diagnoses (70% or more)	62	56	118
Autopsies partially confirmed ante-mortem diagnoses (50-70%)	15	16	31
Autopsies refuted antemortem diagnoses (Less than 50%)	7	5	12

Attendance at autopsies (10 months):—students, 754; staff, 803.

Autopsy percentage of deaths — 68.8%

The above table merely summarizes certain information relative to deaths and autopsies during the past record year. Additional comments may be found in the combined report of the laboratories and pathological departments.

Analysis of Deaths

Of the 234 deaths noted in the first table, 22 occurred at the Summer Street Department and the remaining 212 at the main hospital. The figure for total number of deaths runs remarkably constant from year to year. As may be seen in the first table, the deaths are equally divided between the sexes — 117 of either sex. This is an unusual coincidence, since for several years there have been from 10 to 15 percent more women than men, die in the hospital. The average age of all deaths was 61.7 years. The following is a more detailed analysis of these deaths, based only on the primary cause of death in each case:

(*a*) Sixty-four deaths, representing 27.3%, were due to the physical disorders coincident to old age, primarily arteriosclerosis and cardiovascular-renal disease. The average age of death of this group was 72.4 years. The age factor remains fairly constant in this group from year to year, but there is a decided decrease in the percentage of the total number of deaths represented by this group.

(*b*) Fifty-two patients, representing 22.2% died from pneumonia. As noted in the report last year, we now include in this group many deaths which heretofore had been included in the first group. This change on our part was due to a widespread change in classification of deaths from the statistical standpoint. The average age of deaths of this entire group was 66.8 years. Of the total number in the group 14 died from lobar pneumonia, and the average age of this sub-group was 62 years.

(*c*) Twenty patients, or 8.5%, died from general paresis. Again, as has been noted year after year, the greater number of this group die in the hot, exhaustive summer months extending from the middle of June to the middle of September. The average age of death of this group was 45.5 years.

(*d*) Nineteen deaths, representing 8.1% were due to carcinoma. This death rate is more than double that which we have ever before experienced, and cancer this year leads tuberculosis as a cause of death in this hospital. The average age of death of this group was 59.3 years. Of the total number, twelve primarily involved the gastro-intestinal tract, the stomach being the primary seat, three originated in the breast, two in the uterus, one in the bladder, and one in the testicle. We have continued to take full advantage of the facilities offered us by the Public Health Department and its Pondville Hospital for treatment and advice relative to our patients suffering from cancer.

(*e*) Seventeen deaths, or 7.2% were due to tuberculosis. Of this number, all were of the pulmonary type except one which was renal, and one involving the bones. The average age of death was 42.7 years.

(*f*) Eight deaths, representing 3.4% were due to kidney disease, uncomplicated by senile changes. The average age of death was 53.5 years.

(*g*) Eight deaths, representing 3.4% were due to heart disease uncomplicated by senile changes. Three of these were cases of acute bacterial endocarditis. The average age of death was 57.4 years.

(*h*) Six deaths, or 2.5% were due to diabetes mellitus. The average age of death was 68.1 years.

(*i*) Five deaths, representing 2.1% were due to fractures. The average age of death was 70.4 years. The percentage which this group represents of the total deaths has steadily declined in recent years.

(*j*) Three deaths, representing 1.2% were due to cerebral hemorrhage, with an average age of 62.3 years.

(*k*) The remaining 32 deaths, representing 13.6 years, were due to a variety of causes which have no particular statistical significance. The average age of death of this unclassified group was 54.7 years.

Consultations Detailed

Eye	155	Medical	16
Ear, nose and throat	73	Orthopedic	11
Gynecological and obstetrical	170	X-ray	1,108
General surgical	194	Others	8
Total			1,735

The above table indicates roughly the extent to which our consultation service has been utilized.

Obstetrical Service

We continue to carry our license for an obstetrical service of eight beds. Prenatal care is carefully managed and the follow-up care after delivery is maintained in necessary cases for a period of six months or until such time as the infant is weaned. As may be noted from the first table in this report, there were eleven deliveries last year. One birth was a still-born.

Surgery Detailed

Amputations, major, 3; minor, 3; antrum, radical, 1; appendectomies, 22; aspirations, 1; biopsy, 4; cataract excision, 1; circumcision, 2; colphorrhaphies, 2; craniotomy, 1; cystoscopy, 3; cystotomy, supra-public, 3; dilatation and curettage, 2; dislocation reduced, 1; excisions, minor, 16; enterostomy, 2; fulguration, 1; gastrostomy, 1; gastro-enterostomy, 2; hemorrhoiddectomy, 2; herniorrhaphy, 9; hysterectomy, 5; incision and drainage, minor, 55; injection varicose veins, 64; iridectomy, 1; laporatomy, 6; laryngoscopic examination, 1; ligation of large blood vessels, 1; lysis of adhesions, 4; mastoidectomy, 2; myotomy 1; myringectomy, 2; oophorectomy, 1; orchidectomy, 1; osteotomy, 2; paracentesis, 7; perineorrhaphy, 3; plaster casts, major, 16; plaster casts, minor, 6; plaster repairs, 5; proctoscopic examinations, 9; removal foreign body, 4; salpingectomy, 2; splints applied, 4; submucous resection, 3; suspension of uterus, 1; suturings, 42; tonsillectomy and adenectomy, 4; thorocentesis, 2; trachelorrhaphy, 2; trephine, minor, 4.

There were a total of 358 surgical procedures carried out on 337 different patients in the surgical suite. A great deal of this increase in actual procedures is accounted for by the fact that many of the larger suturing procedures, and the more important cases requiring incision and drainage have been done in the surgical suite itself rather than in the ward treatment rooms as was the custom in the past. The amount of work represents a good degree of activity.

Clinic Detailed

Eye examinations, 861; ear, nose and throat examinations, 826; gynecological examinations, 567; luetic treatment, 2,731; small pox vaccinations, 169; spinal punctures, 382; typhoid and para-typhoid inoculations, 1,796; Wassermanns, Kahns, Hintons, 1,389; others, 41. Total, 8,762.

Again, the attendance at various clinics indicates a fair degree of activitiy, and is rather comparable to past years. There were approximately 5,000 visits to the luetic clinic alone, for treatment, examination or advice.

Employees Detailed

Examined and treated at clinic, 2,614; required hospitalization, 171; required operation, 32; total number of days on sick wards, 1,322.

There has been a tremendous increase in routine clinic examination and treatment of employees. The figure of 2,614 given above indicates 100% increase over the volume last year. The majority of these attended the clinic during the winter and early spring. Fifty less employees have required hospital care this year than was the case last year. This is a decrease of 30%. There likewise has been the decrease of 150 days of sickness requiring hospitalization.

Dressings Detailed (Out-Patient)

	Male	Female
Abrasions and lacerations	739	903
Boils and carbuncles	535	331
Burns	110	112
Infections	1,273	1,558
Ulcerations	155	316
Others	1,421	693
Total out-patient dressings	4,365	4,329
Ward dressings	17,034	14,860
Total dressings	22,399	19,518
Grand total	41,917	

The figures given above indicate an increase of 17% in activity over last year. This increase is general, and is found in both the out-patient dressings as well as in the ward dressings. It becomes increasingly urgent from year to year that we establish a centralized system for out-patient dressings. This could be best carried out in conjunction with our present surgical suite, but such is not possible under the present physical layout of this suite, and its adjoining rooms.

Dental Department

Bridges, 2; cleanings, 1,309; examinations (routine), 2,202; extractions, 1,124; fillings, 1,136; plates, 33; repairs, 60; treatments, (miscellaneous), 825; x-ray diagnosis, 58; others, 7. Total examinations and treatments, 6,756. Total patients examined or treated, 3,986. Total general anaesthetic cases, 16.

X-Ray Department

Parts Examined

	Patients	*Plates*		*Patients*	*Plates*
Abdomen (plain)	19	22	Jaw	12	23
Ankle	25	31	Knee	11	16
Arm	17	22	Kidney (plain)	5	11
Chest	289	308	Leg	18	23
Colon	11	12	Mastoid	14	28
Elbow	8	9	Nose	23	43
Foot	20	24	Ribs	14	24
Fluoroscopy	66	0	Shoulder	32	50
Gastro-intestinal series	55	298	Sinuses	10	21
Gall-bladder (plain)	2	3	Skull	131	386
Graham test	17	53	Spine	34	68
Hand	41	42	Teeth	84	232
Heart	11	14	Wrist	25	28
Hip	54	73	Others	13	32
Total				1,061	1,896
Finger or foot prints					18
Photographs					1,865
Lantern Slides					224

Although this report indicates a decrease in some of the regular x-ray work, it represents a tremendous increase in the making of lantern slides and photographs. These latter two functions of the technician are very important from the teaching standpoint. It is not expected that this volume of photographs and lantern slides will continue proportionately.

Physical Therapy Department

Classifications of Treatment and Tests

Ultra-violet (air-cooled)	3,279
Ultra-violet (water-cooled)	897
Baking	1,812
Massage	610

Diathermy	550
Others	654
Total treatments and tests	7,802
New patients during year	382
Total number of patients treated	5,330

The report of this department indicates a general increase in activity of approximately 40% over that of last year. This increase is in the total number of patients treated as well as in the total number of treatments and tests given.

Research Service — Psychiatry and Internal Medicine

F. H. Sleeper, *Resident Director Research*

Because of the emphasis placed on the evaluation of data already obtained with a consequential slight diminution in experimental work below that of the preceding year, the curtailment of financial support did not too seriously affect the operation of the service. However, if productivity on a comparable scale is to be continued, additional financial support from the State should be made available.

During the period covered by the report a rather crude constant temperature room was constructed. As a result of preliminary experiments conducted in this room sufficient data of a positive nature were obtained by Drs. H. Freeman and J. Gottlieb to warrant expansion of the work and more elaborate construction to eliminate technical errors which cannot be avoided in the present room.

New equipment purchased during the year consisted of a muffle furnace for the laboratory; a "silk scale" for measuring insensible perspiration; a Boas cardiotachometer which will be used for the study of emotional changes as reflected by the pulse rate and the effects of graded work on the pulse rate; and a Benedict-Collins metabolism apparatus.

Publications

Particular emphasis has been placed on preparation of accrued material for publication. During the fiscal year the following articles have been published, excerpts from the summaries and conclusions are given:

1. "Oxygen consumption (Basal Metabolic rate) in Schizophrenia." R. G. Hoskins, Arch. Neur. and Psychiat. *28:* 1346, December 1932.

The rate of oxygen consumption under conventionally satisfactory conditions was determined in 214 male schizophrenic patients. The average was 88.3% of standard normal. One to 15 readings were made per individual patient. The average lowest reading in the series was 81.1%. Evidence is given that this more nearly represents the true basal rate than the 88.3 figure. The average sub-group rates were — catatonic 87.9%, hebephrenic 89.4%, paranoid 87.9%, indeterminate 88.8%, and simple 95.0%. Schizophrenia is characterized by a systematic downward displacement of the oxygen consumption rate.

Further work on this problem will be carried out during the ensuing year. Work directed toward ways and means of normalizing the lowered rate has been reported in previous years.

2. "The Effect of Habituation on Blood Pressure in Schizophrenia." H. Freeman, Arch. Neur. and Psychiat. *29:* 139, January, 1933.

A study was made of the systolic and diastolic blood pressures in 50 cases of schizophrenia, in three periods, three months apart. The mean values of the systolic pressures in the three periods were 105.2, 99.6 and 100.3 mm. hg. respectively. Diastolic pressures were 65.5, 55.5 and 60.8 mm. respectively. Season, nutrition, anemia and oxygen consumption rates were excluded as factors causal in the production of the lowered pressures. Sedentary life was probably not a significant factor. The fall in systolic pressure on repeated determinations is ascribed to habituation to the environmental situation. The observations serve further to emphasize vascular hypotension as a characteristic of schizophrenia. The mechanism of its production presents a problem for further research. Experiments are under way at this time for further elaboration of this finding and will be continued.

Inasmuch as hypotension has been definitely shown to be a characteristic of schizophrenia, methods for treating the condition had to be devised. The following communication is the direct result of part of our therapeutic research plan.

3. "Some Effects of a Glycerin Extract of Suprarenal Cortex Potent by Mouth." R. G. Hoskins and H. Freeman, Endocrinology *17:* 29, Jan.-Feb. 1933.

Ten schizophrenic patients, initially presenting low blood pressure, were treated for 10 weeks with glycerin extract of adrenal cortex. Dosage was gradually increased from an equivalent of about 100 grains to 450 grains of fresh gland substance per day. The average initial systolic pressure was 105.7 and the final pressure 132.5 mm. hg. Similarly, the diastolic pressure was increased from 69 to 84 mm. There was an irregular increase in weight from an average of 62.6 kg. at the beginning to 65.4 kg. at the end of treatment. There was also a fairly consistent increase in the red cell counts of about 300,000 on the average per patient. At the end, the increase had fallen to about 150,000 cells above the initial level. There was evidence of early stimulation of renal function with later return toward initial levels. Investigation is to be extended.

Noto, an Italian investigator, has reported that the ingestion of 1 gram of tyrosine by schizophrenic patients resulted in the production of aromaturia and aromatemia, which in turn was attributed to a defective liver. We have repeated this work.

4. "The Effect of the Ingestion of Tyrosine on the blood phenols and the blood uric acid as determined by the methods of Folin and Benedict." J. M. Looney, Jour. Biol. Chem., May 1933.

Results of this study on 48 schizophrenic patients indicated that the two methods are not measuring absolutely identical substances, as Benedict's method is affected by changes in phenols as well as by changes in uric acid. No association could be shown between changes in blood phenols and the increases in tyrosine in the blood. The excretion of phenol in the urine could not be correlated with the phenol content of the blood.

The above paper, dealing with the technical phase of the subject, did not show, as actually happens, that in schizophrenic patients of the period of hospitalization with which we are dealing, no phenols were present in sufficient amounts in either the blood stream or the urine to have had a toxic action. However, we were dealing with longer hospitalized patients than the Italian investigator and this phase of the work remains to be done with some technical variations.

5. "Organic Functions in Schizophrenia." R. G. Hoskins, and F. H. Sleeper. Arch. Neur. and Psychiat. *30:* 123, July, 1933.

An epitomized account is given of the results of the study of physiologic functions in schizophrenia as brought out by repeated tests on 57 male subjects over a period of seven months. Patients were on the average 16 per cent under weight, showed a high incidence of poor circulation in the skin, irregularities of the pupils, abnormal reflexes, poor teeth and depression of the blood pressure, oxygen consumption and to a slight extent, the pulse rate. The level of protein metabolism showed no significant correlation with the rate of oxygen consumption as it did in a control series. Total urinary volume was twice that of normal controls, which suggests abnormal functioning of the diencephalon, or of the posterior lobe of the pituitary gland. There was a high incidence of moderate secondary anemia, and leucocytosis. The average red and white cell counts were 4,957,000 and 10,477 respectively; differential counts were normal; sedimentation rate and Schilling index were commonly normal. In individual cases, venous oxygen was strikingly low, but the average was substantially normal. The functional efficiency of the liver tested in a variety of ways, indicated a variably inconsistent inefficiency in a considerable proportion of the cases. Nearly all the functions studied showed high individual variability. The ability of the body to maintain a "steady state" in schizophrenia is diminished. Some functions are basically displaced in an upward others in a downward direction.

6. "A Cooperative Research in Schizophrenia." R. G. Hoskins, F. H. Sleeper, D. Shakow, E. M. Jellinek, J. M. Looney and M. H. Erickson. Arch. Neur. and Psychiat. *30:* 388, August, 1933.

This paper describes the Worcester project in several aspects. The functions of the laboratories devoted to organic and psychologic features of the research are outlined. The methods by which psychiatric observations were made are discussed. The recording and handling methods used in dealing with the data are recounted.

The project has proved to be practicable and productive.

