Morbidity in the Municipal Hospitals of the City of New York

Report of an Exploratory Study in Hospital Morbidity Reporting

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RUSSELL SAGE FOUNDATION
New York — — 1955

Printed in the United States
of America

Library of Congress
Catalog Card Number: 55–7894

Wm. F. Fell Co., Printers
Philadelphia, Pa.

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FOREWORD

PROPER ADMINISTRATION of health and medical care services of today as well as the planning of programs for tomorrow require accurate data on the illnesses from which the population to be served suffer. The need for basic data is imperative in a city of the size and complexity of New York.

The scarcity of up-to-date intelligence on volume and type of diseases among the city's residents has been a real handicap in planning of both publicly and privately supported health and hospital services. Hospital records have been repeatedly suggested in the past as a valuable source of information on morbidity. In 1947 the Board of Health, which is charged by law with concern for all matters related to health in the city, memorialized the Mayor to provide for a reporting system on patients discharged from hospitals. The Board furthermore suggested that a central collecting agency for such information be installed in the municipal Department of Hospitals.

The program recommended by the Board of Health was given impetus when, in 1951, Russell Sage Foundation and our predecessors, Dr. Marcus D. Kogel, Commissioner of Hospitals, and Dr. John F. Mahoney, Commissioner of Health, had the wisdom to launch this pilot project in hospital morbidity reporting. The project was supported by the Foundation's generosity.

Ever since the first data came off the tabulating machines, the study findings have been of great value in the operations of both departments. The wealth of information condensed in this volume will be, we are sure, of major importance to many groups concerned with health and medical care, here and elsewhere.

The pilot project has, moreover, demonstrated the practicability of a morbidity reporting scheme utilizing, on a community-

wide basis, data available on the charts of hospital patients. Although data collected for a limited period of time as in this report are highly useful, the actual need is a reporting system that continuously provides up-to-date information. The scene in the fields of health, medical science, and medical care is shifting so fast that data become obsolete very quickly. During the study period, for instance, tuberculosis hospitals had to operate far beyond any acceptable standard of occupancy. But two years later two tuberculosis hospitals had been closed owing to decreased need for inpatient care. The development of a practical reporting system and the demonstration that a continuing study of morbidity could be carried on through the use of hospital morbidity data are perhaps the chief contributions of this pilot project.

We have already taken steps to inaugurate a hospital morbidity reporting system in New York City. The Interdepartmental Health Council, a body through which the Commissioners of Welfare, Health, and Hospitals consider problems common to the three departments, reviewed the pertinent suggestions which had been prepared by the authors of this report. The Council recommended unanimously that such a continuing reporting system be started at the earliest date possible. The funds necessary for its operation have been requested in the 1955–1956 city budget.

In its initial phase, in conformity with recommendations in this report, the system would be limited to the municipal hospitals. But we trust that before long the voluntary and proprietary hospitals in this city will join forces with us in this scheme which can contribute so much to the health and welfare of our citizens.

Leona Baumgartner, M.D.
Commissioner of Health

Basil C. MacLean, M.D.
Commissioner of Hospitals

PREFACE

THE GREAT SCARCITY OF KNOWLEDGE of the incidence and prevalence of specific diseases has continued to be a serious handicap in the planning and administration of medical care and public health programs. Such agencies as the Departments of Hospitals and Health of the City of New York have been especially conscious of this limitation, but thus far means have not been found by which to meet their urgent need for periodic information concerning disease-specific morbidity in this city.

A hospital morbidity reporting system has been suggested as a means to fill, in important part, this gap in knowledge. In such a system all hospitals in the community would forward periodically to a central agency uniform summary reports on their discharged patients for processing and analysis and publication of findings. All the data needed for such reports are elements of the medical charts routinely maintained for each hospital patient. This existing source contains both diagnostic information concerning patients and their demographic characteristics.

A morbidity reporting system of this kind has long been recognized as practicable for New York City, but budgetary restrictions have prevented its establishment. In addition to funds, there has been need for testing of methodology and evaluation of preliminary findings before launching a large-scale reporting system. An exploratory study of limited scale was therefore desired.

With the assistance of Russell Sage Foundation, it has now been possible for the New York City Departments of Hospitals and Health to conduct a pilot study in routine hospital morbidity reporting, the methodology and some of the results of which are described herein. The authors also offer their recommendations

for future community action concerning such reporting. It is necessary here to specify briefly the scope of the pilot project and to indicate the cautions that must be applied to any generalizations that may be drawn from the data of the study.

Approximately 900,000 patients are discharged from hospitals in New York City in the course of a year. These patients are now served by some 170 municipal, voluntary, and proprietary hospitals. The municipal hospital system cares almost exclusively for indigent persons, including the medically indigent, that is, persons who in health are able to maintain themselves but are unable to pay for all the medical care they need. Voluntary hospitals accept patients from all socioeconomic groups in the population; and proprietary institutions cater primarily to the upper-income groups. Each of these three systems includes both general hospitals and hospitals for specific diseases. As to size, hospitals in the city range from fewer than 20 to nearly 2,000 beds.

The determination of scope for a pilot project in an area of such complexity needed careful consideration. The collection of data for a total of 100,000 to 150,000 patients seemed adequate for the methodological as well as analytical purposes of a test study. For practical reasons it appeared preferable to assemble the desired volume of reports by covering a sizable number of hospitals for a limited time rather than a smaller number for a more extended period. After consultation with representatives of the voluntary hospitals, which generally were not ready for the experiment, it was decided to concentrate on the hospitals operated by the Department of Hospitals. Data on approximately 120,000 patients were anticipated from six-month coverage of the municipal hospitals, both general and special.

This delimitation of scope had major advantages. The execution of such a project is greatly facilitated when the participating units are under the jurisdiction of the agency conducting the test and operate under uniform policies and procedures. Moreover, the staffs of most of the municipal hospitals had already had extensive experience in preparing the kind of reports on discharged patients that were required for the purpose of the project. Finally, the data of a test study covering the entire municipal

hospital system would be significant in themselves and of immediate usefulness to the Department of Hospitals.

On the other hand, limitation of the data of the study to the municipal hospitals largely prevents generalization concerning the morbidity of the total population of the city. The patients of the municipal hospitals do not represent a cross section of the city's population receiving hospital care. They do, however, comprise a large majority of the indigent and medically indigent sick who are hospitalized.

A variety of circumstances determines the demographic composition of the population of the municipal hospitals. An excessive proportion of nonwhite patients is to be found among the recipients of free or low-charge hospital care. Elderly persons also are to be expected more frequently as patients of the municipal hospitals.

Impairment of health due to improper diet and to inadequate living standards is probably more prevalent in low-income groups than in the population generally, despite modern public health efforts. The low-income groups, therefore, are likely to exhibit higher proportions of diseases resulting from such deficiencies.

Long-term diseases not infrequently result in reduction of the income of the breadwinner of a family and inevitably increase family expenses. They may therefore so reduce the economic status of persons with such conditions as to cause them to seek care in municipal rather than other institutions. Again, such external factors as the location of hospitals and arrangement of ambulance districts may influence the number of emergency admissions to municipal hospitals and so increase their share of patients with injuries, or with cerebro-vascular or cardiac attacks.

In general, the medical decisions which result in the hospitalization of patients with infectious and other acute diseases and of patients in need of surgical or other active treatment are made upon clinical and medical care considerations only. But for many patients with chronic conditions, who constitute a large fraction of today's hospital population, the need for hospitalization, and also the duration of hospital stay, may be influenced by the

availability of other facilities for their care. The fact that possibilities for obtaining care elsewhere than in the hospital are different for different socioeconomic groups helps to determine the morbidity found in the municipal hospitals.

These are some of the reasons which limit the general applicability of data on patients of the municipal hospitals. Coverage of all hospitals—municipal, voluntary, and proprietary—will be required in order to obtain hospital morbidity data that are representative of the total community.

However, the authors believe that the results of this pilot project have shown that data even of limited scope can produce information of major importance for various phases of medical care programs. They recommend the establishment as soon as possible of current hospital morbidity reporting for the city. The operation of such a scheme in the municipal hospital system might well serve as an introductory step toward a community-wide scheme.

This pilot study was conducted by the Departments of Hospitals and Health with the cooperation of Russell Sage Foundation. Dr. Ralph G. Hurlin of the Foundation staff gave advice in all phases of the project; Dr. Helen R. Jeter, also of the Foundation staff, assisted in the preparation of the final manuscript. The authors wish to express their appreciation to the Foundation for its participation in the study, and to the Commissioners of their two departments, who granted time and facilities for the study and supported them with advice and encouragement. Dr. Marcus D. Kogel was Commissioner of Hospitals until the end of 1953 and was succeeded by Dr. Basil C. MacLean; Dr. John F. Mahoney was Commissioner of Health until the end of 1953 and was succeeded by Dr. Leona Baumgartner.

We are indebted to three voluntary hospitals which, in response to our request, submitted reports on their discharged patients: Lebanon, Mary Immaculate, and St. Vincent's Hospitals. Although their data have not been included in the tabulations of this report, their participation contributed to the methodological aspects of the project.

Our special thanks are due to the Advisory Committee, appointed by Commissioners Kogel and Mahoney when the project was being planned, for its valued counsel; to the medical-record librarians of the participating hospitals, who prepared the hospital reports on discharged patients; and to the members of our respective staffs who assisted in the study, especially Mrs. Sylvia W. Stolz who trained and supervised the special project staff.

MARTA FRAENKEL
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Chapter I

THE NEED FOR HOSPITAL MORBIDITY REPORTING

THIS PILOT PROJECT WAS UNDERTAKEN to test a plan for morbidity reporting and to evaluate the data thus obtained. The recommendation for the future provides for central collection of data routinely recorded on the medical charts of hospital patients as source material for periodic communitywide reports on hospitalized sickness classified by diagnosis.

The term "morbidity" refers to states of disease of varying degree, ranging from slight indisposition to complete disability or fatality. It includes conditions of different types, acute illness as well as permanent deformities, and inactive chronic conditions as well as their exacerbations, which are often as dramatic as acute disease. The rarest types of disease are covered by the term just as is the omnipresent common cold.

Basic differentiation should be made between general and specific morbidity. General morbidity refers to the state of being sick, without specification of the condition involved. A general morbidity rate, therefore, is the ratio of the number of people in a given population who are sick to that population. On the other hand, specific morbidity refers to the state of being afflicted with a specific disease. A specific morbidity rate, therefore, is the ratio of the number of persons having a specific disease to the given population.

Our knowledge about specific morbidity is severely limited. Efforts to increase this knowledge have been much intensified in the recent past, but the need for more information is obvious. In planning and administering medical care, endeavors must be guided by facts about specific diseases in order to be conducted

effectively. Detailed knowledge of supply and demand is indispensable for efficient business management; intelligence as to strength, distribution, and specific characteristics of the enemy is required for successful warfare. Knowledge of present and future requirements, in terms of specific morbidity, is needed for planning and administering both public health and medical care.

Present Knowledge of Specific Morbidity

Knowledge about specific morbidity in the recent past has been obtained or inferred mainly from three sources: (1) mortality statistics, (2) mandatory reporting by physicians of the incidence of certain diseases, and (3) special health surveys. Each is useful in its own way, but each has limitations.

The collection and analysis of mortality statistics have reached remarkably high standards with respect to both completeness and accuracy. Part of their great value results from their periodicity, which permits significant conclusions concerning the trend of specific conditions that cause death. But for many purposes mortality data are inadequate. They tell nothing of nonfatal illnesses or of the course and duration of fatal illnesses. Because long-term diseases play a growing role in the total morbidity of the population, planners of public health and medical care programs need to know about the occurrence of diseases, over and above such knowledge as can be inferred, retrospectively, from cause-of-death data.