7. "Blood Cholesterol in Schizophrenia." J. M. Looney and H. M. Childs. Arch. Neur. and Psychiat. *30:* 567, September, 1933.

Approximately 50 men with schizophrenia were studied over a period of seven months at intervals of two weeks and three months. The mean cholesterol values were: for the first period, 146 mg.; second period, 161 mg.; third period, 166 mg. The mean value for 26 normal men was 175 mg. Both schizophrenic patients and the controls showed great variability in cholesterol values, the former having a standard deviation of about 20 mg., and the latter about 27 mg. No correlation could be shown between the blood cholesterol and the basal metabolic rate or the emotional status. Schizophrenia seems to be characterized by a slight degree of depression of the cholesterol content of the blood.

8. "The Fasting Blood Sugar in Schizohprenia." William Freeman, M.D., Am. Jour. Med. Sc. 186; 621, November 1933.

Six samples taken from 59 male schizophrenic patients, making a total of 347 determinations, form the basis of this report. The conclusion is drawn that schizophrenia is characterized by normal fasting blood sugar levels, but the individual variability is somewhat greater than in normal subjects. Thirty-one normal subjects acted as controls for this study.

9. "Schizophrenia from the Physiological Point of View." R. G. Hoskins, M.D. Annals of Int. Med. *7:* 445, 1933. Read before the American College of Physicians at Montreal, Quebec, February 9, 1933.

This paper emphasizes the marked variability from one functional test to another. In most regards, the average functional level was essentially normal. The galactose tolerance averaged 22 grams as compared with a reported normal average of 30 grams. The motor functions of the colon were retarded. The complex of functions centering about oxygen metabolism was found to be characteristically abnormal. There are suggestions that pituitary deficiency may play an important role. It is suggested that further studies as to how these abnormalities are brought about may throw significant light on the cause of the psychosis.

Several papers have been accepted for publications.

1. "The concomitance of organic and psychologic changes during marked improvement in schizophrenia." M. H. Erickson, Am. Jour. Psychiat.

Three distinct psychiatric states, namely stupor, recovery from stupor, and a condition of apparent recovery from psychosis were found, for each of which a physiologic cross-sectional study was made. During the stuporous state, the patient was underweight, had diminished oxygen consumption, reduced body temperature, polyuria, and delayed colonic emptying time. During the second period, the patient had recovered from the stupor, had gained weight, had a still further slight decrease in his oxygen consumption rate, slight increase in body temperature mild secondary anemia, low venous and arterial oxygen content. Other findings were normal. During the third period, the patient had gained weight, normal oxygen consumption rate was recorded, normal body temperature and except for a marked plyuria and low venous oxygen content, there was no significant deviation from normal. There is evidence suggested of pituitary deficiency, manifested at about puberty and also during the first and third periods of the study. However, the fluctuations noted could likewise be attributed to an abnormal function of the hypothalamus. Coincidental with the changes in the psychiatric and psychological spheres, there have been corresponding or opposite fluctuations and variations in the organic sphere. When more studies of this nature have been made possibly an answer to the question of functional interdependence may be achieved.

2. "Blood Sedimentation Rate in Schizophrenia." H. Freeman. Arch. Neur. and Psychiat.

A study was made of 50 normal and 47 schizophrenic men in whom selection was made on the basis of relative freedom from detectable infectious processes. In the normals, the mean sedimentation rate was 0.26 mm. per minute; of these, 20 percent had rates more rapid than the conventional normal limit of 0.35 mm. In the schizophrenic subjects the determinations were made on three occasions in seven months. The mean values for the rates were 0.32, 0.24, and 0.29 mm. per minute. These were all within normal limits and were not significantly different from one another. Sub-classes showed no significant differences in the sedimenta-

tion reaction. The sedimentation rate in noninfected subjects showed a mean variation of only 0.09 mm. per minute over a seven-month period and seemed to be a characteristic feature of each person. There was no diurnal variation of the sedimentation reaction. Infection being excluded, schizophrenia is characterized by normal blood sedimentation rate.

3. "A Comparison of the Methods for Collection of Blood to be Used in the Determination of Cases." J. M. Looney and H. Childs. Jour. Biol. Chem.

A new method for collecting and handling blood for gas analysis, using a capped syringe, is described and is shown to be superior to the methods now in use in preventing error caused by the diffusion of the gases through the oil layer used in the ordinary method.

4. "The sensory threshold to direct current stimulation in schizophrenic and normal subjects." P. E. Huston, Arch. Neur. and Psychiat.

As a check upon the statement that high faradic current thresholds are found in about 50 per cent of dementia praecox patients, a technic of direct current stimulation was employed. This revealed no significant differences between the schizophrenic group and a comparable normal one in the means of the two groups, the scatter about the mean, the mean variation within individuals, the intervale between the ascending and descending series and the course of the threshold. Reasons for the failure to confirm Grabfield's results are advanced.

5. "Manganese Treatment in Schizophrenia." R. G. Hoskins, Jour. Nerv. and Ment. Dis.

This paper points out the relative inadequacy of colloidal manganese in the treatment of schizophrenia.

6. "Further Studies on a Glycerin Extract of Adrenal Cortex Potent by Mouth." H. Freeman, F. E. Linder, and R. G. Hoskins, Endocrinology.

This is a complete confirmation of the results of the preceding study mentioned.

7. "The relation between oral and rectal temperatures in normal and schizophrenic subjects." H. T. Carmichael and F. E. Linder, Am. Jour. Med. Sci.

Schizophrenic subjects have a mean difference between oral and rectal temperatures, taken simultaneously, of 0.54 F as contrasted with the figure of 0.95 F for normal subjects. Normal subjects individually showed more variation than did the individual patients. While the difference between the two groups may in part be accounted for by greater activity of the normals, results suggest that the heat regulating mechanism in the schizophrenic subjects may be different than in the normals.

8. "A Biometric Study of the Relation between Oral and Rectal Temperatures in Normal and Schizophrenic subjects." F. E. Linder and H. T. Carmichael, Human Biology.

In a biometric study of the relationship between oral and rectal temperatures of 25 schizophrenic patients and 24 normal subjects, 24 simultaneous oral and rectal temperature measurements were made on each. Analysis of the data showed essentially the same mean oral and rectal temperatures for the two groups. But significant differences found in the degree and manner of the relation of oral to rectal temperatures indicate that the organization of the temperature regulating mechanisms in schizophrenia is different than in our normal controls.

9. "The Schizophrenic Personality with Special Regard to Psychological and Organic Concomitants." R. G. Hoskins and E. M. Jellinek.

Invitation to present this paper before the Association for Research in Nervous and Mental Diseases has been received.

A comparison of variation from individual to individual in schizophrenics with the variation amongst normal controls gives evidence of the heterogeneity of the schizophrenic group. The authors believe that no theory can be advanced until strict separation of the various diseases classified as schizophrenia has been accomplished. However, on the basis of studies of the variation within given individuals and of studies of correlations within these individuals, but chiefly based on the investigation of blood pressure relationships as indices of autonomic integration, they predict that in the major part of the group the essential etiology will prove to be defects of integration rather than primary organic abnormality. They extend Bleuler's label to include "split physiology" as well as "split mentality."

The following papers have been submitted for publication but no formal acceptance has yet been received.

1. "Studies on the Phytotoxic Index." I. Results in 68 male schizophrenic subjects. William Freeman and Joseph M. Looney.
2. "Arm-to-Carotid circulation time in normal and schizophrenic individuals." H. Freeman, M.D.
3. "The effect of dinitrophenol on the metabolism as seen in schizophrenic patients." J. M. Looney, M.D. and R. G. Hoskins, Ph. D., M.D.
4. "The gas content of arterial and venous blood of schizophrenic patients." J. M. Looney, H. Freeman and E. M. Jellinek.

Psychological phases of the research are covered in the report of the chief psychologist, D. Shakow.

A total of 28 addresses were given by members of the research service during the year.

The year has been notable chiefly for definite increases in our knowledge of the physiology of schizophrenia. The concept of inefficiency of integrative physiological mechanisms has been applied to the group. The general problem has been clarified to a greater degree than heretofore as a result of the analysis of accrued material.

Plans for the next year contemplate emphasis on the gathering of control data, the possible establishment of a ward exclusively for therapuetic purposes and projects directed toward evaluation of autonomic efficiency in these patients. Sufficient work has been done on the psychiatric evaluation of various traits of the patients to tell us which traits can be quantitated. This information is of vital interest. The accumulation of such data is tremendously time-consuming and requires a greater personnel than we have available to carry on as far as we would wish. Work on this project will be continued, however. It is hoped that hormonal assays on the blood may be carried out on a systematic basis. Other plans for the year are alluded to in the body of the report.

Research activities of the hospital are in no sense limited to the research service. During the year, Dr. Perkins has continued his investigations of the physiological effects of diathermy in the treatment of dementia paralytica, Dr. Yorshis his studies on blood groups in schizophrenic patients and their relatives, Dr. Emch her work on menstrual abnormalities in psychotic women, Dr. Levine on special neurological and endocrine case studies.

It would be emphasized that the personnel of the research service is both anxious and willing to be of assistance to the other services in planning new projects, providing special facilities which may be available and helping staff members to avoid mistakes which have been made on the research service in investigations.

Research Service Psychological Laboratory

David Shakow, *Director.*

In general the department went along the even tenor of its way except that more time was given this year to analysis as opposed to the accumulation of data.

As an inevitable result of the policy of using the hospital as a training center, the year saw numerous changes in the personnel. Miss Rosaline Goldman, a graduate of the Worcester State Teachers' College, came in December as externe. Miss Judith Israelite, M.A., of Columbia and the Judge Baker Foundation, came as interne in February and stayed through August. She has since gone to the Caswell Training School at North Carolina as psychologist. Miss Marjorie Page left in July to continue her graduate work and take a position at the Iowa Psychopathic Hospital. Miss Marion Greenham, M.A., (University of Minnesota) came as interne in July. Messrs. Irving Knickerbocker and Douglas MacGregor of Harvard came for special experiment work during the summer, as did Mr. Lorrin Riggs of Dartmouth.

In September there were a number of changes. Dr. Braly and the Misses Merrick Bail and Spessard left; Miss Bail for the position of psychometrist at Foxorough State Hospital, Miss Spessard for a position in Virginia, and Dr. Braly for a position at the University of Minnesota. Miss Margaret Gifford of Wellesley and the Harvard School of Education and Miss Jennie Kauffman from Cornell came to take two of the positions thus vacated.

A statistical analysis of the work done by the Department shows the following.

Psychometrics and Interviews

House:	*Individuals*	*Tests*
Regular patients	299	1,050
Schizophrenia research	138*	759
Other special groups	88	352
	525	2,161
Out-Patient Department:		
Child Guidance clinic:		
Regular patients	219	1,095
Special disability and other therapeutic interviews	60	1,256**
School clinic	296	888
Girls' Welfare Society	18	72
Jail	32	126
Other	7	38
Employees	191	503
	823	3,978
Experimental and Other Research		
Patients	510	1,525
Normals	305	706
	815	2,231
Grand Total	2,163	8,370

*Includes repeated examinations on the same individual.
**Interviews or sessions.

Among the research projects completed during the year are the following:

1. Study of psychological "condition" in schizophrenia and normal controls by means of the Miles pursuitmeter.
2. Oscillographic study of the patellar tendon reflex in schizophrenia and normal controls.
3. Reaction-time under varying preparatory intervals in schizophrenia.
4. The Kent-Rosanoff association test in schizophrenia.
5. Simple auditory and simple and choice visual reaction time in schizophrenia and normal controls.

Some of the major projects still in progress are:

1. The response of schizophrenic patients to the interruption of presented tasks.
2. The response of schizophrenic patients to substituted activities.
3. Memory in psychotic subjects — particularly in schizophrenia.
4. The psychological stiuation of a patient in a mental hospital.

II. The progress of hospitalization.

Two papers are about ready for publication:

1. A study of hypnotically-induced complexes by means of the Luria technic.
2. The response of newly-admitted patients to Dr. Bryan's informational letter to them.

One paper has been accepted for publication by the Archives of Neurology and Psychiatry — "The Sensory Threshold to Current Stimulation in Schizophrenic and Normal Subjects."

Some of the papers in an advanced stage of writing which should be submitted during the course of the year are:

1. A series on motor and learning phenomena in schizophrenia, based on studies with the prodmeter, the pursuitmeter, and the steadiness meter.
2. "Scatter" in the Stanford-Binet in schizophrenia.
3. Psychomotor learning as measured by the Ferguson V and the Worcester 2C Formboards.
4. The psychological situation of patients in a mental hospital. I. First contacts with the hospital and the different types of response to it.

Papers published, based on work done at Smith College, by members of the department during the year are the following:

1. Hanfmann, E.: Some experiments in spatial position as a factor in children's perception and reproduction of simple figures. Psychol. Forsch. 17, 1933.
2. Hanfmann, E. and Dembo, T.: Intuitive halving and doubling of figures. Psychol. Forsch. 17, 1933.

In the course of the year the following papers were read at meetings:

1. Houston, P. E. — A study of hypnotically-induced complexes by means of the Luria technic. American Psychological Assn., (Ithaca), Sept. 1933.
2. Houston, P. E. — A Study of hypnotically-induced complexes by means of the Luria technic. Harvard Psychological Colloquium, December 1933.
3. Huston, P. E. — A study of hypnotically-induced complexes by means of the Luria technic. Massachusetts Psychiatric Assn., December, 1933.
4. Rickers, M. — The response of schizophrenic patients in a "free" situation. American Psychological Assn., (Ithaca), September, 1933.
5. Rickers, M. — The Lewin theory of feeblemindedness. Harvard Psychological Clinic, February, 1933.
6. Rickers, M. — The response of normal subjects in a "free situation" Harvard Psychological Clinic, July, 1933.
7. Hanfmann, E. — Theory of Association. Harvard Psychological Clinic, February, 1933.

Considerable new apparatus was developed during the year largely because of the aid of the mechanic made available to the Research Service. Among these might be mentioned, a modification of the Miles pursuitmeter, a new reaction-time apparatus, the completion of the oscillograph, and a multiple choice apparatus.

During the course of the year two seminar courses were held — one for department members and the other made available for the hospital staff. In the first, meetings were held weekly from November through February. At regular meetings members of the department presented reports on their research projects. At special meetings outside speakers were invited to discuss some psychological subject of interest. Among the outside speakers were Doctor Wells, Willoughby, Hunter, and Hoagland. The other seminar held was in the nature of a course on "Mental Adjustments" given by Dr. F. L. Wells of the Boston Psychopathic Hospital. This consisted of two-hour sessions held once a week during March and April.

Plans for the coming year involve primarily the analysis of the immense body of material collected in our work for the past years. However, because of the promise of a number of our experimental studies, we are planning particularly to continue some of them. These include various aspects of learning in schizophrenia; the Luria studies on the nature of conflict, especially in patients; the mental status studies; and various of the Lewing studies.

Research Service — Biochemistry and Pathology

Joseph M. Looney, M.D. — *Director of Laboratories.*

As will be seen from the attached summary, the total number of tests performed in the laboratory for the past year has been maintained at a high level — a total of 48,830 as compared with a total last year of 49,611.

The work of installing a new refrigerator in the mortuary was completed early in January. This unit has proven of inestimable value throughout the year, and is of ample size to care for all our routine requirements. In order to complete the renovation of the pathology department, a new autopsy table is necessary, as the present one is in very poor condition.

The training course in laboratory technique has been continued, and a new student has been admitted to replace one of the girls who had completed the work and secured employment. Mr. H. O. Carlson, who served as a volunteer assistant in the laboratory, left in September, and has since secured employment as a chemist.

Dr. S. R. Feldman, pathological interne, resigned on June 1 to enter private practice in Springfield. His place has been taken by Dr. J. C. Drooker who will serve as pathological interne for six months while awaiting his general internship at the Boston City Hospital.