Mandatory reporting of diseases by physicians generally can meet, at best, only a small part of the need for morbidity reporting. It must be limited to relatively few diseases. The selection of the conditions to be reported may change during the course of the years, some acute communicable diseases being eliminated and some chronic conditions, such as cancer or occupational diseases, being added. But any attempt at comprehensiveness is prohibitive, because of the immensity and complexity of the work involved in obtaining the data. Compulsory reporting of diseases by physicians at large, it is safe to assume, will concentrate on those diseases for which knowledge of incidence is of very great

importance for epidemiological and other public health reasons. Tuberculosis is their prototype.

In recent years morbidity surveys of particular communities have produced valuable information about the volume and kinds of illness and disability. For such studies the house-to-house canvass, usually for a sample of the community studied, is the method used. The facts concerning health or illness are reported by some member of the family. But such surveys of families cannot supply reliable medical data. Whenever there is interest in the nature of illnesses, medical judgment is necessary to discriminate between objective fact and subjective interpretation.

Still another source of knowledge about specific morbidity is to be found in the diagnostic and related data about disease prepared for administrative purposes by various agencies other than hospitals. The scope of such data often is limited to certain fractions of the population, perhaps to certain sex, age, occupational, or economic groups. Data from some sources are restricted to illness and disability of a specified degree. Large employers, trade unions, civil service systems, the armed forces, schools and colleges, and health and sickness insurance agencies, particularly prepaid medical care plans, amass such data on illnesses, both fatal and nonfatal, as an integral part of their operations.

Thus, much useful information about both general and specific morbidity can be obtained from mortality statistics, from the required reporting of certain diseases by physicians, from special health surveys, and from the routine collection of data for administrative purposes. What, then, is the particular significance of data to be obtained from hospitals concerning their patients, or as the phrase is used in this report, of hospital morbidity data?

Hospital Morbidity Reporting

In hospitals detailed data on large numbers of people with serious illnesses are recorded routinely. Such data include medical diagnoses, established professionally as the result of clinical observation and diagnostic tests. Thus far, these data have not been reported to and analyzed by a central agency on a communitywide basis except in a few instances, primarily for experi-

mental purposes. With these rare exceptions, their use in the past has been solely for internal clinical and research purposes. It is one of the purposes of this report to demonstrate that hospital morbidity data are useful in hospital administration, community planning, and public health administration.

The term "hospital morbidity" refers to sickness among patients in hospitals. The term is used here to include also nonpathological conditions for which persons are admitted to hospitals, such as normal pregnancy.

In a reporting scheme data about hospital morbidity are associated with certain other data for analytical purposes. Here the term "hospital morbidity" will imply morbidity specified by diagnosis rather than sickness at large. The associated data will include selected demographic characteristics of patients (age, sex, and color) and selected characteristics of hospital care (surgical intervention, duration of hospital stay, and outcome).

Since hospital morbidity is limited to persons who are treated in hospitals, it represents chiefly serious illness. Hospital morbidity reporting, then, is a partial, not a comprehensive, scheme of reporting about illness. Hospital morbidity reporting is highly important, however, for its special contributions.

Need in Public Health Administration

Hospital morbidity statistics can supply an important basis of reference in public health administration. The inadequacy of the morbidity information now available is a major handicap in this field. Public health officials must consider the whole community and its total population, as well as component age and sex groups. Completeness of coverage is important, and comprehensive data are the usual goal.

To what extent will hospital morbidity reporting furnish data on specific illnesses for the entire population or for significant age and sex groups? By their very nature, the aggregate of the records from all hospitals in a community will provide a complete picture of certain serious diseases among the population concerned and a partial picture of other serious diseases. Most minor illnesses, however, are omitted.

The completeness with which incidence or prevalence of given diseases in the population will be revealed by centrally pooled hospital data depends, other conditions being equal, upon certain community factors. These are the adequacy of the supply of hospital beds; the accessibility of hospital facilities to all practicing physicians; the availability of hospital care to all in need, without financial or other barriers; and a health-conscious citizenry that consults physicians in case of illness and follows their advice concerning hospitalization.

Medical care programs and facilities in most cities in this country assure relatively complete availability of hospital care. Large fractions of the population are now insured against the risk of the expense of hospitalized illness. Tax-supported hospital care is usually available to the medically indigent. Housing and living patterns in metropolitan areas, as well as increasing use of technically complex diagnostic and therapeutic procedures, have made it more and more desirable, if not imperative, to transfer the care of seriously sick people from the private home to a properly equipped hospital. A comparatively wide and homogeneous coverage of serious diseases by a hospital reporting system thus seems guaranteed.

It can be assumed, therefore, that barring immediately fatal instances hospital morbidity data will reveal the full incidence of some acute, chiefly surgical conditions, such as acute appendicitis, ectopic pregnancy, intestinal obstruction, fracture of the skull, serious burns—conditions that can be treated adequately only in hospitals. Further, such data will show a close approximation to the full incidence of selected major chronic diseases, predominantly those that usually require only one or infrequent hospitalization, such as fibroma of the uterus, cancer of the breast, cholelithiasis, and renal calculi.

But hospital morbidity data will not show either the incidence or prevalence of some chronic diseases, even of serious degree. For example, many patients with arthritis or diabetes may never require hospital care. Patients with other chronic conditions may have to be admitted to hospitals again and again, sometimes at relatively short intervals. Those with certain cardiovascular con-

ditions, for instance, are able to live at home if their prompt hospitalization is assured in case of exacerbation of the condition.

Hospital morbidity data will also provide important information concerning most reportable diseases. For pneumonia, for example, which is greatly underreported in the present mandatory scheme, more complete information concerning incidence will be produced from hospital reporting than is now obtainable, notwithstanding the fact that the proportion of pneumonia patients requiring hospitalization has declined greatly since the introduction of antibiotics. For cancer data, moreover, there is for New York City no practical source except hospitals, since the city, unlike the rest of the state, does not operate a cancer reporting system.

Public health administration is also concerned with programs of health improvement in which reliable, but less than comprehensive, data will be of great utility. Thus, hospital data on complications of pregnancy, puerperal conditions, and prematurity will contribute valuable information for the guidance of maternal and child health programs. Also, concerning serious traumatic conditions, especially among children, needed data that have heretofore been available only as a result of special studies will be obtained regularly from the hospital morbidity reporting system.

Need in Community Planning for Medical Care

The need of a community for medical care is determined primarily by two major factors: the number of people suffering from specific diseases and the amount of care of specified types that people with given diseases require at given stages of their illness. Community planning for medical care facilities or services, therefore, should be based on combined knowledge of the incidence and prevalence of specified diseases among people of given age, sex, color, and socioeconomic characteristics; and of the amount and type of care required at various stages of their disease.

Institutional care is the area of medical care planning that is especially in need of up-to-date specific morbidity data. Any new

hospital is a major venture, involving complex phases of program-making, financing, and construction. Yet, thus far, when planning and coordinating agencies have developed a master plan for a community's hospital facilities or advised concerning the construction of new hospitals—their type, size, location, and the distribution of beds by service—the best available source of information on which to base plans or advice has been the mortality statistics of the community.

Knowledge of the diseases that bring people to hospitals is also needed for planning overall medical care. Most persons with chronic illnesses require hospital care, if at all, only temporarily and intermittently. Many of them are hospitalized in the initial phase of their illness. Readmissions may be necessitated by exacerbations of usually controlled conditions, for additional diagnostic studies, or for reassessment of the therapeutic regime. The length of time patients with chronic diseases remain in a hospital often is decided not so much by their clinical condition as by the availability of other proper facilities and services in the community—other institutions, such as nursing homes, homes for the aged, and convalescent homes, or home-care service with attendance by needed physicians, visiting nurses, and housekeepers.

The increasing proportion of aged people in the community, many of them afflicted with chronic diseases, requires revision of existing programs and the establishment of new programs of care. Wards of general hospitals for many reasons are unsuitable accommodation for persons incapacitated only or chiefly by the infirmity of old age. Traditional old-age homes, on the other hand, are inappropriate for those aged persons whose chronic disability requires close supervision by a physician and auxiliary services.

In planning medical care for the fast-growing numbers of chronically incapacitated people, who are mostly but not exclusively aged persons, the hospital is only one facility to be considered. As an important link in a chain of medical services, however, each hospital has responsibility for compiling and making available for community analysis the data concerning its own diversified chronic care program.

To be fully useful for planning purposes, information on hospital morbidity should be periodic and reasonably recent. This is necessary since many of the factors involved are subject to important changes. Today scientific developments are continually changing the preventive, therapeutic, and rehabilitative weapons against specific diseases. The impact of new discoveries on the need for hospital care may be fundamental. The introduction of new methods may sometimes increase the volume of care needed, at other times decrease it or change its type. Many chronic disease patients who in the past have been treated conservatively at home are now brought to the hospital temporarily for treatment. New radical surgical measures that are promoted by the availability of modern antibiotics and anesthesia agents change the pattern of hospital care for various groups of patients. As an example, more and more patients with pulmonary tuberculosis now receive care of limited duration in specialized surgical departments instead of protracted sanatorium care. Similarly, many schizophrenia patients now receive relatively brief hospital care incidental to shock treatment or surgery instead of long-term institutional care. High-voltage x-rays and radium continue to change the hospital needs of patients with malignant neoplasms. We do not know what the impact of atomic energy will be on diagnostic and therapeutic measures and, consequently, on the need for hospital care of patients with given diseases.

Need in Hospital Administration

The function of a hospital is to provide for patients with different diseases the highest quality of the specific type of care they require in the present stage of their illness. To carry out this function in the most efficient way, optimal use must be made of professional and other staff and of space, equipment, and funds. Services and commodities must be allocated, distributed, and redistributed to meet best the needs of the patients. Such allocation at any given time depends also upon the facilities other than hospitals that are available for persons with given conditions.

The respective roles of the medical and surgical services, and the way in which the hospital services must be modified for short-

stay versus long-stay patients, for emergency care versus diagnostic study, for terminal care versus rehabilitative treatment depend upon the characteristics of the patients. Since a hospital must provide a wide variety of services to meet complex needs, specific knowledge is required of trends in the diagnostic array and in the therapeutic regimes for specific diseases.

Hospital use of personnel of various skills, allocation of space and equipment, and other administrative requirements also are greatly influenced by changes in medical care practices for particular diseases. Early ambulation, for instance, has changed fundamentally hospital arrangements for obstetrical patients and for patients with specific surgical conditions. The hospital administration, therefore, should be informed of disease-specific length-of-stay data, of data on specific post-surgical and post-delivery needs, as well as of other items concerning patients that affect the volume and type of care to be rendered.

Owing to the lack of such specific data, comparisons, evaluations, and decisions have been made in the past on the basis of general data, such as the gross average length of stay of patients discharged from the hospital. Comparisons of such general data may lead to seriously erroneous conclusions. For example, the evidence of a shorter gross average length of stay in a voluntary general hospital than in a municipal general hospital of the same community has sometimes been interpreted as proof that the voluntary hospital operates more efficiently than the municipal hospital. It should be recognized that averages summarizing patient loads containing widely different proportions of different diseases are not safely comparable. For some conditions disease-specific averages will be significant. The analysis of a large volume of disease-specific data over considerable periods of time will permit the establishment of significant length-of-stay distributions for most important diseases. Use of these data will lead ultimately to the adoption of more precise standards for judging the efficiency of hospital care than are now available.