During the summer the same policy of admitting medical students to work in the laboratories has been followed out and this year two students from Boston University Medical School worked in the pathology department and one student

from Harvard Medical School, and one from John Hopkins Medical School worked in the Chemical Department.

The instruction to the student nurses in bacteriology, pathology and chemistry by Dr. Freeman and myself has been carried out as usual. The pathological conferences, which are held monthly, have proven to be both profitable and instructive.

During the year the name of Dr. Freeman was added to the list of specialists in the field of clinical pathology approved by the American Medical Association. It might be noted that of the four physicians residing in Worcester on the list two are on the staff of this hospital.

The total number of autopsies performed during the year amounted to 165, which is 74% of total of 233 deaths which occurred during the year. This is a most excellent record and is due to the close cooperation between the medical service, and the pathologist. These were attended by 1,061 visits from members of the medical staff, and 1,033 visits from among the medical students, or an average attendance of 13 per autopsy.

The director attended the annual convention of the American Society of Biological Chemists in Cincinnati, Ohio in April and presented a paper on "The Effect of the Ingestion of Tyrosine on the Blood Phenols and Blood Uric Acid as Determined by the Methods of Folin and Benedict." This was published in the June number of the Journal of Biological Chemistry.

In March he gave an address to the Knights of Columbus in Somerville, Massachusetts, on "What the State is doing for its insane."

Dr. Freeman has continued his connection with the Boston University School of Medicine as instructor in the Department of Pathology. He also presented two papers during the year; the first entitled, "Bone Marrow Studies in Primary Blood Dyscrasias" was given at a staff meeting of the Worcester Hahnemann Hospital in April, and the second before the annual cancer clinic of the Worcester District Medical Society on "Grading the Degree of Malignancy of Cancerous Tumors in Relation to Prognosis and Treatment" in September.

In addition the following papers have either been published or accepted for publication during the year.

Pathologist's Duty in Obtaining Permission for Autopsy. Am. Journ. Clinical Pathology, 3, 211, 1933. William Freeman.

Preparation and Use of Colloidal Carbon Solutions. J. M. Looney and F. C. Stratton. Accepted by Jour. Lab. and Clinical Medicine.

A Comparison of the Methods for the Collection of Blood to be Used in the Determination of Gases. J. M. Looney and H. Childs. Accepted by J. Biol. Chem.

Bone Marrow Studies in Primary Blood Dyscrasias. William Freeman. Staff of Worcester Hahnemann Hospital.

Grading the Degree of Malignancy of Cancer Tumors with its relation to the Prognosis and Treatment. Read before the Annual Cancer Clinic of the Worcester District Medical Society.

A number of other papers have been completed and are ready for publication.

The research work has progressed satisfactorily; during the year definite indications for future studies have crystallized out of the completed investigations.

It is hoped that future investigations will proceed along the line of therapy and a number of substances have been or are in the process of being utilized for such studies.

Total Number of Examinations

Bacterial cultures	249	Androitin test	12
Bacterial smears	287	Urine (bacteriology)	16
Basal metabolisms	1,084	Glucose tolerance	10
Blood cultures	50	Blood gases	485
Blood creatinine	1,576	Blood sedimentation	29
Blood N.P.N.	1,626	Pituitary hormone	7
Blood sugars	2,210	Blood lactic acid	448
Blood urea	1,579	Luminescent bacteria	175
Blood uric acid	1,638	Blood glutathione	624
Blood counts	2,802	Stomach contents	94
Blood counts (W)	4,420	Blood fragility	103
Blood counts (D)	3,556	Blood P.H.	104

Haemoglobins	4,329	Dopa Stains	34
Clotting time	119	Gastric lavage	1
Galactose tolerance	186	Blood pressures	242
Icteric index	240	Fluid (hydrocele)	1
Mosenthal tests	335	Urine (prolan)	54
Nitrogen partitions	1,056	Blood (prolan)	56
Plasmodia malaria	3	Blood oestrin	28
Renal function	195	Urine oestrin	51
Spinal fluids (cells)	372	Manganese analysis	2
Spinal fluids (gold)	370	Stool (fat contents)	10
Spinal fluid (chlor.)	369	Stool (creatinine)	1
Spinal fluid (diff.)	19	Acid analysis	1
Spinal fluid (glob.)	371	Toxicological exam.	8
Spinal fluid (sugar)	370	Vomitus	4
Spinal fluid (prot.)	371	Enema exam	1
Stools	534	Peroxidase stain	6
Sputa	614	Cranial fluid (prot.)	1
Tissue sections	3,576	Cranial fluid (chlor.)	1
Urines (routine)	7,859	Blood clot retractibility	3
VandenBergh tests	172	Spinal fluid culture	2
Vital capacity	459	Fluid (wound)	1
Widals	15	Blood sp. gravity	28
Bleeding time	14	Ascitic fluid	34
Urines (quant. sugar)	342	Platelet fragility	2
Milk analysis	141	Water analysis	3
Blood typing	12	Blood serum protein	2
Fluid (pleura)	1	Exudate (leg)	1
Ascheim-Zondek test	19	Animal inoculation	3
Blood phophorus	10	Urine (urobilen)	148
Blood calcium	18	Urine (urobilinogen)	148
Fluid (abdomen)	4	Phytotoxic index	2
Blood chloride	7	Liver function test	8
Colonic irrigations	372	Blood phenol	6
Platelet count	43	Blood tyrosine	3
Reticulocyte count	42	Urine phenol	6
Blood amino acids	63	Urine tyrosine	3
Blood cholesterols	484	Urine hematin	9
Blood creatine	63	McClure's tests	4
Blood volumes	44	Urine music acid	36
Schilling's indices	393	Milk P.H.	20
Blood hematocrits	210	Stool (tot. nitrogen)	1
Water metabolism	298	Stool (tot. solids)	1
Stool (lead)	1	Stool (saline suspension)	2
Urine (lead)	1	Stool (broth suspension)	2
Fluid (abscess)	1	Fluid (gland)	1
Autopsies	165	Total of Other examinations	48,665
Grand Total			48,830

Research Service — Medical Library

George L. Banay, Ph.D., *Librarian.*

Medical Library

The past year represents a year of marked expansion in the history of the medical library. The increase in the number of our periodicals, our policy of immediate binding, the exchanges received from the Medical Library Association, and the reorganization of our reference library necessitated the installation of new shelves in the Library. By putting in twelve new racks (some of them especially adapted for the display of periodicals) we increased the shelf-room capacity about 50%. The new floor and desk lamps in the reading room enhance the attractiveness of the reading-room considerably. But, because at the end of the year almost all of the additional shelf-room has been used up, the necessity of increasing the facilities of the medical library is as great as ever.

To indicate the increased activities and the progress in the development of the library, I quote the following details:

Periodicals: The medical library had 11 more journals than last year. We now have 26 periodicals in neurology, psychiatry and mental hygiene; 17 in psychology and psychoanalysis; 16 in general medicine, 19 in internal medicine, surgery, obstetrics and pathology; 8 in physiology and chemistry; 5 in physical medicine and radiology; 1 in legal medicine; 2 in hospital administration; 5 in social service; 1 in occupational therapy; 2 in nursing; 9 in education and child guidance; altogether 105 periodicals.

Of this number the hospital subscribes to 78: 2 are paid for by the Foundation for Neuro-Endocrine Research, 13 are donated by Dr. Hoskins, 2 by Dr. Sleeper, 1 by Dr. Perkins, 2 by Dr. Carmichael, 1 by Dr. Erickson, and 6 come in free from State and Federal authorities and medical supply companies.

Of these periodicals six are in French, seven in German, five in Italian, and 87 in English.

Circulation. The Medical Library circulated 483 volumes last year.

Inter-Library Loans. The Librarian maintained close contact with other medical libraries and we borrowed 217 volumes of periodicals from 8 libraries, that is: Boston Medical Library, 138; New York Academy of Medicine, 26; Clark Univeristy Library, 21; Army Medical Library, 13; Harvard College Library, 11; Providence Public Library, 5; Harvard Medical Library, 2; Iowa State College Library, 1.

Medical Library Exchange. Continuing our policy of completing the back files of our medical periodicals, we were able to complete many items during the year either by purchase from second-hand dealers or by exchange from other libraries. (Boston Medical and Surgical Journal, Medical Clinics of North America, and others.) As a member of the Medical Library Association, we received 92 volumes and we gave in exchange 38 volumes to 27 medical libraries. The Association is of the greatest benefit to all medical libraries in helping to shape a general policy for the administration and care of the medical libraries and by maintaining the exchange. The librarian attended the annual convention of the association held in Chicago, June 19-21, 1933.

Dr. William J. Delahanty donated to us about 60 volumes of old medical periodicals to be used for exchange. Dr. Looney presented to us 35 volumes of chemical periodicals.

New Books. We have received 16 books as donations from various members of the Staff. Besides this, we bought 123 new volumes to bring our reference library more up-to-date.

Binding. We bound 589 volumes during the year, including the ones received from the exchange, so that we are up-to-date now with our binding.

Present State. By November 30, 1933 the medical library had 2,809 bound volumes of periodicals, 62 unbound volumes of periodicals, and 2,254 volumes of books. Total, 5,125 volumes, not counting the reprints and the pamphlets, an increase of 728 volumes during the year.

Services. The librarian continued to circulate the weekly bibliography and abstracts, prepared many special bibliographies, and translated about 60 foreign medical articles.

After circulation the abstracts are returned to the medical library and are classified under subject headings. We now have about 2,000 abstracts on file.

Plans for the Future. A great many of our books are old and have only historical value. As soon as there is more shelf-room available it is intended to separate the volumes of historical interest and make a special historical collection in glass-doored book-cases.

Cooperating with the department of research, we intend to compile a complete bibliography of schizophrenia and abstract all the important articles as soon as we can afford to have permanent help in the medical library.

II. General Library

The number of books in the library has been increased by many donations and purchases. The general library now has 3,663 books and takes about 40 current magazines and newspapers. One-third of the books are fiction, the rest religion, history, biography and poetry. One hundred seventy-five new books (mostly light fiction) were added to the library to bring it as much up-to-date as possible.

The library is well patronized by patients and employees. The average monthly attendance is 1,500 patients, and 300 employees. The circulation of books and magazines is gratifying. Here are the mean monthly figures.

Books and magazines taken out	598
Books and magazines distributed on the wards	200

Besides this, the library borrows 150 books every three months from the Worcester Public Library to circulate among the patients and employees.

We maintained the five sub-branches on the closed wards as before (Lincoln I, Washburn I, Salisbury I, Summer Street Department and Hillside Farm.) The occupational therapy department cooperated with us in the most helpful way by taking books and magazines to the patients regularly, as they know their wishes better than anybody else.

All in all, the library circulated 7,180 volumes last year and had 21,752 reading visitors.

A few churches of Worcester (First Church of Christ. Scientist, St. John's Episcopal Church, All Saints' Church) and the Worcester Public Library send to us old books and magazines regularly, so we received during the year about 500 books and 1,500 magazines. We express our hearty thanks to all who have given books and magazines to the library.

After long years of faithful service, Miss Cushing, the patient in charge of the general library, died at the end of the year, and shortly afterwards her successor, Miss Garbitt, too. Their deaths upset the routine work of the library for a period until we again found suitable personnel.

Outpatient Service — Child Guidance Clinic

S. H. Hartwell, M.D., *Director.*

		Boys	Girls	Total
I.	Report of Case Load:			
A.	*Carried Cases:*			
1.	Cases carried over from last year			452
2.	Intake a. New cases accepted	146	55	201
	b. Old cases reopened:			
	(1) last closed before present year	5	3	8
	(2) last closed within present year	1	–	1
3.	Total cases open at sometime in this year			662
4.	Cases taken from service	116	70	186
5.	Cases carried forward to next year			476
B.	Closed cases followed up (not reopened)			31
C.	Applications rejected			10
D.	Withdrawn cases			29
II.	Type of Service Classification:			
A.	*New Accepted Cases:*			
6.	Full service a. Clinic staff cases			96
	b. Cooperative cases			42
	c. Full service cases not (a) or (b)			35
7.	Special service			31
8.	Mental health study			6
9.	Total new cases accepted			210
B.	*Total Cases Open at Sometime in this Month:*			
10.	Full service a. Clinic Staff cases			427
	b. Cooperative cases			110
	c. Full service cases not (a) or (b)			68
11.	Special service			50
12.	Mental health study			7
13.	Total cases open at sometime this year			662
C.	*Cases Taken from Service:*			
14.	Full service a. Clinic staff cases			87
	b. Cooperative cases			48
	c. Full service cases not (a) or (b)			21
15.	Special service			26
16.	Mental health study			2
17.	Total cases taken from service			186

III. Sources Referring New Accepted Cases:

		Full	Special	Mental Health	Total
18. Agencies	a. Social	43	13	–	56
	b. Medical	5	1	1	7
19. Schools	a. Public	18	4	–	22
20. Juvenile court		66			66
21. Private physicians		1	7	4	12
22. Parents and relatives		40	6	1	47
23. Total new cases accepted		173	31	6	210

IV. Summary of Work With or About Patients:

		Total
A. *By Psychiatrists:*		
1. Interviews with patients	a. for examination	201
	b. for treatment	1,159
2. Interviews about patients		318
3. Physical examination by clinic staff members		193
B. *By Psychologists:*		
1. Interviews with patients	a. for examination	197
	b. for re-examination	30
	c. for treatment	492
2. Interviews about patients		86
C. *By Social Worker:*		
1. Interviews in clinic		961
2. Interviews outside clinic		1,521
3. Telephone calls		1,325
D. *Number of Cases given Initial Staff Conference:*		
1. Full service	a. Clinic staff cases	72
	b. Cooperative cases	83
2. Special service		57
3. Mental Health study		7

V. Personnel Report: (Average staff during year)

		Full Time	Part time
A. *Regular Staff:*	a. Psychiatrists	2–3	1
	b. Psychologists	3	
	c. Social workers	3	
	d. Clerical workers	2	
B. *Staff in Training:*	a. Psychiatrists	1	
	b. Social workers	2	
C. *Volunteers:*	a. Clerical workers	–	1–2
	b. Research		1

VI. Operating Schedule:

A. Schedule of clinic days and hours:
9:00 to 5:00 daily
9:00 to 12:00 Saturdays.

B. Schedule of attendance of psychiatrists:
9:00 to 5:00 daily.
9:00 to 12:00 Saturday.

Cases Carried Over from Last Year

At the beginning of the year 1933, we were carrying 452 open cases. Approximately 50% of these cases were cases that were in the stage of active treatment. By this is meant that the children, as the patients, or their parents, or other important people in their lives, were being seen by some member of the staff for interviews or other contacts regularly and frequently. Most of the cases represented by the other 50% of this group are cases which have been active in the clinic for two or three years, and are held open because the child or his parents still occasionally wish to come to the clinic or to see the workers. Some of these children or their parents need very definite psychiatric advice and help occasionally. Others wish to have the contact continued because of the fact that they have been helped and get security from knowing that the staff members are still their friends, and are

people who can appreciate their successes and adjustments. The year 1934 opens with 476 open cases. This slight increase is very gratifying since it means that the staff is now at least carrying the same volume of work that it did a year ago despite the fact that the average size of the staff throughout the year has been somewhat smaller than it was the year previous.

By comparing the average case load which is 450 and dividing by the average number of cases received during any year, one sees the average time a child is carried as a treatment case in the clinic is two years.

Intake

The total number of new cases accepted during the year was 201, and 9 cases were reopened. This last item requires considerable explanation. It is the policy of the clinic to consider three points when accepting cases. There are many more cases that are (in one way or another) referred to the clinic than is represented by the figure of those accepted. When parents or agencies ask to have a child accepted by the clinic, the first thing that is done is to have the parents or the agency worker come to the clinic, with the child's record, if one is available, and discuss the problem with our chief social worker or her assistant.