Chapter II

METHODS USED IN THIS PROJECT

All hospitals under the jurisdiction of the Department of Hospitals that were in operation at the beginning of the study period were covered by the project. Both general and special hospitals were thus included. Three nonmunicipal general hospitals also participated in the project but, because of their small number, their data were not included with those of the municipal hospitals for the purpose of analysis. The tabulations and discussion of findings in this report, therefore, relate solely to the patients discharged from the municipal hospitals.

The Study Period

The municipal hospitals discharge more than 250,000 inpatients in the course of a year. Half of this number was considered adequate for the desired analysis. Data regarding patients discharged during a six-month period were therefore collected, the period chosen being May to October, 1952. A total of 121,952 discharge reports resulted.

This particular six-month period was selected largely for convenience. It has long been recognized that the seasonal factor is not of great importance in determining the numbers of patients using the New York municipal hospitals. Because the full year was not covered, however, the material of the project is not adequate to demonstrate the seasonal fluctuations of hospitalization for specific diseases and the relative proportion of various diseases found in this study differs to some extent from that which would be found for an entire year.

Collection of Data

The data required for a hospital morbidity reporting system are routinely recorded in all hospitals for clinical and administrative uses. The chart prepared for each patient admitted to a hospital includes a demographic description of the patient as well as the diagnostic findings; it also records the length and outcome of the patient's stay. Upon discharge of the patient, the chart is forwarded to the hospital record room for use in preparing current reports and for filing. The data of the study were taken from the patients' charts by the medical-record librarians.

The discharge reports were submitted by the municipal hospitals at monthly intervals, as soon after the end of each month as the needed data could be transferred from the charts of all ward patients discharged during the month. The monthly reporting interval was desirable, among other reasons, because it facilitated checking the number of discharge reports submitted against the number of patients discharged as shown by the monthly administrative reports of the hospital superintendents.

The term "inpatient" in the New York municipal hospital system is equivalent to "ward patient," since with the exception of one hospital there is no provision for private or semi-private care.[1] The term does not include infants born in the hospital and cared for only in the newborn nursery. However, whether born in the reporting hospital or elsewhere, babies who are admitted to the pediatric services of the hospitals are inpatients.

The Report Form

The purpose of the report form for this study was to record for transmission to the central office the needed descriptive data about the discharged patients. Practical considerations of time and effort on the part of the staffs of both the hospital record rooms and the project required limitation of the data collected to items of most obvious importance. The report form used included these items:

[1] The exception is Sydenham Hospital. See footnote, p. 40.

1. Name of hospital
2. Case number
3. Sex
4. Race
5. Marital status
6. Religious affiliation
7. Age on admission
8. Borough of residence
9. Clinical service
10. Date of admission
11. Date of discharge
12. Length of stay
13. Condition on discharge
14. Diagnoses
15. Type and date of surgical interventions
16. Source of admission
17. Discharge category

The names of the patients were not needed and were not obtained. Their inclusion would have greatly increased the task of reporting and would have required special measures for maintaining the confidentiality of the information reported. The case numbers were adequate for identification in the event that inquiry proved necessary concerning a report.

A report schedule already in regular use in most of the municipal hospitals is a 19 by 11-inch sheet on which, through use of both sides, information concerning 40 discharges can be entered in code, the data for each patient occupying a single line. The last two columns of this sheet provide space for explanatory comments. The project took advantage of this established device. Use of this multiple report form was found highly effective, permitting large economy of staff time both in the hospital record rooms and the central office, as well as of supplies and filing space.

For those municipal hospitals which had not previously been using the multiple report sheets, and for the participating voluntary hospitals, a form was designed for reporting the facts about each patient on an individual schedule.

Medical Diagnoses

An outstanding feature of medical diagnostic data collected from hospitals is their relatively high degree of accuracy, based as they are upon medical judgment resulting from clinical examination supplemented by such tests as are found necessary or desirable. Diagnoses are, moreover, systematically recorded in the municipal hospitals, as in most other hospitals of the city, in

terms of the *Standard Nomenclature of Diseases and Operations*.[1] Although the fourth edition of the Standard Nomenclature became available in January, 1952, it was not yet in use in the municipal hospitals when the study was initiated, so that the diagnostic information was necessarily reported for the project in terms of the third edition.

The code numbers for the diagnostic terms of the Standard Nomenclature are routinely entered on the patients' charts in the hospitals by the physicians on the house staff. Under the standard procedure of the municipal hospitals, the diagnosis and the code number for the diagnosis are both recorded on the patients' charts. Only the code number was transferred to the report form. The use of code numbers for reporting diagnoses to a central office permits a major saving of time and effort on the part of the record-room staffs. It also saves time of the analysis unit, since the reports do not then need coding in the central office.

The diagnostic data of the study refer exclusively to the main diagnosis, which is defined as the final diagnostic statement of the condition for which the patient was admitted to the hospital. The report schedule provided space for reporting two additional diagnoses, but only the main diagnosis was tabulated for analysis. Although the frequency with which specific diseases occur in combination is of interest in morbidity analysis, the great variation among physicians with respect to the recording of additional diagnoses makes their use of doubtful value. Special precautions would have to be taken to assure that all participating physicians recorded all additional diagnoses on the patients' charts in accordance with established criteria as to what constitutes an additional diagnosis, if these data were to be used.

Surgical Interventions

Operative interventions also were reported in the codes of the *Standard Nomenclature of Diseases and Operations*. The Nomenclature covers a wide variety of operations, including manipulative as well as instrumental, diagnostic as well as therapeutic, and

[1] Published for the American Medical Association, Blakiston Co., Philadelphia, 3d ed., 1942; 4th ed., 1952.

minor as well as major interventions. The practices of the hospitals vary in respect to the recording of operative procedures; some record all types of intervention covered by the Nomenclature, others only certain types. The extent of such variation was not determined in this study. For surgical interventions, as for diagnoses, decision was made that only one item should be tabulated. It was therefore necessary when more than one intervention was reported to choose one for tabulation. In these instances, which were infrequent, the choice was made by the project staff by a uniform procedure.

Length of Stay and Outcome

The report schedule called for the dates of admission and discharge of the patient and also the length of stay. The latter item was the only one which the record-room staffs had to compute. For patients in the hospital less than 48 hours, length of stay was reported in hours; for those staying longer, the number of days was reported.

For reporting condition on discharge the following categories, already in use in the municipal hospitals, were used:

Left against medical advice
Condition improved
Other alive
Dead, hospital autopsy
Dead, other

The usual practice of the hospitals is to give preference to the category "left against medical advice" when that designation is applicable. The other two categories for reporting condition of patients discharged alive, therefore, refer usually to those patients who left with medical consent. In most of the tabulations of the study, only the two major divisions of condition on discharge have been used, namely, "alive" and "dead."

Other Items

Brief mention only is necessary concerning several other items included on the report form. For race, the categories used for

reporting were only white, Negro, and other, and tabulations were made only for the categories white and nonwhite.

Marital status and religious affiliation of patients were reported, but this information was not tabulated. The accuracy of the reported information on marital status was believed to be doubtful. The facts about religious affiliation were included on the punch cards and are available for tabulation.

The age reported was age at time of admission. Except for infants, age was recorded in completed single years up to a final category, "99 years or over." For infants under one month, age was given in days; for those from one month to one year, it was given in months.

Only the borough of residence, or if outside New York City the town and state of residence, was reported. Street addresses, while valuable for determining geographic morbidity differentials or the geographic origins of hospital populations, were ruled out for the purpose of this project, among other reasons because of the large amount of time that would have been required both to report and to process the data.

Because of current interest in problems of a new population group, it would have been desirable to identify Puerto Rican patients, but to do so would have required the reporting of an item which it was unlikely the hospitals could supply readily under existing procedures.

Review Before Mechanical Processing

The practical method of tabulating the project material for analysis was obviously by use of mechanical procedures. All preparatory steps were undertaken with this point in mind.

In routine hospital morbidity reporting, reliance must of necessity be placed upon the capacity for accuracy of the hospital personnel who prepare the reports. The coding of diagnoses by physicians is subject to review by the medical-record librarians. No attempt was made, however, to verify the accuracy with which the data were abstracted from the patients' charts. In most of the municipal hospitals the medical-record librarians

were experienced in preparing for use in special studies the kind of report required for the project. In preparation for this study, meetings were held with the librarians at which misunderstandings were clarified, solutions to recording problems explored, and patterns of omissions, inconsistencies, or other errors in reporting discussed. Random errors undoubtedly occurred, but effort was made by this means to avoid systematic errors.

Review of the reported data by the project staff consisted mainly of inspection of the reports for omissions, inconsistency of items reported, or obvious lack of adherence to instructions. Here again, emphasis was placed upon identification of systematic errors. Omission of information was extremely rare.

In the process of reviewing the reported data, the project staff supplied two items for tabulation. The post-surgical length of stay was calculated from the reported dates of operation and of discharge. Discharge on the day of operation was specifically so coded for tabulation, as was also discharge on the day following operation; other lengths of the interval were coded by days to a maximum of "99 days or more." A code was also inserted to indicate whether more than one diagnosis was reported.

Summarization of Diagnostic Data

The determination of categories for summarization of data concerning such items as age or length of hospital stay is comparatively simple. The summarization of diagnostic data, on the other hand, requires more elaborate preparation.

The Standard Nomenclature, the codes of which were used to record and to report diagnoses, was designed to establish uniformity of diagnostic statements and to serve as an indexing mechanism for diagnostic information in the hospital. It provides, in fact, two sets of codes—topographic (site) and etiologic (cause)—by means of which in combination any disease can be specifically described. In other words, the Standard Nomenclature provides a method of individually describing any condition affecting any part of the body by use of a specific code. But the Standard Nomenclature is not intended to provide a device for

statistical presentation of information on diseases, inasmuch as there is no established method of grouping its very numerous categories.

The International Statistical Classification. A medium for first summarization of the diagnostic information exists in the *International Statistical Classification of Diseases, Injuries, and Causes of Death.*[1] Formerly a classification of causes of death only, the current sixth edition of this list was designed to provide a standard method of classifying for statistical purposes both fatal and nonfatal illnesses. The International Statistical Classification provides separate categories for each disease entity of major importance and for groups of related less important or nonspecific conditions. Its categories are variously etiologic or topographic. Its primary purpose is to summarize statistical data regarding diseases for analytical purposes.

In order to translate the morbidity data reported in terms of the Standard Nomenclature codes into the codes of the International Statistical Classification, it was necessary to establish the relationships between the two sets of codes. While the fourth edition of the Nomenclature does this, giving for every listed diagnosis both the Nomenclature and the ISC codes, the third edition, which as already explained was in use in the hospitals, does not. The code numbers for approximately 6,900 different categories of the third edition of the Standard Nomenclature were utilized in reporting diagnoses for the study.[2] They were combined in the project office into 955 ISC categories.

The Summary List. For many, if not most, purposes of analysis and presentation of morbidity data even the International Statistical Classification is too detailed. A condensation of this classification was therefore made for the purpose of the study by the authors. In this process they were guided by their expectation of the relative frequency of various conditions among the patients of the municipal hospitals and by the importance of these condi-

[1] World Health Organization, *Manual of the International Statistical Classification of Diseases, Injuries, and Causes of Death:* Sixth Revision of the International Lists of Diseases and Causes of Death. Geneva, Switzerland, 1948.

[2] Appendix B explains that this number refers to "condensed" Nomenclature diagnoses.

tions for public health and hospital care planning. This condensed classification was reviewed by a specially appointed subcommittee of the Committee on Public Health Relations of the New York Academy of Medicine and was revised in accordance with its recommendations. The revised classification, having 196 categories, has been termed the Summary List.[1] Appendix Table 53 shows specifically the composition of each category of the Summary List in terms of the ISC code numbers.