Three factors are weighed when the case is being considered for acceptance by the clinic:

First. Does the child or its parents need the kind of service which we offer? In other words, is a part of the problem based on the mental health, the personality, the emotional experiences or attitudes of the various people in the family situation, who are accountable for a considerable part of the problem?

Second. Is the child's environmental situation such that, if these problems are dealt with, the child or his parents can benefit by a change in their mental life; or can our social worker, or in agency cases their social work, change the environmental situation, if it is so pernicious or abnormal that the clinic treatment alone could not be expected to accomplish results?

Third. Is the need for help that a child guidance or mental hygiene clinic can bring great enough to warrant the making of a full study, conducted as it always is in our clinic, with the idea that treatment will probably be necessary?

When the answer to any of these three questions is definitely in the negative the case is not at that time accepted for study and treatment in the clinic. However, the clinic does give service to the unaccepted cases during the referral interviews. For the first group we attempt to help the parents or others referring the child to see what the problem is, and often can give advice, such as environmental changes or methods of dealing with the child in habit training or disciplining, which if carried out will solve or partly solve the problem. The second group, those where in our opinion the situation is too pernicious and too undesirable for successful treatment, we can often refer the case to some other agency such as a child placing agency or the S. P. C. C., where the problem may be more constructively dealt with. Quite frequently, such cases come back to us later and are accepted. In the third group, those in which the problem is comparatively simple, we are very often able to do as much for the child in one or two interviews with the parents, as we would were the child to be accepted for full study and treatment, thus avoiding unnecessary work and use of the time of various members of the staff. Notes of these interviews are kept. Quite frequently the referring person comes back later for further advice. Sometimes the cases is accepted later, and these notes are very useful to us. They do not appear in the statistical report of our work although they do represent in our opinion a considerable part of the actual constructive work we do.

As will be seen later in the report, we deal with a large number of agencies. We accept all the cases referred to us from a very few of these agencies. Chief among them we should mention the juvenile courts. Because of the law requiring a compulsory examination of all children before being committed as wayward or delinquent, and since the Child Guidance Clinic is the only agency at present equipped to make this examination in this community, it is necessary for us to do this. The small group of cases with whom we have no opportunity to do a thorough study or treatment, because of the fact that they are to be committed no matter what advice we give, are the most unsatisfactory group of cases with which we deal.

None of these come from the Worcester Juvenile Court where the judge and probation officers are always ready to continue a case or put the child on probation if we say at the time of the initial examination that we think the case may be dealt with through clinic and probation treatment, or placing by a child placing agency. Some of the outlying courts do not take this attitude. Cases referred by child placing and family welfare agencies are all accepted. These agencies have trained workers who can be relied on to use excellent judgment as to whether or not the case is an appropriate one for us.

Old Cases Reopened:

The number of old cases reopened is small. This is accounted for by the fact that it is the policy of the clinic not to close a case if we feel that the child or the parents would like to have occasional contacts with us, even if in the ordinary meaning the case has been adjusted successfully. This policy decreases the number of new cases that may be accepted, but we feel that a very definite part of our goal should be the understanding of the results, whether they are good or whether the case ends in failure, by the people who have worked with the case. In the last analysis, unless we can come to this understanding we are not progressing in technique nor will we be helped to establish or discredit any ideas that preventative psychiatry is advancing.

The clinic is particularly interested in a group of children who have been considered psychotic or borderline psychotic, and whom we have been able to handle as treatment cases. The results of treatment in some of these cases have been extremely satisfactory but we feel they present a special problem for the clinic since they must be observed carefully over a long period, even though they seemingly are now well adjusted.

Recommendations

The usual repairs to the operating plant have been carried out during the year insofar as our limited appropriations would permit. Because of economic conditions during the past few years, the amount of money for the maintenance and upkeep of the buildings has been inadequate. Our buildings are old and require an ever increasing amount of money to keep them in good condition. Necessary repairs have piled up to the point where a considerable amount is needed to restore the hospital to its former condition of efficiency. The roofs and windows are in need of a considerable outlay to prevent waste of coal and to keep out the weather. There are many changes and alterations that need to be made to bring the buildings up to the point where patients can be properly treated in them. For after all, all construction must be thought of in terms of patients. To spend great amounts of money on changes in buildings to modernize them simply to house patients is one thing but to modernize old buildings in order to improve treatment facilities which in turn lead to the recovery of more patients, is another. Some of the changes recommended deal directly with the recovery of patients and others lead to increase efficiency on the business side of the institution and of course indirectly to the recovery of patients. In the first group of needed changes — those which have a direct bearing on the recovery rate of patients the following may be noted:

Cafeteria Equipment for the Quinby, Woodward, Washburn and Salisbury Wards

On each side of the hospital there are from 75 to 100 patients who are disturbed, noisy and untidy and cannot be taken to the regular cafeteria for obvious reasons. For this group and also to supply tray service for the two admission wards, cafeteria equipment is needed for a small dining room on each side. Any rearrangement which will permit closer supervision and the service of better food of greater variety and proper temperature will not only assist in getting patients well but will actually save money by eliminating waste.

Changes in the Thayer and Folsom Wards:

The Thayers and Folsoms are the medical and surgical wards of the hospital. They are ideal, in many ways, for this purpose. They permit proper classification and are easy of access for administrative purposes. But they are not performing their functions properly until certain changes are made so that better care and treatment may be given patients. One of the important needs on these wards is a passenger elevator in which patients may be transferred from one floor to another with the least possible delay. Patients must be transported to and from the

operating suite for surgery and it is difficult to do this efficiently without elevators.

The food service on these wards is not only inefficient but is very wasteful. It is impossible to prepare special diets for physically ill patients or for those who need extra nourishment and get it to them in a palatable condition. Unpalatable food always makes waste. If each diet kitchen could be moved to the basement under the wards it served, all trays could be prepared under direct supervision and sent directly to the ward by a subveyor system. All food would be taken off the wards and all dishwashing would be removed to the diet kitchen. The result of these changes would be that the patients would get better food and with the elimination of the waste we now have with our present system money could be saved.

Installation of A Cafeteria at the Summer Street Department

This is a much needed change which would both benefit patients and save money. There are 500 patients at this department. They are served in two dining rooms, one for men and one for women. These rooms are in the basement and are in a very bad state of repair. It would be a great improvement if one cafeteria could be installed in the center of the building, serving both men and women. Such central food service would permit us to give a greater variety, serve the food in a more palatable condition and thus lead directly to an actual saving of money.

Installation of Surgical Equipment for Folsom and Thayer Wards

A glance at the medical and surgical section of this report will at once show how important this need is. We do not have the proper equipment for taking care of our physically ill patients. We need more sterilizers, more utensils such as bed pans, blanket warmers, Gatch beds, bedside tables, chart holders and other important articles for the efficient care of the sick.

Men and Women's Bath Houses

The bathing facilities at this hospital consists of one central bath house which is used on alternate days by both sexes. It is located some distance from the wards and it is necessary to take the patients out of doors to bathe them. This is a decided hardship at any time but in the winter it is positive cruelty. This condition should be remedied at once by the erection, on each side, of a combined general bathing and tonic and sedative bathhouse, which will be connected with the main building. A central bath suite for each sex permits better supervision and more frequent bathing than will equipment on each ward.

Conversion of the Roofs of the Woodward and Quinby Wards into Tubercular Wards.

This could be done with very little expense. The roofs are now used for patients to walk about on but they would be much more useful if they could be used for tubercular patients where they could receive the maximum amount of air and sunshine. This would give additional accommodations for about fifty patients on both wards.

Acoustical Treatment of Patient's Cafeteria and Chapel.

When the present cafeteria was built, the treatment of walls by acoustical material was not as far advanced as it is today. The result is that the cafeteria is noisy. In many ways this noise affects patients and nullifies the good therapeutic affect the dining room has.

The installation of sound picture equipment makes it absolutely essential that something be done to deaden the echos in the amusement hall. The maximum amount of therapeutic affect cannot be attained until better acoustics are secured.

Tunnel to Patient's Cafeteria

The present route followed by male patients to and from the dining room is not satisfactory. They travel the same route that service carts use in delivering supplies to the wards. The employees use the same corridor to go to their dining room. This crossing of traffic is very unsatisfactory and at slight expense a tunnel could be built leading from the Lincoln wards to the sub-basement near the cafeteria.

Patients' Exercise Yard

This is a badly needed improvement which will permit disturbed patients to spend most of their time out of doors in good weather with a minimum amount of supervision. Occupations can be carried on in this yard, playground apparatus can be installed and much benefit can be accomplished for the women who are on continued treatment wards. This yard would be exclusively for women.

Alterations to Farmhouse

The building which is commonly known as the farmhouse is in a bad state of repair. It now houses thirty patients who would be more comfortable at the main building. This building could be converted into a staff and employees' home at little expense and this would take care of the crowded situation among employees and physicians which is not conducive to good work. It would also enable us to get badly needed additional room for our surgical and treatment suite and permit physicians to give better care to the patients coming there for treatment. An examination of the surgical report will reveal how badly this room is needed.

In the second group of much needed improvements which would add to the business efficiency of the hospital I list the following:

New Engines — Main Hospital

The light and power of the hospital is supplied by three old Ames engines directly connected to generators of the direct current type. These engines are over 30 years old and they use an excessive amount of steam for the power they deliver. Because of their age it is difficult to get repair parts for them. The generators are worn, the insulation is brittle and the commutators have been turned down many times. We are limited on production because of the decreased capacity of the generators. The Commonwealth would save money if this old equipment were replaced by two large unit generators each capable of carrying the entire load and one small unit which could carry a small load.

New Engines — Summer Street

The engines at the Summer Street Department are 33 years old. They have had hard service. The current shaft of the small engine is sprung and the connecting ring of the large unit should be replaced. The generators are in poor condition. The commutator on the small engine has been turned down many times and the generator on the large engine has been damaged by lightning. They should be replaced by two new 50 horse power machines directly connected to generators.

New Laundry

The laundry building at this hospital is a menace to patients and employees both from the standpoint of fire hazard and health. It is a single large room located on the first floor of a two story building, dark and without any ventilation except from the windows. Part of the room is one story with a tar and gravel roof and skylight. This latter condenses the steam as fast as it rises and in the winter it falls back into the room in a deluge. It is absolutely inhuman to require either employees or patients to be in any room where such conditions prevail.

Alterations in Present Laundry Building for Proper Storage Facilities

The facilities at this hospital for the storage of goods is entirely inadequate. The store rooms are in separate rooms in the basement. They are scattered, and hard to supervise. Improper ventilation, dampness and darkness make it impossible for the hospital to properly take care of the considerable stock of goods we must carry at all times. The present laundry building would make an ideal storehouse. It is located in the center of the institution, easily accessible to all parts and adequate for all our needs.

Renovation of "Strawbarn"

The old barn which is locally known as the "strawbarn" from the fact that it was used many years ago for the storage of straw to fill the straw ticks upon which the patients slept, is now used for the storage of plumbers and engineers supplies. It could easily be transformed into an excellent industrial building where industrial therapy can be given to male patients under conditions that are much more comfortable than is the case at the present time.

Renovation of Toilets in Nurses and Attendants Home

The toilets in both the attendants and nurses homes are obsolete, unsanitary and entirely inadequate to the number of people who are housed in these structures. The Board of Registration of Nurses requires one toilet and one lavatory for every six nurses, and one shower or tub for each ten nurses. We are not able to comply with these requirements at the present time. This project contemplates only the replacement of unsanitary, obsolete fixtures for more modern ones. The structural changes necessary to enable us to install these additional fixtures are not extensive.

Repaving Main Avenue and Adjoining Roads

The condition of the Worcester State Hospital roads is disgraceful. These roads have good bases and when originally built it was contemplated that surfacing would be carried out later. This has never been done. The result is that the roads are rutty, uneven, and some of them washed out by rain storms. This project contemplates new curbing, a gutter on each side and a properly surfaced road.

Completion of Cow Barn

Two years ago we completed a new barn of the pen type and the results of this experimental barn have been such as to justify the completion of the project as it was worked out before the present wing was built. This would include other wings to the barn and also the erection of a new horse barn. This latter is particularly important because our present wooden structure, which was here when the hospital was built, is in a state of extreme dilapidation and will not last very much longer. It does not seem to be good business procedure to keep valuable horses in a structure of this kind. These changes should also include very important changes in our facilities for vegetable storing which are entirely inadequate at this hospital.

It is obvious that all of these changes cannot be made at one time but a portion of the work could be done each year and it would not take many years to get this hospital in first class condition. I have included these specific matters in this report in order to make it perfectly clear that in my opinion an attempt should be made to begin the modernization at a very early date. The reason for this modernization is that it will enable us to be more efficient in the care and treatment of patients and as a result of increased efficiency I firmly believe that more patients could be discharged from the hospital.

Words are quite inadequate to express my feelings of gratitude toward the Board of Trustees and the officers and employees of this hospital for their constant support and cooperation during this strenuous period. Members of the Board have been unfailing in their encouragement and support and I am deeply grateful for this. The officers and employees have worked diligently and to a common end towards the progress of the hospital and it is with much pleasure that I make this public acknowledgement to both of these groups.

Respectfully submitted,
WILLIAM A. BRYAN,
Superintendent.

VALUATION

November 30, 1933

Real Estate	
Land, 589.16 acres	$467,130.00
Buildings	2,042,646.68
	$2,509,776.68
Personal Property	
Travel, transportation and office expenses	$7,950.87
Food	12,590.12
Clothing and materials	27,401.05
Furnishings and household supplies	274,990.24
Medical and general care	55,738.54
Heat and other plant operation	3,845.53
Farm	57,697.15
Garage and grounds	12,284.17
Repairs	17,216.54
	$469,714.21
Summary	
Real estate	$2,509,776.68
Personal property	469,714.21
	$2,979,490.89

FINANCIAL REPORT

To the Department of Mental Diseases:

I respectfully submit the following report of the finances of this institution for the fiscal year ending November 30, 1933.

STATEMENT OF EARNINGS

Board of patients	$74,665.22
Personal Services:	
Reimbursement from Board of Retirement	263.14

Sales:		
Food	$1,393.62	
Clothing and materials	149.80	
Furn. and household supplies	21.12	
Medical and general care	204.71	
Heat and other plant operation	63.50	
Garage and grounds	2.50	
Repairs ordinary	154.95	
Repairs and renewals	–	
Arts and Crafts sales	–	
Misc. — junk	–	
Farm (itemize) Cows and calves $142.04; hides, $21.71; vegetables, $2.03; sundries, $3.00	168.78	
Total Sales		$2,158.98
Miscellaneous: —		
Interest on bank balances	$335.68	
Rents	906.97	
Sundries	52.80	
Total, miscellaneous		$1,295.45
Total Earnings for the year		$78,382.79
MAINTENANCE APPROPRIATION		
Balance from previous year, brought forward		$39,941.10
Appropriation, current year		707,800.00
Total		$747,741.10
Expenditures as follows:		
1. Personal services	$394,038.31	
2. Food	106,079.36	
3. Medical and general care	29,040.96	
4. Religious instruction	2,446.00	
5. Farm	22,888.56	
6. Heat and other plant operation	82,717.58	
7. Travel, transportation and office expenses	9,086.32	
8. Garage and grounds	5,841.69	
9. Clothing and materials	13,615.61	
10. Furnishings and household supplies	25,259.15	
11. Repairs ordinary	13,372.21	
12. Repairs and renewals	2,456.49	
Total Maintenance expenditures		$706,842.24
Balance of Maintenance appropriation, Nov. 30, 1933		$40,898.86
SPECIAL APPROPRIATIONS		
Balance December 1, 1932, brought forward		$285.95
Appropriations for current year		41,000.00
Total		$41,285.95
Expended during the year (see statement below)	$32,808.23	
Reverting to Treasury of Commonwealth	*119.57	
(Star balances below that are reverting)		32,927.80
Balance November 30, 1933, carried to next year		$8,358.15

APPROPRIATION	Act or Resolve Ch. Year	Amount Appro-priated	Expended during Fiscal Year	Total Expended to Date	Balance at end of Year
Officers' Cottages, 1929	146–1929 245–1931	$19,000.00	–	$18,999.49	$.51*
Equipment for dairy					
Equipment for cow barn	14–1931	20,000.00	–	19,957.58	42.42*
Renovating heating system	245–1931	12,000.00	–	11,954.44	45.56*
Furnishings Officers' cottages	245–1931	3,000.00	$166.38	2,968.92	31.08*
Roof repairs and fire protection	371–1933	41,000.00	32,641.85	32,641.85	8,358.15
		$95,000.00	$32,808.23	$86,522.28	$8,477.72

PER CAPITA

During the year the average number of patients has been 2,235.60.
Total cost of maintenance, $706,842.24.
Equal to a weekly per capita cost of (52 weeks to year), $6.0803.
Total receipts for the year, $78,382.79.
Equal to a weekly per capita of, $.6743.
Total net cost of maintenance for year (Total maintenance less total receipts) $628,459.45.
Net weekly per capita, $5.4060.