It was unnecessary to enter the ISC and Summary List code numbers on the schedules before punching. In transferring data from the schedules to the punch cards, only the Nomenclature code numbers were punched. When the cards had been sorted into Nomenclature categories, the appropriate ISC and Summary List code numbers were then gang-punched.

Further discussion of the preparation of the diagnostic data for tabulation is contained in Appendix B.

Tabulation of Data

The pattern of the tabulations desired was planned in the preliminary stages of the project. It was necessary, however, to review the relative frequency of diagnoses and to determine the extent to which various items were not reported before deciding definitely on the design of the tables to be used in analysis of the data. The early machine runs indicated that the number of instances in which items were unreported was very small indeed. Of the total 121,952 discharge reports submitted by the municipal hospitals, only 38 omitted the patient's condition on discharge and only six the length of stay. Color was not reported for only 124 patients, and age for 302. The diagnosis for which the largest number of items was lacking was alcoholism, but even for this category color was not reported for only five patients and age for only 35. The effect of missing information was thus insignificant. Tabulations were therefore made in accordance with the original plans.

[1] The code numbers of the Summary List will be found to run to 203. Revision of the list resulted in dropping seven of the code numbers first assigned.

Only a small portion of the tabular material produced in the analysis of the project data has been included in this report. Three Appendix tables contain details of the diagnostic data. Table 54 records the frequencies of patients for all those ISC diagnostic categories which included at least 25 discharges. Table 55 classifies all the reported patients by Summary List diagnostic categories and by sex, color, and age. Table 56 classifies them by Summary List categories and by condition on discharge and length of hospital stay.

Following chapters make use of a large number of special tabulations derived from the Appendix tables or from unpublished master tabulations. Appendix C presents a list of the machine runs available, in order to indicate the detail of tabulations of the data that may be used in special studies. In addition, the punch cards containing the full diagnostic detail of the Standard Nomenclature have been preserved for further use.

Chapter III

THE MUNICIPAL HOSPITALS AND THEIR PATIENTS

THE HOSPITALS

In new york city the hospitals operated by the municipal government constitute a large part of the total hospital facilities. Of the total bed capacity of hospitals in the city at the end of 1952, excluding federal hospitals and state mental hospitals, 43 per cent were in municipal hospitals, 48 per cent in voluntary hospitals, and 9 per cent in proprietary hospitals.

Within the study period, the Department of Hospitals operated a total of 35 institutions, of which 31 are covered by this study. Two hospitals were excluded because they were not in operation at the beginning of the study period, and two homes for dependent aged persons because they are not hospitals in the usual sense of the term.

All the municipal hospitals provide inpatient care, 22 of them also have outpatient departments, and 16 give medical and nursing care through recently instituted home-care services.[1] This report is concerned exclusively with the inpatients, including those transferred on discharge to home-care service, and with their characteristics upon discharge from the ward. It should be observed that for many patients such characteristics as duration of stay may be influenced by the availability of clinic or home medical care services which permit continuation of care after discharge from the ward.

[1] In the Department of Hospitals the term "home care" means an extension of hospital care in the patient's home. Patients in need of long-term medical care, primarily those with chronic diseases, are transferred to their own homes for continued care under direction of the hospital staff when they no longer need the complete facilities and services of the hospital ward. When clinical considerations require it, home-care patients are returned to the ward.

Several of the general and special hospitals of the New York municipal hospital system are organized and administered as hospital centers (Bellevue, Kings County, and Queens Hospital Centers). With one exception, the centers combine contiguously located general and special hospitals.[1] The grouping of institutions in such centers facilitates the provision of medical care for patients requiring successively different types of service. As necessary, patients can be transferred readily from one to another unit of the center.

Of the 31 municipal hospitals covered by the study, 14 are general and 17 are special hospitals. They are identified in Table 1, which provides information concerning their size and utilization during the study period.

General Hospitals

The 14 general hospitals account for 9,421 beds; they differ widely in size, ranging from 177 to 1,939 beds. By definition, a general hospital operates a variety of services, among them medical, surgical (general, orthopedic, and other special surgery), obstetrical,[2] gynecological, and pediatric. Though uniform in basic program, the scope of services of the general hospitals differs considerably. Tradition, neighborhood, affiliation with training and teaching programs, availability of special equipment and other factors, some tangible, others intangible, impress a stamp of individuality on each general hospital.

Four general hospitals have special tuberculosis divisions, one of which, Metropolitan, is as large as a sizable tuberculosis hospital. Five of the general hospitals, in addition to the newborn nursery connected with the obstetrical service, operate a center for the care of premature infants as part of their pediatric service. Infants are admitted to such centers both from the newborn nursery of that hospital and from other hospitals.

[1] Neponsit Beach Hospital is physically separated from the other units of the Queens Hospital Center.

[2] Gouverneur Hospital did not operate an obstetrical service at the time of the study.