Respectfully submitted,
MARGARET T. CRIMMINS,
Treasurer.

STATEMENT OF FUNDS

Patient's Funds

Balance on hand November 30, 1932	$10,147.14	
Receipts	6,947.65	
Interest	301.85	
		$17,396.64
Expended	8,273.05	
Interest paid to State Treasurer	301.85	
		8,574.90
		$8,821.74

Investments

Worcester County Institution for Savings	1,300.00	
Worcester Five Cents Savings Bank	1,300.00	
Worcester Mechanics Savings Bank	1,300.00	
Peoples Savings Bank	1,800.00	
Bay State Savings Bank	1,800.00	
Balance Worcester Depositors' Corp.	211.02	
Balance Mechanics National Bank	994.99	
Cash on hand December 1, 1933	115.73	
		$8,821.74

Canteen Fund

Balance on hand November 30, 1932	$1,183.57	
Receipts	14,510.56	
		$15,694.13
Expended		14,373.83
		$1,320.30

Investments

Worcester Depositors' Corp. (Class A Certificate)	$310.98	
Mechanics National Bank	854.43	
Cash on hand December 1, 1933	154.89	
		$1,320.30

Lewis Fund

Balance on hand November 30, 1932	$1,353.25	
Income	48.75	
		$1,402.00

Investments

Worcester Five Cents Savings Bank	$1,300.00	
Balance Worcester Bank & Trust Co.	61.75	
Balance Mechanics National Bank	40.25	
		$1,402.00

Wheeler Fund

Balance on hand November 30, 1932	$1,012.36	
Income	37.50	
		$1,049.86
Expended		28.80
		$1,021.06

Investments

Worcester Mechanics Savings Bank	$1,000.00	
Balance Worcester Bank & Trust Co.	21.06	
		$1,021.06

Manson Fund

Balance on hand November 30, 1932	$1,025.15	
Expended	4.32	
		$1,020.83

Investments

Millbury Savings Bank	$1,020.00	
Balance Worcester Bank & Trust Co.	.83	
		$1,020.83

Clement Fund

Balance on hand November 30, 1932	$1,000.00	
Income	37.50	
		$1,037.50
Expended		37.50
		$1,000.00

Investment

Worcester County Institution for Savings	$1,000.00

Respectfully submitted,
MARGARET T. CRIMMINS,
Treasurer.

November 30, 1933.

STATISTICAL TABLES

As Adopted by the American Psychiatric Association Prescribed by the Massachusetts Department of Mental Diseases

Table 1. *General Information*

Data correct at end of hospital year November 30, 1933

1. Date of *opening* as a hospital for mental diseases, January 18, 1833.
2. Type of hospital: State.
3. Hospital plant:

Value of hospital property:	
Real estate, including buildings	$2,509,776.68
Personal property	469,714.21
Total	$2,979,490.89

Total acreage of hospital property owned, 589.16
Additional acreage rented, 400
Total acreage under cultivation during previous year, 177

4. Officers and employees — November 30, 1933

	Actually in Service at End of Year			Vacancies at End of Year		
	M.	F.	T.	M.	F.	T.
Superintendents	1	–	1	–	–	–
Assistant physicians	11	1	12	–	–	–
Clinical assistants	–	–	–	2	–	2
Total physicians	12	1	13	2	–	2
Stewards	1	–	1	–	–	–
Resident dentists	1	–	1	–	–	–
Pharmacists	1	–	1	–	–	–
Graduate nurses	–	37	37	–	1	1
Other nurses and attendants	98	131	229	1	1	2
Occupational therapists	–	5	5	–	–	–
Social workers	–	4	4	–	–	–
All other officers and employees	115	73	188	6	1	7
Total officers and employees	228	251	479	9	3	12

Note: — The following items, 5–10 inclusive, are for the year ended September 30, 1933.

5. Census of patient population at end of year:

	Actually in Hospital			Absent from Hospital but Still on Books		
White:	M.	F.	T.	M.	F.	T.
Insane	1,052	1,075	2,127	194	217	411
Mental defectives	1	3	4	–	–	–
Alcoholics	1	–	1	–	–	–
All other cases	6	2	8	–	–	–
Total	1,060	1,080	2,140	194	217	411
Other Races:						
Insane	21	20	41	1	3	4
Total	21	20	41	1	3	4
Grand Total	1,081	1,100	2,181	195	220	415

	Males	Females	Total
6. Patients under treatment in occupational-therapy classes, including physical training, on date of report	101	81	182
7. Other patients employed in general work of hospital on date of report	665	387	1,052
8. Average daily number of all patients actually in hospital during year	1,071.52	1,073.52	2,144.59
9. Voluntary patients admitted during year	8	9	17
10. Persons given advice or treatment in out-patient clinics during year	248	108	356

Table 2. *Financial Statement*

See Treasurer's report for data requested under this table.

Note: — The following tables 3–20, inclusive, are for the Statistical year ended September 30, 1933.

TABLE 3. *Movement of Patient Population*

	Regular Court Commitment (Insane)			Voluntary			Temporary Care			Observation			Total on Books		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Patients on books of institution September 30, 1932	1,231	1,296	2,527	1	–	1	–	–	–	10	4	14	1,242	1,300	2,542
Admissions during year:															
First admissions	262	222	484	2	–	2	9	1	10	59	32	91	332	255	587
Readmissions	52	67	119	6	9	15	7	4	11	17	15	32	82	95	177
Transfers from other hospitals for mental diseases	19	16	35	–	–	–	–	–	–	–	–	–	19	16	35
Total received during year	333	305	638	8	9	17	16	5	21	76	47	123	433	366	799
Total on books during year	1,564	1,601	3,165	9	9	18	16	5	21	86	51	137	1,675	1,666	3,341
Discharged from books during year															
As recovered	19	20	39	–	–	–	2	2	4	18	20	38	39	42	81
As improved	117	121	238	–	–	–	1	–	1	–	–	–	118	121	239
As unimproved	26	22	48	2	1	3	2	1	3	7	1	8	37	25	62
As without psychosis	1	6	7	3	5	8	8	2	10	48	23	71	60	36	96
Transferred to other hospitals for mental diseases	22	12	34	–	–	–	–	–	–	–	–	–	22	12	34
Died during year	114	108	222	–	–	–	3	–	3	6	2	8	123	110	233
Total discharged, transferred and died during year	299	289	588	5	6	11	16	5	21	79	46	125	399	346	745
Insane patients remaining on books of hospital at end of hospital year															
In hospital	1,070	1,092	2,162	4	3	7	–	–	–	7	5	12	1,081	1,100	2,181
On parole or otherwise absent	195	220	415	–	–	–	–	–	–	–	–	–	195	220	415
Total	1,265	1,312	2,577	4	3	7	–	–	–	7	5	12	1,276	1,320	2,596

TABLE 4. *Nativity of First Admissions and of Parents of First Admissions*

NATIVITY	PATIENTS			PARENTS OF MALE PATIENTS			PARENTS OF FEMALE PATIENTS		
	M.	F.	T.	Fathers	Mothers	Both Parents	Fathers	Mothers	Both Parents
United States	150	124	274	72	70	63	61	62	49
Austria	1	1	2	2	2	2	1	1	1
Belgium	–	–	–	–	1	–	–	–	–
Canada[1]	27	22	49	35	39	32	34	35	30
China	–	–	–	1	1	1	–	–	–
Denmark	1	1	2	2	1	1	1	1	1
England	1	3	4	4	4	2	9	6	5
Finland	2	3	5	2	2	1	3	3	3
France	–	–	–	1	–	–	–	1	–
Germany	2	5	7	6	4	4	5	5	5
Greece	2	3	5	2	2	2	3	3	3
Hungary	–	–	–	–	–	–	1	–	–
Ireland	22	29	51	51	50	47	51	51	43
Italy	10	9	19	11	11	11	11	10	10
Norway	–	–	–	–	1	–	1	–	–
Poland	9	7	16	11	11	11	10	9	9
Portugal	3	1	4	4	4	4	1	1	1
Russia	8	1	9	9	9	9	3	2	2
Scotland	1	1	2	4	2	2	1	3	1
Sweden	7	6	13	12	12	11	11	11	11
Switzerland	–	1	1	–	–	–	1	1	1
Turkey in Europe	1	–	1	2	3	2	–	–	–
Other countries	14	4	18	15	15	15	6	6	6
Unascertained	1	1	2	16	18	14	8	11	8
Total	262	222	484	262	262	234	222	222	189

[1]Includes Newfoundland.

TABLE 4-A. *Age of First Admissions Classified with Reference to Nativity, and Length of Residence in the United States of the Foreign Born*

Age Groups Years	Aggregate			Native Born												Foreign Born												Nativity unascertained		
				Total			Parentage										Total			Time in United States before Admission											
							Native			Foreign			Mixed			Unascertained				Under 5 years			5–9 years			10–14 years			15 years and over					
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Under 15	1	–	1	1	–	1	–	–	–	–	–	–	–	–	–	1	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
15–19 .	11	12	23	10	10	20	5	4	9	3	4	7	2	2	4	–	–	–	1	2	3	–	–	–	–	–	–	–	–	–	1	2	3	–	–	–
20–24 .	13	13	26	11	10	21	3	3	6	6	2	8	2	5	7	–	–	–	2	3	5	–	–	–	–	–	–	–	–	–	2	3	5	–	–	–
25–29 .	21	15	36	16	12	28	5	5	10	8	4	12	1	3	4	2	–	2	5	3	8	–	–	–	–	–	–	–	–	–	5	3	8	–	–	–
30–34 .	15	28	43	15	19	34	5	5	10	4	9	13	6	5	11	–	–	–	–	9	9	–	1	1	–	–	–	–	–	–	–	8	8	–	–	–
35–39 .	30	16	46	17	12	29	5	7	12	5	2	7	5	2	7	2	1	3	13	4	17	–	–	–	–	–	–	–	–	–	13	4	17	–	–	–
40–44 .	26	15	41	12	7	19	5	2	7	6	1	7	1	4	5	–	–	–	14	8	22	–	–	–	–	–	–	–	–	–	14	8	22	–	–	–
45–49 .	22	22	44	8	10	18	4	1	5	4	4	8	–	3	3	–	2	2	14	12	26	–	–	–	–	–	–	–	–	–	14	12	26	–	–	–
50–54 .	23	17	40	12	6	18	4	2	6	6	3	9	1	1	2	1	–	1	11	11	22	–	–	–	–	–	–	–	–	–	11	11	22	–	–	–
55–59 .	22	12	34	8	3	11	4	2	6	3	–	3	1	1	2	–	–	–	14	9	23	–	–	–	–	–	–	–	–	–	14	9	23	–	–	–
60–64 .	16	20	36	8	7	15	2	4	6	3	3	6	2	–	2	1	–	1	8	13	21	–	–	–	–	–	–	–	–	–	8	13	21	–	–	–
65–69 .	13	17	30	5	8	13	2	2	4	2	2	4	–	3	3	1	1	2	8	9	17	–	–	–	1	–	1	–	–	–	7	9	16	–	–	–
70, over	49	35	84	27	20	47	19	11	30	5	3	8	1	4	5	2	2	4	22	15	37	–	–	–	–	–	–	–	–	–	21	14	35	1	1	2
Total.	262	222	484	150	124	274	63	48	111	55	37	92	22	33	55	10	6	16	112	98	210	–	1	1	1	–	1	–	–	–	110	96	206	1	1	2

TABLE 5. *Citizenship of First Admission*

	Males	Females	Total
Citizens by birth	150	124	274
Citizens by naturalization	40	23	63
Aliens	42	45	87
Citizenship unascertained	30	30	60
Total	262	222	484

TABLE 6. *Psychoses of First Admissions*

PSYCHOSES	M.	F.	T.	M.	F.	T.
1. Traumatic psychoses				2	–	2
2. Senile psychoses				14	38	52
3. Psychoses with cerebral arteriosclerosis				60	31	91
4. General paralysis				28	14	42
5. Psychoses with cerebral syphilis				2	5	7
6. Psychoses with Huntington's chorea				–	–	–
7. Psychoses with brain tumor				–	–	–
8. Psychoses with other brain or nervous diseases, total				7	6	13
Tabes dorsalis	1	–	1			
Other diseases	6	6	12			
9. Alcoholic psychoses, total				45	9	54
Korsakow's psychosis	1	–	1			
Acute hallucinosis	3	–	3			
Other types, acute or chronic	41	9	50			
10. Psychoses due to drugs and other exogenous toxins, total				2	–	2
Opium (and derivatives), cocaine, bromides, chloral, etc., alone or combined	1	–	1			
Other exogenous toxins	1	–	1			
11. Psychoses with pellagra				–	1	1
12. Psychoses with other somatic diseases				10	12	22
Post-infectious psychosis	1	1	2			
Cardio-renal diseases	1	2	3			
Other diseases or conditions	8	9	17			
13. Manic-depressive psychoses, total				16	17	33
Manic type	3	3	6			
Depressive type	10	11	21			
Other types	3	3	6			
14. Involution melancholia				3	–	3
15. Dementia praecox (schizophrenia)				43	46	89
16. Paranoia and paranoid conditions				11	15	26
17. Epileptic psychoses				–	2	2
18. Psychoneuroses and neuroses, total				3	15	18
Hysterical type	1	5	6			
Psychasthenic type (anxiety and obsessive forms)	–	1	1			
Neurasthenic type	1	3	4			
Other types	1	6	7			
19. Psychoses with psychopathic personality				3	3	6
20. Psychoses with mental deficiency				12	5	17
21. Undiagnosed psychoses				1	–	1
22. Without psychosis, total				–	3	3
Alcoholism without psychoses	–	1	1			
Mental deficiency without psychosis	–	1	1			
Others	–	1	1			
Total				262	222	484

TABLE 7. *Race of First Admissions Classified with Reference to Principal Psychoses*

RACE	Total			Traumatic			Senile			With cerebral arterio-sclerosis			General paralysis		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
African (black)	3	5	8	–	–	–	–	2	2	–	–	–	1	1	2
Armenian	6	1	7	–	–	–	–	–	–	–	–	–	1	–	1
Chinese	2	–	2	–	–	–	–	–	–	–	–	–	–	–	–
English	6	12	18	–	–	–	–	3	3	2	2	4	–	–	–
Finnish	–	3	3	–	–	–	–	–	–	–	–	–	–	–	–
French	23	19	42	–	–	–	1	1	2	7	3	10	3	2	5
German	3	5	8	–	–	–	–	3	3	2	–	2	–	–	–
Greek	2	3	5	–	–	–	–	1	1	–	–	–	1	–	1
Hebrew	9	4	13	–	–	–	–	–	–	3	–	3	–	–	–
Irish	43	45	88	–	–	–	1	9	10	15	12	27	4	2	6
Italian[1]	10	10	20	–	–	–	–	1	1	1	2	3	1	1	2
Lithuanian	10	3	13	1	–	1	–	–	–	1	–	1	–	–	–
Magyar	1	–	1	–	–	–	–	–	–	–	–	–	1	–	1
Portuguese	4	2	6	–	–	–	–	1	1	–	–	–	–	–	–
Scandinavian[2]	13	12	25	–	–	–	1	1	2	3	1	4	1	1	2
Scotch	3	1	4	–	–	–	–	–	–	1	–	1	–	1	1
Slavonic[3]	14	9	23	–	–	–	–	1	1	–	–	–	–	–	–
Turkish	1	–	1	–	–	–	–	–	–	–	–	–	–	–	–
Other specific races	2	1	3	–	–	–	–	–	–	1	–	1	–	–	–
Mixed	101	81	182	1	–	1	11	13	24	20	10	30	15	6	21
Race unascertained	6	6	12	–	–	–	–	2	2	4	1	5	–	–	–
Total	262	222	484	2	–	2	14	38	52	60	31	91	28	14	42

TABLE 7. *Race of First Admissions Classified with Reference to Principal Psychoses* — Continued

RACE	With cerebral syphilis			With other brain or nervous diseases			Alcoholic			Due to drugs and other exogenous toxins			With pellagra		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
African (black)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Armenian	–	–	–	1	–	1	–	–	–	–	–	–	–	–	–
Chinese	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
English	–	–	–	1	1	2	1	–	1	–	–	–	–	–	–
Finnish	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
French	–	1	1	–	2	2	3	1	4	–	–	–	–	–	–
German	–	–	–	–	–	–	1	–	1	–	–	–	–	–	–
Greek	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Hebrew	–	–	–	1	1	2	–	–	–	–	–	–	–	–	–
Irish	–	–	–	–	–	–	12	2	14	–	–	–	–	1	1
Italian[1]	–	1	1	–	–	–	1	–	1	–	–	–	–	–	–
Lithuanian	–	–	–	1	–	1	3	1	4	–	–	–	–	–	–
Magyar	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Portuguese	–	–	–	–	–	–	1	–	1	–	–	–	–	–	–
Scandinavian[2]	–	1	1	–	–	–	2	–	2	–	–	–	–	–	–
Scotch	–	–	–	–	–	–	1	–	1	–	–	–	–	–	–
Slavonic[3]	–	–	–	–	–	–	8	2	10	–	–	–	–	–	–
Turkish	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Other specific races	1	–	1	–	–	–	–	–	–	–	–	–	–	–	–
Mixed	1	2	3	3	2	5	12	3	15	2	–	2	–	–	–
Race unascertained	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Total	2	5	7	7	6	13	45	9	54	2	–	2	–	1	1

[1]Includes "North" and "South".
[2]Norwegians, Danes and Swedes.
[3]Includes, Bohemian, Bosnian, Croatian, Dalmatian, Herzegovinian, Montenegrin, Moravian, Polish, Russian, Ruthenian, Servian, Slovak, Slovenian.

TABLE 7. *Race of First Admissions Classified with Reference to Principal Psychoses* — Continued

RACE	With other somatic diseases			Manic-depressive			Involution melancholia			Dementia praecox			Paranoia and paranoid conditions		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
African (black)	–	–	–	–	–	–	–	–	–	–	–	–	1	–	1
Armenian	–	–	–	–	–	–	–	–	–	2	1	3	1	–	1
Chinese	–	–	–	–	–	–	–	–	–	2	–	2	–	–	–
English	1	–	1	–	–	–	–	–	–	1	2	3	–	1	1
Finnish	–	–	–	–	–	–	–	–	–	–	2	2	–	–	–
French	1	1	2	2	2	4	1	–	1	2	4	6	–	1	1
German	–	–	–	–	–	–	–	–	–	–	2	2	–	–	–
Greek	–	–	–	–	–	–	–	–	–	–	1	1	1	–	1
Hebrew	–	–	–	1	–	1	1	–	1	3	–	3	–	1	1
Irish	2	3	5	3	2	5	–	–	–	5	8	13	–	4	4
Italian[1]	1	–	1	1	1	2	–	–	–	1	2	3	2	2	4
Lithuanian	2	–	2	–	–	–	–	–	–	2	–	2	–	–	–
Magyar	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Portuguese	–	–	–	1	–	1	–	–	–	1	1	2	–	–	–
Scandinavian[2]	–	1	1	1	3	4	–	–	–	4	3	7	1	–	1
Scotch	1	–	1	–	–	–	–	–	–	–	–	–	–	–	–
Slavonic[3]	1	–	1	2	3	5	–	–	–	2	–	2	1	1	2
Turkish	–	–	–	–	–	–	–	–	–	–	–	–	1	–	1
Other specific races	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Mixed	1	6	7	5	6	11	1	–	1	17	19	36	3	5	8
Race unascertained	–	1	1	–	–	–	–	–	–	1	1	2	–	–	–
Total	10	12	22	16	17	33	3	–	3	43	46	89	11	15	26

TABLE 7. *Race of First Admissions Classified with Reference to Principal Psychoses* — Concluded

RACE	Epileptic psychoses			Psycho-neuroses and neuroses			With psychopathic personality			With mental deficiency			Undiagnosed psychoses			Without psychoses		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
African (black)	–	–	–	–	–	–	–	–	–	1	2	3	–	–	–	–	–	–
Armenian	–	–	–	–	–	–	–	–	–	1	–	1	–	–	–	–	–	–
Chinese	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
English	–	–	–	–	2	2	–	1	1	–	–	–	–	–	–	–	–	–
Finnish	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
French	–	–	–	–	1	1	–	–	–	3	–	3	–	–	–	–	–	–
German	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Greek	–	–	–	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–
Hebrew	–	–	–	–	1	1	–	–	–	–	1	1	–	–	–	–	–	–
Irish	–	–	–	–	2	2	–	–	–	1	–	1	–	–	–	–	–	–
Italian[1]	–	–	–	1	–	1	–	–	–	1	–	1	–	–	–	–	–	–
Lithuanian	–	–	–	–	2	2	–	–	–	–	–	–	–	–	–	–	–	–
Magyar	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Portuguese	–	–	–	–	–	–	–	–	–	1	–	1	–	–	–	–	–	–
Scandinavian[2]	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Scotch	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Slavonic[3]	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2	2
Turkish	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Other specific races	–	–	–	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–
Mixed	–	–	–	2	5	7	3	1	4	3	2	5	1	–	1	–	1	1
Race unascertained	–	–	–	–	–	–	–	1	1	1	–	1	–	–	–	–	–	–
Total	–	2	2	3	15	18	3	3	6	12	5	17	1	–	1	–	3	3

[1]Includes "North" and "South".
[2]Norwegians, Danes and Swedes.
[3]Includes Bohemian, Bosnian, Croatian, Dalmatian, Herzegovinian, Montenegrin, Moravian, Polish, Russian, Ruthenian, Servian, Slovak, Slovenian.

TABLE 8. *Age of First Admissions Classified with Reference to Principal Psychoses*

PSYCHOSES	Total			Under 15 years			15–19 years			20–24 years		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
1. Traumatic	2	–	2	–	–	–	1	–	1	–	–	–
2. Senile	14	38	52	–	–	–	–	–	–	–	–	–
3. With cerebral arteriosclerosis	60	31	91	–	–	–	–	–	–	–	–	–
4. General paralysis	28	14	42	–	–	–	2	–	2	–	1	1
5. With cerebral syphilis	2	5	7	–	–	–	–	–	–	–	–	–
6. With Huntington's chorea	–	–	–	–	–	–	–	–	–	–	–	–
7. With brain tumor	–	–	–	–	–	–	–	–	–	–	–	–
8. With other brain or nervous diseases	7	6	13	–	–	–	–	1	1	–	–	–
9. Alcoholic	45	9	54	–	–	–	–	–	–	–	–	–
10. Due to drugs and other exogenous toxins	2	–	2	–	–	–	–	–	–	–	–	–
11. With pellagra	–	1	1	–	–	–	–	–	–	–	–	–
12. With other somatic diseases	10	12	22	–	–	–	2	2	4	–	–	–
13. Manic-depressive	16	17	33	–	–	–	–	1	1	2	1	3
14. Involution melancholia	3	–	3	–	–	–	–	–	–	–	–	–
15. Dementia praecox	43	46	89	–	–	–	4	3	7	9	6	15
16. Paranoia and paranoid conditions	11	15	26	–	–	–	–	–	–	–	–	–
17. Epileptic psychoses	–	2	2	–	–	–	–	–	–	–	–	–
18. Psychoneuroses and neuroses	3	15	18	–	–	–	–	1	1	1	4	5
19. With psychopathic personality	3	3	6	1	–	1	–	1	1	1	–	1
20. With mental deficiency	12	5	17	–	–	–	2	2	4	–	–	–
21. Undiagnosed psychoses	1	–	1	–	–	–	–	–	–	–	–	–
22. Without psychosis	–	3	3	–	–	–	–	1	1	–	1	1
Total	262	222	484	1	–	1	11	12	23	13	13	26

TABLE 8. *Age of First Admissions Classified with Reference to Principal Psychoses* — Continued

PSYCHOSES	25–29 years			30–34 years			35–39 years			40–44 years			45–49 years		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
1. Traumatic	1	–	1	–	–	–	–	–	–	–	–	–	–	–	–
2. Senile	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
3. With cerebral arteriosclerosis	–	–	–	–	–	–	–	–	–	–	–	–	–	2	2
4. General paralysis	–	1	1	2	4	6	7	3	10	5	2	7	5	–	5
5. With cerebral syphilis	–	–	–	–	1	1	–	–	–	1	2	3	1	1	2
6. With Huntington's chorea	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
7. With brain tumor	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
8. With other brain or nervous diseases	–	–	–	1	–	1	–	2	2	2	1	3	2	–	2
9. Alcoholic	2	1	3	1	1	2	6	–	6	6	3	9	6	2	8
10. Due to drugs and other exogenous toxins	–	–	–	1	–	1	1	–	1	–	–	–	–	–	–
11. With pellagra	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
12. With other somatic diseases	–	2	2	–	1	1	1	2	3	3	–	3	1	2	3
13. Manic-depressive	–	2	2	1	3	4	2	3	5	2	3	5	3	2	5
14. Involution melancholia	–	–	–	–	–	–	–	–	–	–	–	–	1	–	1
15. Dementia praecox	13	5	18	6	13	19	6	3	9	4	2	6	1	6	7
16. Paranoia and paranoid conditions	1	–	1	–	1	1	4	1	5	–	2	2	2	3	5
17. Epileptic psychoses	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1
18. Psychoneuroses and neuroses	–	4	4	–	3	3	–	–	–	2	–	2	–	1	1
19. With psychopathic personality	1	–	1	–	–	–	–	1	1	–	–	–	–	1	1
20. With mental deficiency	3	–	3	3	1	4	3	1	4	–	–	–	–	1	1
21. Undiagnosed psychoses	–	–	–	–	–	–	–	–	–	1	–	1	–	–	–
22. Without psychosis	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Total	21	15	36	15	28	43	30	16	46	26	15	41	22	22	44

TABLE 8. *Age of First Admissions Classified with Reference to Principal Psychoses* — Concluded

PSYCHOSES	50–54 years			55–59 years			60–64 years			65–69 years			70 years and over		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
1. Traumatic	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
2. Senile	–	1	1	–	1	1	–	5	5	1	9	10	13	22	35
3. With cerebral arteriosclerosis	2	3	5	7	3	10	8	4	12	8	6	14	35	13	48
4. General paralysis	3	2	5	3	–	3	1	1	2	–	–	–	–	–	–
5. With cerebral syphilis	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–
6. With Huntington's chorea	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
7. With brain tumor	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
8. With other brain or nervous diseases	1	–	1	–	–	–	1	2	3	–	–	–	–	–	–
9. Alcoholic	11	1	12	5	–	5	3	1	4	4	–	4	1	–	1
10. Due to drugs and other exogenous toxins	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
11. With pellagra	–	–	–	–	1	1	–	–	–	–	–	–	–	–	–
12. With other somatic diseases	1	–	1	1	1	2	1	1	2	–	1	1	–	–	–
13. Manic-depressive	2	1	3	3	1	4	1	–	1	–	–	–	–	–	–
14. Involution melancholia	1	–	1	1	–	1	–	–	–	–	–	–	–	–	–
15. Dementia praecox	–	3	3	–	3	3	–	2	2	–	–	–	–	–	–
16. Paranoia and paranoid conditions	2	2	4	2	1	3	–	4	4	–	1	1	–	–	–
17. Epileptic psychoses	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–
18. Psychoneuroses and neuroses	–	1	1	–	1	1	–	–	–	–	–	–	–	–	–
19. With psychopathic personality	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
20. With mental deficiency	–	–	–	–	–	–	1	–	1	–	–	–	–	–	–
21. Undiagnosed psychoses	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
22. Without psychoses	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–
Total	23	17	40	22	12	34	16	20	36	13	17	30	49	35	84

TABLE 9. *Degree of Education of First Admissions Classified with Reference to Principal Psychoses*

PSYCHOSES	Total			Illiterate			Reads only			Reads and writes			Common School			High School			College			Unascertained		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
1. Traumatic	2	–	2	–	–	–	–	–	–	–	–	–	2	–	2	–	–	–	–	–	–	–	–	–
2. Senile	14	38	52	1	8	9	–	–	–	–	1	1	5	14	19	2	5	7	2	1	3	4	9	13
3. With cerebral arteriosclerosis	60	31	91	5	5	10	–	–	–	5	1	6	25	18	43	7	2	9	1	–	1	17	5	22
4. General paralysis	28	14	42	2	–	2	–	–	–	–	–	–	17	9	26	8	5	13	–	–	–	1	–	1
5. With cerebral syphilis	2	5	7	–	–	–	–	–	–	–	–	–	1	4	5	–	–	–	–	–	–	1	1	2
6. With Huntington's chorea	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
7. With brain tumor	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
8. With other brain or nervous diseases	7	6	13	–	1	1	–	–	–	–	–	–	6	3	9	–	1	1	–	–	–	1	1	2
9. Alcoholic	45	9	54	7	2	9	–	–	–	5	–	5	20	7	27	5	–	5	2	–	2	6	–	6
10. Due to drugs and other exogenous toxins	2	–	2	–	–	–	–	–	–	–	–	–	2	–	2	–	–	–	–	–	–	–	–	–
11. With pellagra	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1
12. With other somatic diseases	10	12	22	2	1	3	–	–	–	–	1	1	3	6	9	1	1	2	–	–	–	4	3	7
13. Manic-depressive	16	17	33	4	1	5	–	–	–	–	–	–	7	6	13	4	9	13	1	–	1	–	1	1
14. Involution melancholia	3	–	3	–	–	–	–	–	–	–	–	–	3	–	3	–	–	–	–	–	–	–	–	–
15. Dementia praecox	43	46	89	2	2	4	–	–	–	–	1	1	28	33	61	8	8	16	–	2	2	5	–	5
16. Paranoia and paranoid conditions	11	15	26	1	1	2	–	–	–	–	1	1	8	5	13	–	5	5	–	–	–	2	3	5
17. Epileptic psychoses	–	2	2	–	1	1	–	–	–	–	–	–	–	–	–	–	1	1	–	–	–	–	–	–
18. Psychoneuroses and neuroses	3	15	18	1	–	1	–	–	–	–	–	–	–	12	12	2	3	5	–	–	–	–	–	–
19. With psychopathic personality	3	3	6	–	–	–	–	–	–	–	–	–	2	3	5	1	–	1	–	–	–	–	–	–
20. With mental deficiency	12	5	17	5	2	7	1	–	1	1	1	2	3	2	5	–	–	–	–	–	–	2	–	2
21. Undiagnosed psychoses	1	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	1
22. Without psychoses	–	3	3	–	2	2	–	–	–	–	–	–	–	1	1	–	–	–	–	–	–	–	–	–
Total	262	222	484	30	26	56	1	–	1	11	6	17	132	123	255	38	40	78	6	3	9	44	24	68

TABLE 10. *Population of Place of Residence of First Admissions Classified with Reference to Principal Psychoses*

PSYCHOSES	Total			0–2,499			2,500–9,999			10,000–24,999			25,000–49,999			50,000–99,999			100,000–249,999			250,000–499,999			500,000+			Unknown		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
1. Traumatic	2	–	2	–	–	–	–	–	–	–	–	–	1	–	1	–	–	–	1	–	1	–	–	–	–	–	–	–	–	–
2. Senile	14	38	52	3	5	8	1	4	5	3	4	7	–	–	–	–	–	–	6	23	29	–	–	–	1	2	3	–	–	–
3. With cerebral arteriosclerosis	60	31	91	9	1	10	3	4	7	2	3	5	–	–	–	1	–	1	41	22	63	–	–	–	4	1	5	–	–	–
4. General paralysis	28	14	42	–	1	1	3	–	3	3	–	3	3	2	5	–	–	–	15	4	19	–	–	–	3	6	9	1	1	2
5. With cerebral syphilis	2	5	7	–	–	–	1	–	1	–	1	1	–	–	–	–	–	–	–	2	2	–	–	–	1	2	3	–	–	–
6. With Huntington's chorea	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
7. With brain tumor	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
8. With other brain or nervous diseases	7	6	13	–	–	–	1	–	1	–	–	–	–	–	–	1	–	1	5	6	11	–	–	–	–	–	–	–	–	–
9. Alcoholic	45	9	54	3	–	3	8	2	10	4	1	5	–	–	–	–	–	–	26	5	31	–	–	–	2	–	2	2	1	3
10. Due to drugs and other exogenous toxins	2	–	2	–	–	–	1	–	1	–	–	–	–	–	–	–	–	–	1	–	1	–	–	–	–	–	–	–	–	–
11. With pellagra	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1	–	–	–	–	–	–	–	–	–
12. With other somatic diseases	10	12	22	1	2	3	2	2	4	–	1	1	–	–	–	1	–	1	5	7	12	–	–	–	1	–	1	–	–	–
13. Manic-depressive	16	17	33	–	–	–	4	4	8	1	1	2	–	2	2	1	1	2	7	7	14	–	–	–	2	1	3	1	1	2
14. Involution melancholia	3	–	3	–	–	–	1	–	1	–	–	–	–	–	–	–	–	–	2	–	2	–	–	–	–	–	–	–	–	–
15. Dementia praecox	43	46	89	1	5	6	4	4	8	5	2	7	–	–	–	–	1	1	23	28	51	–	–	–	8	4	12	2	2	4
16. Paranoia and paranoid conditions	11	15	26	–	2	2	1	1	2	1	3	4	–	–	–	–	–	–	6	5	11	–	–	–	3	4	7	–	–	–
17. Epileptic psychoses	–	2	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2	2	–	–	–	–	–	–	–	–	–
18. Psychoneuroses and neuroses	3	15	18	–	1	1	1	3	4	–	2	2	–	–	–	–	–	–	1	7	8	–	–	–	1	1	2	–	1	1
19. With psychopathic personality	3	3	6	1	–	1	–	–	–	1	–	1	–	–	–	–	–	–	–	1	1	–	–	–	1	2	3	–	–	–
20. With mental deficiency	12	5	17	–	–	–	2	–	2	1	–	1	–	–	–	–	–	–	6	3	9	–	–	–	2	2	4	1	–	1
21. Undiagnosed psychoses	1	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	1	–	–	–
22. Without psychosis	–	3	3	–	–	–	–	–	–	–	1	1	–	–	–	–	–	–	–	1	1	–	–	–	–	1	1	–	–	–
Total	262	222	484	18	17	35	33	24	57	21	19	40	4	4	8	4	2	6	145	124	269	–	–	–	30	26	56	7	6	13

TABLE 11. *Economic Conditions of First Admissions Classified with Reference to Principal Psychoses*

PSYCHOSES	Total			Dependent			Marginal			Unascertained		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
1. Traumatic	2	–	2	–	–	–	2	–	2	–	–	–
2. Senile	14	38	52	5	8	13	7	27	34	2	3	5
3. With cerebral arteriosclerosis	60	31	91	11	8	19	43	22	65	6	1	7
4. General paralysis	28	14	42	1	2	3	26	12	38	1	–	1
5. With cerebral syphliis	2	5	7	–	–	–	2	4	6	–	1	1
6. With Huntington's chorea	–	–	–	–	–	–	–	–	–	–	–	–
7. With brain-tumor	–	–	–	–	–	–	–	–	–	–	–	–
8. With other brain or nervous diseases	7	6	13	2	–	2	5	6	11	–	–	–
9. Alcoholic	45	9	54	6	1	7	38	8	46	1	–	1
10. Due to drugs and other exogenous toxins	2	–	2	1	–	1	1	–	1	–	–	–
11. With pellagra	–	1	1	–	–	–	–	1	1	–	–	–
12. With other somatic diseases	10	12	22	4	1	5	6	11	17	–	–	–
13. Manic-depressive	16	17	33	–	–	–	15	16	31	1	1	2
14. Involution melancholia	3	–	3	–	–	–	3	–	3	–	–	–
15. Dementia praecox	43	46	89	7	6	13	34	39	73	2	1	3
16. Paranoia and paranoid conditions	11	15	26	4	1	5	7	12	19	–	2	2
17. Epileptic psychoses	–	2	2	–	–	–	–	2	2	–	–	–
18. Psychoneuroses and neuroses	3	15	18	–	1	1	3	14	17	–	–	–
19. With psychopathic personality	3	3	6	1	2	3	2	1	3	–	–	–
20. With mental deficiency	12	5	17	3	2	5	8	3	11	.	–	1
21. Undiagnosed psychoses	1	–	1	–	–	–	–	–	–	1	–	1
22. Without psychoses	–	3	3	–	2	2	–	1	1	–	–	–
Total	262	222	484	45	34	79	202	179	381	15	9	24

TABLE 12. *Use of Alcohol by First Admissions Classified with Reference to Principal Psychoses*

PSYCHOSES	Total			Abstinent			Temperate			Intemperate			Unascertained		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
1. Traumatic	2	–	2	1	–	1	–	–	–	1	–	1	–	–	–
2. Senile	14	38	52	13	27	40	1	3	4	–	1	1	–	7	7
3. With cerebral arteriosclerosis	60	31	91	24	25	49	15	5	20	10	–	10	11	1	12
4. General paralysis	28	14	42	13	8	21	7	5	12	5	1	6	3	–	3
5. Cerebral syphilis	2	5	7	–	3	3	2	1	3	–	–	–	–	1	1
6. With Huntington's chorea	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
7. With brain tumor	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
8. With other brain or diseases	7	6	13	3	5	8	1	–	1	2	1	3	1	–	1
9. Alcoholic	45	9	54	–	–	–	–	–	–	45	9	54	–	–	–
10. Due to drugs and exogenous toxins	2	–	2	–	–	–	1	–	1	1	–	1	–	–	–
11. With pellagra	–	1	1	–	1	1	–	–	–	–	–	–	–	–	–
12. With other somatic diseases	10	12	22	3	11	14	1	–	1	5	–	5	1	1	2
13. Manic-depressive	16	17	33	6	15	21	5	2	7	4	–	4	1	–	1
14. Involution melancholia	3	–	3	3	–	3	–	–	–	–	–	–	–	–	–
15. Dementia praecox	43	46	89	28	37	65	7	5	12	4	2	6	4	2	6
16. Paranoia and paranoid conditions	11	15	26	5	13	18	3	1	4	2	–	2	1	1	2
17. Epileptic psychoses	–	2	2	–	1	1	–	1	1	–	–	–	–	–	–
18. Psychoneuroses and neuroses	3	15	18	2	9	11	1	2	3	–	3	3	–	1	1
19. With psychopathic personality	3	3	6	2	2	4	1	–	1	–	–	–	–	1	1
20. With mental deficiency	12	5	17	8	5	13	–	–	–	2	–	2	2	–	2
21. Undiagnosed psychoses	1	–	1	–	–	–	–	–	–	–	–	–	1	–	1
22. Without psychosis	–	3	3	–	1	1	–	–	–	–	2	2	–	–	–
Total	262	222	484	111	163	274	45	25	70	81	19	100	25	15	40

TABLE 13. *Marital Condition of First Admissions Classified with Reference to Principal Psychoses*

PSYCHOSES	Total			Single			Married			Widowed			Separated			Divorced			Unascertained		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	R.	T.
1. Traumatic	2	–	2	2	–	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
2. Senile	14	38	52	–	3	3	3	8	11	9	26	35	1	–	1	–	1	1	1	–	1
3. With cerebral arteriosclerosis	60	31	91	11	9	20	27	6	33	20	16	36	–	–	–	1	–	1	1	–	1
4. General paralysis	28	14	42	10	3	13	14	8	22	2	1	3	2	–	2	–	2	2	–	–	–
5. With cerebral syphilis	2	5	7	1	–	1	1	4	5	–	–	–	–	–	–	–	1	1	–	–	–
6. With Huntington's chorea	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
7. With brain tumor	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
8. With other brain or nervous diseases	7	6	13	4	1	5	2	4	6	–	1	1	–	–	–	–	–	–	1	–	1
9. Alcoholic	45	9	54	18	2	20	19	3	22	5	4	9	1	–	1	2	–	2	–	–	–
10. Due to drugs and other exogenous toxins	2	–	2	1	–	1	1	–	1	–	–	–	–	–	–	–	–	–	–	–	–
11. With pellagra	–	1	1	–	–	–	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–
12. With other somatic diseases	10	12	22	3	4	7	4	6	10	3	1	4	–	1	1	–	–	–	–	–	–
13. Manic-depressive	16	17	33	3	4	7	10	12	22	3	–	3	–	–	–	–	1	1	–	–	–
14. Involution melancholia	3	–	3	1	–	1	–	–	–	1	–	1	–	–	–	1	–	1	–	–	–
15. Dementia praecox	43	46	89	33	18	51	7	24	31	2	3	5	–	1	1	–	–	–	1	–	1
16. Paranoia and paranoid conditions	11	15	26	4	4	8	5	5	10	1	5	6	1	1	2	–	–	–	–	–	–
17. Epileptic psychoses	–	2	2	–	–	–	–	2	2	–	–	–	–	–	–	–	–	–	–	–	–
18. Psychoneuroses and neuroses	3	15	18	1	6	7	2	7	9	–	2	2	–	–	–	–	–	–	–	–	–
19. With psychopathic personality	3	3	6	2	2	4	–	–	–	–	1	1	1	–	1	–	–	–	–	–	–
20. With mental deficiency	12	5	17	11	3	14	1	2	3	–	–	–	–	–	–	–	–	–	–	–	–
21. Undiagnosed psychoses	1	–	1	–	–	–	1	–	1	–	–	–	–	–	–	–	–	–	–	–	–
22. Without psychosis	–	3	3	–	2	2	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–
Total	262	222	484	105	61	166	97	93	190	46	60	106	6	3	9	4	5	9	4	–	4

TABLE 14. *Psychoses of Readmissions*

PSYCHOSES	Males	Females	Total
Senile psychoses	1	5	6
Psychoses with cerebral arteriosclerosis	3	6	9
General paralysis	–	1	1
Psychoses with other brain or nervous diseases	2	1	3
Alcoholic psychoses	6	2	8
Psychoses due to drugs and other exogenous toxins	1	–	1
Psychoses with otl er somatic diseases	–	1	1
Manic-depressive psychoses	9	18	27
Involution melancholia	1	1	2
Dementia praecox	16	21	37
Paranoia and paranoid conditions	4	3	7
Psychoneuroses and neuroses	3	3	6
Psychoses with psychopathic personality	1	1	2
Psychoses with mental deficiency	5	3	8
Without psychosis	–	1	1
Total	52	67	119

TABLE 15. *Discharges of Patients Classified with Reference to Principal Psychoses and Condition on Discharge*

PSYCHOSES	Total			Recovered			Improved			Unimproved		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Traumatic	2	–	2	–	–	–	2	–	2	–	–	–
Senile	2	9	11	–	1	1	2	5	7	–	3	3
With cerebral arteriosclerosis	18	9	27	3	–	3	13	8	21	2	1	3
General paralysis	16	4	20	–	1	1	11	3	14	5	–	5
With cerebral syphilis	1	2	3	–	1	1	1	1	2	–	–	–
With other brain or nervous diseases	2	6	8	–	1	1	2	4	6	–	1	1
Alcoholic	31	6	37	8	3	11	18	3	21	5	–	5
Due to drugs and other exogenous toxins	2	1	3	1	–	1	1	1	2	–	–	–
With other somatic diseases	4	8	12	–	–	–	4	8	12	–	–	–
Manic-depressive	20	20	40	4	3	7	15	15	30	1	2	3
Involution melancholia	1	4	5	–	–	–	1	3	4	–	1	1
Dementia praecox	39	51	90	1	1	2	31	43	74	7	7	14
Paranoia and paranoid conditions	13	13	26	2	1	3	8	9	17	3	3	6
Epileptic psychoses	–	2	2	–	–	–	–	2	2	–	–	–
Psychoneuroses and neuroses	3	11	14	–	2	2	3	7	10	–	2	2
With psychopathic personality	2	6	8	–	2	2	1	2	3	1	2	3
With mental deficiency	5	11	16	–	4	4	4	7	11	1	–	1
Undiagnosed psychoses	1	–	1	–	–	–	–	–	–	1	–	1
Without psychosis	1	6	7	–	–	–	–	–	–	–	–	–
Total	163	169	332	19	20	39	117	121	238	26	22	48

TABLE 15-A. *Hospital Residence During This Admission of First Court Admissions Discharged during 1933*

PSYCHOSES	Number			Average Net Hospital Residence in Years		
	M.	F.	T.	M.	F.	T.
Traumatic	2	–	2	1.00	–	1.00
Senile	2	8	10	.50	.63	.61
With cerebral arteriosclerosis	16	9	25	.48	1.28	.76
General paralysis	13	1	14	.74	1.50	.80
With cerebral syphilis	1	2	3	.50	.50	.50
With other brain or nervous diseases	1	5	6	.50	1.17	1.06
Alcoholic	26	6	32	.53	.54	.53
Due to drugs and other exogenous toxins	2	1	3	.31	.50	.37
With other somatic diseases	4	7	11	.99	.79	.86
Manic-depressive	13	11	24	.59	.74	.66
Involution melancholia	1	2	3	.50	2.50	1.83
Dementia praecox	28	36	64	1.31	2.13	1.76
Paranoia and paranoid conditions	9	13	22	.78	.69	.73
Epileptic psychoses	–	2	2	–	.50	.50
Psychoneuroses and neuroses	2	9	11	.50	.45	.47
With psychopathic personality	2	4	6	.25	1.55	1.12
With mental deficiency	3	7	10	1.83	2.83	2.54
Without psychoses	1	3	4	.50	.23	.30
Total	127	126	253	2.01	2.35	2.18

TABLE 16. *Causes of Death of Patients Classified with Reference to Principal Psychoses*

CAUSES OF DEATH	Total			Senile			With cerebral arterio-sclerosis			General paralysis			Alcoholic			Manic-depressive		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Epidemic, Endemic and Infectious Diseases																		
Erysipelas	1	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Tuberculosis of the respiratory system	10	3	13	–	–	–	2	–	2	–	–	–	1	–	1	1	–	1
Tuberculosis of other organs	2	2	4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Syphilis (non-nervous forms)	1	2	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
General Diseases not Included in Class I																		
Cancer and other malignant tumors	10	8	18	–	1	1	3	–	3	–	–	–	–	–	–	1	2	3
Tumor (non-cancerous)	1	–	1	–	–	–	1	–	1	–	–	–	–	–	–	–	–	–
Pellagra	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Diabetes	1	5	6	–	2	2	1	–	1	–	–	–	–	1	1	–	–	–
Alcoholism (acute or chronic)	1	–	1	–	–	–	–	–	–	–	–	–	1	–	1	–	–	–
Other general diseases	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Diseases of the Nervous System																		
Meningitis (non-epidemic)	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Cerebral hemorrhage, apoplexy	3	1	4	–	–	–	2	–	2	–	–	–	1	–	1	–	–	–
General paralysis of the insane	7	6	13	–	–	–	–	–	–	7	6	13	–	–	–	–	–	–
Diseases of the Circulatory System																		
Endocarditis and myocarditis	6	6	12	–	–	–	1	1	2	–	–	–	1	–	1	–	–	–
Other diseases of the heart	1	1	2	–	–	–	1	–	1	–	–	–	–	1	1	–	–	–
Arteriosclerosis	19	19	38	4	6	10	11	10	21	–	–	–	–	–	–	1	–	1
Other diseases of the circulatory system	1	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Diseases of the Respiratory System																		
Bronchopneumonia	15	17	32	4	7	11	8	4	12	–	–	–	1	1	2	1	1	2
Lobar pneumonia	9	8	17	1	3	4	6	1	7	–	–	–	–	–	–	–	–	–
Other diseases of the respiratory system (tuberculosis excepted)	1	1	2	–	–	–	–	–	–	–	–	–	–	1	1	–	–	–
Diseases of the Digestive System																		
Ulcer of stomach and duodenum	2	1	3	–	–	–	–	–	–	1	–	1	–	–	–	–	–	–
Diarrhea and enteritis	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1
Appendicitis and typhlitis	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Hernia and intestinal obstruction	1	1	2	–	–	–	–	–	–	–	–	–	1	1	2	–	–	–
Cirrhosis of liver	1	–	1	1	–	1	–	–	–	–	–	–	–	–	–	–	–	–
Other diseases of digestive system (cancer and tuberculosis excepted)	1	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Non-Venereal Diseases of Genito-Urinary System and Annexa																		
Nephritis	9	15	24	–	6	6	5	7	12	–	–	–	1	–	1	1	–	1
Other diseases of kidneys and annexa	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Diseases of bladder	1	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Other diseases of genito-urinary system	2	–	2	1	–	1	1	–	1	–	–	–	–	–	–	–	–	–
External Causes																		
Homicide	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Accidental poisoning	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Accidental traumatism	6	2	8	1	–	1	4	1	5	1	–	1	–	–	–	–	1	1
Other external causes	2	2	4	–	–	–	–	–	–	2	–	2	–	–	–	–	1	1
Total	114	108	222	12	25	37	46	24	70	11	6	17	7	5	12	5	6	11

TABLE 16. *Causes of Death of Patients Classified with Reference to Principal Psychoses* — Concluded

CAUSES OF DEATH	Involution melancholia			Dementia praecox			Epileptic psychoses			Psycho-neuroses and neuroses			With mental deficiency			*All other psychoses		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Epidemic, Endemic and Infectious Diseases																		
Erysipelas	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	1
Tuberculosis of the respiratory system	–	–	–	4	1	5	–	–	–	1	–	1	–	2	2	1	–	1
Tuberculosis of other organs	–	–	–	2	1	3	–	–	–	–	–	–	–	–	–	–	1	1
Syphilis (non-nervous forms)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	2	3
General Diseases not Included in Class I																		
Cancer and other malignant tumors	1	–	1	4	3	7	–	–	–	–	–	–	–	–	–	1	2	3
Tumor (non-cancerous)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Pellagra	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1	–	–	–
Diabetes	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2	2
Alcoholism (acute or chronic)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Other general diseases	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1
Diseases of the Nervous System																		
Meningitis (non-epidemic)	–	–	–	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–
Cerebral hemorrhage, apoplexy	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1
General paralysis of the insane	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Diseases of the Circulatory System																		
Endocarditis and myocarditis	–	1	1	1	3	4	–	–	–	–	–	–	1	–	1	2	1	3
Other diseases of the heart	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Arteriosclerosis	1	–	1	1	1	2	–	–	–	–	–	–	1	–	1	–	2	2
Other diseases of the circulatory system	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	1
Diseases of the Respiratory System																		
Bronchpneumonia	–	1	1	1	1	2	–	–	–	–	–	–	–	–	–	–	2	2
Lobar pneumonia	–	1	1	2	2	4	–	–	–	–	–	–	–	–	–	–	1	1
Other diseases of the respiratory system (tuberculosis excepted)	–	–	–	1	–	1	–	–	–	–	–	–	–	–	–	–	–	–
Diseases of the Digestive System																		
Ulcer of stomach and duodenum	–	–	–	1	1	2	–	–	–	–	–	–	–	–	–	–	–	–
Diarrhea and enteritis	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Appendicitis and typhlitis	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1
Hernia and intestinal obstruction	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Cirrhosis of liver	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Other diseases of digestive system (cancer and tuberculosis excepted)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	1
Non-Venereal Diseases of Genito-Urinary System and Annexa																		
Nephritis	–	–	–	1	–	1	–	–	–	–	–	–	–	–	–	1	2	3
Other diseases of kidneys and annexa	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1	–	–	–
Diseases of bladder	1	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Other diseases of genito-urinary system	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
External Causes																		
Homicide	–	–	–	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–
Accidental poisoning	–	–	–	–	–	–	–	1	1	–	–	–	–	–	–	–	–	–
Accidental traumatism	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Other external causes	–	–	–	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–
Total	3	3	6	18	16	34	–	1	1	1	–	1	2	4	6	9	18	27

*Includes group 22, "without psychosis".

TABLE 17. *Age of Patients at Time of Death Classified with Reference to Principal Psychoses*

PSYCHOSES	Total			Under 15 years			15–19 years			20–24 years			25–29 years			30–34 years			35–39 years		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
1. Traumatic	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
2. Senile	12	25	37	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
3. With cerebral arteriosclerosis	46	24	70	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
4. General paralysis	11	6	17	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
5. With cerebral syphilis	2	4	6	–	–	–	–	–	–	–	–	–	–	1	1	–	–	–	–	1	1
6. With Huntington's chorea	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
7. With brain tumor	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
8. With other brain or nervous diseases	2	1	3	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1	–	–	–
9. Alcoholic	7	5	12	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	1
10. Due to drugs and other exogenous toxins	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
11. With pellagra	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
12. With other somatic diseases	5	12	17	–	–	–	–	1	1	–	–	–	–	–	–	–	1	1	–	2	2
13. Manic-depressive	5	6	11	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1
14. Involution melancholia	3	3	6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
15. Dementia praecox	18	16	34	–	–	–	1	–	1	1	1	2	3	1	4	1	1	2	–	–	–
16. Paranoia and paranoid conditions	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
17. Epileptic psychoses	–	1	1	–	–	–	–	–	–	–	1	1	–	–	–	–	–	–	–	–	–
18. Psychoneuroses and neuroses	1	–	1	–	–	–	–	–	–	–	–	–	–	–	–	1	–	1	–	–	–
19. With psychopathic personality	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
20. With mental deficiency	2	4	6	–	–	–	–	–	–	–	–	–	–	1	1	–	1	1	–	–	–
21. Undiagnosed psychoses	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
22. Without psychosis	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Total	114	108	222	–	–	–	1	1	2	1	2	3	3	3	6	2	5	7	3	5	8

TABLE 17. *Age of Patients at Time of Death Classified with Reference to Principal Psychoses* — Concluded

PSYCHOSES	40–44 years			45–49 years			50–54 years			55–59 years			60–64 years			65–69 years			70 years and over		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
1. Traumatic	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
2. Senile	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1	2	3	5	10	21	31
3. With cerebral arteriosclerosis	–	–	–	–	–	–	2	1	3	3	4	7	7	3	10	7	3	10	27	13	40
4. General paralysis	2	2	4	4	1	5	2	–	2	–	–	–	1	1	2	–	–	–	–	–	–
5. With cerebral syphilis	–	–	–	–	–	–	–	1	1	1	–	1	1	1	2	–	–	–	–	–	–
6. With Huntington's chorea	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
7. With brain tumor	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
8. With other brain or nervous diseases	–	–	–	1	–	1	1	–	1	–	–	–	–	–	–	–	–	–	–	–	–
9. Alcoholic	–	1	1	1	1	2	1	–	1	1	–	1	–	2	2	2	1	3	1	–	1
10. Due to drugs and other exogenous toxins	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
11. With pellagra	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
12. With other somatic diseases	2	1	3	1	2	3	1	–	1	–	1	1	–	1	1	1	3	4	–	–	–
13. Manic-depressive	1	–	1	–	–	–	1	–	1	–	1	1	1	2	3	–	2	2	2	–	2
14. Involution melancholia	–	–	–	–	–	–	–	–	–	1	1	2	–	1	1	1	–	1	1	1	2
15. Dementia praecox	1	1	2	2	2	4	–	2	2	3	–	3	3	1	4	2	3	5	1	4	5
16. Paranoia and paranoid conditions	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
17. Epileptic psychoses	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
18. Psychoneuroses and neuroses	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
19. With psychopathic personality	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
20. With mental deficiency	–	1	1	–	–	–	–	1	1	–	–	–	–	–	–	1	–	1	1	–	1
21. Undiagnosed psychoses	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1
22. Without psychosis	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Total	6	6	12	9	6	15	8	5	13	9	7	16	13	13	26	16	15	31	43	40	83

TABLE 13. *Total Duration of Hospital Life of Patients Dying in Hospital Classified According to Principal Psychoses*

PSYCHOSES	Total			Less than 1 month			1–3 months			4–7 months			8–12 months			1–2 years			3–4 years		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
1. Traumatic	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
2. Senile	12	25	37	5	2	7	3	7	10	1	6	7	–	–	–	2	4	6	–	3	3
3. With cerebral arteriosclerosis	46	24	70	13	3	16	14	4	18	6	1	7	3	5	8	8	9	17	2	1	3
4. General paralysis	11	6	17	1	–	1	1	–	1	2	1	3	–	1	1	4	2	6	3	–	3
5. With cerebral syphilis	2	4	6	–	–	–	–	1	1	–	–	–	1	–	1	–	2	2	–	–	–
6. With Huntington's chorea	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
7. With brain tumor	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
8. With other brain or nervous diseases	2	1	3	–	–	–	1	–	1	–	–	–	–	–	–	–	–	–	1	–	1
9. Alcoholic	7	5	12	1	1	2	–	–	–	–	–	–	1	–	1	–	1	1	1	–	1
10. Due to drugs and other exogenous toxins	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
11. With pellagra	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
12. With other somatic diseases	5	12	17	1	5	6	–	2	2	2	1	3	2	1	3	–	2	2	–	–	–
13. Manic-depressive	5	6	11	–	–	–	–	–	–	–	–	–	1	–	1	1	1	2	–	–	–
14. Involution melancholia	3	3	6	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1	–	–	–
15. Dementia praecox	18	16	34	–	1	1	1	–	1	–	–	–	–	–	–	1	1	2	–	1	1
16. Paranoia and paranoid conditions	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
17. Epileptic psychoses	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1
18. Psychoneuroses and neuroses	1	–	1	–	–	–	–	–	–	–	–	–	–	–	–	1	–	1	–	–	–
19. With psychopathic personality	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
20. With mental deficiency	2	4	6	–	–	–	–	1	1	–	–	–	–	–	–	–	1	1	–	–	–
21. Undiagnosed psychoses	–	1	1	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
22. Without psychosis	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Total	114	108	222	21	13	34	20	15	35	11	9	20	8	7	15	17	24	41	7	6	13

TABLE 18. *Total Duration of Hospital Life of Patients Dying in Hospital Classified According to Principal Psychoses* — Concluded

PSYCHOSES	5–6 years			7–8 years			9–10 years			11–12 years			13–14 years			15–19 years			20 years and over		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
1. Traumatic	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
2. Senile	–	2	2	1	–	1	–	1	1	–	–	–	–	–	–	–	–	–	–	1	1
3. With cerebral arteriosclerosis	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1	–	–	–
4. General paralysis	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1	2
5. With cerebral syphilis	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
6. With Huntington's chorea	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
7. With brain tumor	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
8. With other brain or nervous diseases	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1	2
9. Alcoholic	1	–	1	1	1	2	–	1	1	–	–	–	1	–	1	–	–	–	–	–	–
10. Due to drugs and other exogenous toxins	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
11. With pellagra	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
12. With other somatic diseases	–	–	–	–	1	1	–	–	–	1	2	3	–	1	1	–	–	–	2	2	4
13. Manic-depressive	–	–	–	–	–	–	2	–	2	–	–	–	–	1	1	–	–	–	1	1	2
14. Involution melancholia	3	2	5	–	–	–	4	2	6	–	1	1	1	–	1	1	2	3	7	6	13
15. Dementia praecox	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
16. Paranoia and paranoid conditions	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
17. Epileptic psychoses	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
18. Psychoneuroses and neuroses	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
19. With psychopathic personality	–	1	1	–	–	–	–	–	–	–	–	–	–	1	1	1	–	1	1	–	1
20. With mental deficiency	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
21. Undiagnosed psychoses	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
22. Without psychosis	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Total	4	7	11	2	2	4	6	4	10	1	3	4	2	3	5	2	3	5	13	12	25

TABLE 19. *Average Length of Hospital Stay During the Present Admissions of All Cases in Residence on September 30, 1933*

PSYCHOSES	Number			Average Length of Residence in Years		
	M.	F.	T.	M.	F.	T.
1. Traumatic	5	1	6	4.49	7.50	4.99
2. Senile	31	64	95	3.13	3.69	3.51
3. With cerebral arteriosclerosis	66	52	118	2.93	3.04	2.98
4. General paralysis	92	35	127	4.23	5.11	4.47
5. With cerebral syphilis	12	8	20	3.49	5.86	4.44
6. With Huntington's chorea	–	–	–	–	–	–
7. With brain tumor	–	–	–	–	–	–
8. With other brain or nervous diseases	18	17	35	3.54	4.66	4.08
9. Alcoholic	148	21	169	8.74	6.15	8.42
10. Due to drugs and other exogenous toxins	2	–	2	.45	–	.45
11. With pellagra	–	1	1	–	.45	.45
12. With other somatic diseases	8	16	24	2.11	4.74	3.86
13. Manic-depressive	42	80	122	7.01	6.66	6.78
14. Involution melancholia	20	38	58	7.70	7.24	7.39
15. Dementia praecox	497	583	1,080	11.61	10.65	11.09
16. Paranoia and paranoid conditions	35	67	102	6.68	7.80	8.01
17. Epileptic psychoses	8	10	18	11.88	7.29	9.33
18. Psychoneuroses and neuroses	5	18	23	1.07	3.36	2.87
19. With psychopathic personality	12	16	28	6.40	8.12	7.38
20. With mental deficiency	72	68	140	8.56	8.53	8.55
21. Undiagnosed psychoses	–	–	–	–	–	–
22. Without psychoses	8	5	13	.83	.45	.68
Total	1,081	1,100	2,181	8.67	8.51	8.59

TABLE 20. *Family Care Department*

	Males	Females	Total
Remaining in family care September 30, 1932	6	39	45
On visit	2	–	2
Admitted during the year	41	75	116
Whole number of cases during the year	47	114	161
Dismissed within the year	30	44	74
Returned to institution	23	37	60
Died	1	–	1
On visit	3	5	8
On escape	3	1	4
Discharged	–	1	1
Remaining in family care September 30, 1933	17	70	87
Supported by State	11	46	67
Private	6	23	29
State and private	–	1	1
Self-supporting	–	–	–
Number of different persons within the year	33	61	94
Number of different persons dismissed	26	38	64
Number of different persons admitted	33	61	94
Average daily number in family care	18	57	75
Supported by State	38	78	116
Private	9	36	45
Self-supporting	–	–	–