TABLE 1. UTILIZATION DATA FOR 31 MUNICIPAL HOSPITALS FOR THE PROJECT PERIOD, MAY TO OCTOBER, 1952

Hospital	Inpatient service (Wards)								Newborn nursery			Home-care service
	Bed complement[a]	Average daily census	Occupancy rate[b]	Total patients treated	Patient days	Patients discharged			Bassinets	Births	Newborn days	Patient days
						Total	Alive	Deaths				
General	9,421	8,760	92.7	107,898	1,611,865	96,875	88,880	7,995	575	13,875	72,929	312,687
Bellevue General	1,759	1,433	81.4	15,769	263,624	13,807	12,960	847	44	1,579	8,066	31,582
City	823	760	92.4	6,864	139,896	6,030	5,584	446	27	571	3,622	15,349
Coney Island	253	259	91.7	3,608	47,602	3,352	3,055	297	30	430	2,547	11,855
Cumberland	287	260	90.7	4,135	47,911	3,835	3,633	202	34	751	4,889	14,960
Fordham	414	407	98.3	5,240	74,866	4,751	4,151	600	32	534	3,068	21,452
Gouverneur	177	130	73.6	1,368	23,969	1,261	1,095	166	–	–	–	5,779
Greenpoint	281	256	91.1	3,743	47,098	3,331	3,062	269	32	763	4,350	16,565
Harlem	705	816	115.7	9,877	150,150	8,951	8,233	718	84	2,055	11,433	26,728
Kings County General	1,939	1,762	91.2	26,908	324,107	24,232	22,193	2,039	70	2,192	8,995	56,885
Lincoln	409	401	98.3	5,845	73,756	5,376	4,988	388	51	1,339	6,552	18,873
Metropolitan	1,054	1,029	97.6	7,830	189,345	6,725	6,253	472	40	1,083	5,912	21,259
Morrisania	471	475	100.9	6,414	87,469	5,777	5,244	533	40	1,055	4,451	33,493
Queens General	629	595	94.3	7,051	109,448	6,398	5,445	953	52	777	3,736	37,907
Sydenham	220	177	80.6	3,246	32,624	3,049	2,984	65	39	746	5,308	–
Tuberculosis	4,093	4,075	102.0	7,763	749,723	3,343	3,008	335	–	–	–	24,902
Bellevue Tuberculosis	495	463	93.5	1,798	85,160	1,195	1,100	95	–	–	–	–
Kings County Tuberculosis	585	457	94.3	865	84,047	331	306	25	–	–	–	–
Municipal Sanatorium	420	390	92.8	650	71,681	251	244	7	–	–	–	–
Neponsit Beach	200	187	93.7	269	34,486	74	66	8	–	–	–	–
Sea View	1,402	1,553	110.8	2,452	285,780	877	734	143	–	–	–	–
Seton	434	419	96.1	679	77,049	223	204	19	–	–	–	11,394
Triboro	557	606	108.8	1,050	111,520	392	354	38	–	–	–	13,508
Cancer	524	420	80.5	2,805	77,291	2,349	1,772	577	–	–	–	–
Francis Delafield	229	163	71.2	894	29,991	719	528	191	–	–	–	–
James Ewing	218	187	86.7	1,509	34,451	1,307	1,017	290	–	–	–	–
John E. Jennings	77	70	90.6	402	12,849	323	227	96	–	–	–	–
Psychiatric	1,028	1,054	102.6	15,973	193,987	14,627	14,164	463	–	–	–	–
Bellevue Psychiatric	630	670	106.3	10,160	123,265	9,318	9,054	264	–	–	–	–
Kings County Psychiatric	398	384	96.6	5,813	70,722	5,309	5,110	199	–	–	–	–
Chronic disease	1,472	1,728	117.4	2,572	317,959	819	482	337	–	–	–	15,514
Goldwater Memorial	1,472	1,728	117.4	2,572	317,959	819	482	337	–	–	–	15,514
Communicable disease	945	620	65.7	4,687	114,161	3,939	3,870	69	–	8	42	–
Kingston Avenue	415	333	80.2	1,735	61,215	1,401	1,350	51	–	4	15	–
Queensboro	61	16	26.2	288	2,948	166	163	3	–	2	12	–
Richmondboro	36	13	37.2	183	2,457	168	167	1	–	–	–	–
Willard Parker	433	258	59.7	2,481	47,541	2,204	2,190	14	–	2	15	–

[a] Number of beds at end of project period.
[b] In computing occupancy rates, changes in complement during the project period were taken into account.

Special Hospitals

Of the 17 special hospitals, seven, as shown in Table 1, are tuberculosis hospitals. Some of them render all types of care required by tuberculosis patients in the various stages of their protracted illness. Others are intended for provision of care during certain phases of the disease only. The 4,093 beds in the tuberculosis hospitals constitute the major, but as already mentioned not the exclusive, provision for tuberculosis patients in the departmental system. In general and in other special hospitals 927 additional beds are set apart for these patients.

There are three special cancer hospitals, but all the general hospitals also serve cancer patients in both their medical and surgical wards.

The two psychiatric hospitals are components of the Bellevue and Kings County Hospital Centers. Both provide emergency admission and diagnostic, screening, and referral services. They do not provide long-term psychiatric treatment or custodial care.

There are four special hospitals for communicable diseases. Because of the sharp decrease in the occurrence of these diseases, and particularly in the need for hospitalization of the patients, several wards of the two largest communicable disease hospitals, Willard Parker and Kingston Avenue, have recently been converted to other purposes, chiefly the care of tuberculosis patients.

Only one of the special hospitals, Goldwater Memorial, is exclusively devoted to chronic diseases. In addition to medical care services, it has extensive research and rehabilitation programs. Operation of a new chronic disease hospital, the 1,902-bed Bird S. Coler Memorial Hospital and Home, was begun during the study period. All the general hospitals also share in various degrees in the medical care of the great number of patients with chronic diseases.

A new special hospital, Riverside, was opened within the study period, in July, 1952, for inpatient care of juvenile drug addicts.

Eligibility for Care

The city charter states that the municipal hospitals are "established primarily for the care and treatment of the indigent sick."

Patients who are able to pay, in whole or in part, are required to do so. Payments for many patients come from prepaid hospital care plans, such as Blue Cross, from workmen's compensation insurance, or from other indirect sources.

The rates for care in the municipal hospitals are inclusive of all charges except special duty nursing, for which, if provided, extra charge is made if upon investigation the patient is found to be able to pay for it. There are no extra fees for special medical or surgical service, use of operating room, anesthesia, drugs or medicines, x-ray examination or treatment, or laboratory tests.

As already stated, all inpatient service in the municipal hospitals is classified as ward service.[1] Decisions as to whether patients shall be accommodated in a large ward or in the relative privacy of a smaller room depend upon clinical considerations and not upon the patient's ability to pay. The ability of patients to pay is investigated either before or following admission and in cases of extended hospital stay is reinvestigated periodically. Patients in certain disease groups, however, are exempt from financial investigation. This applies notably to tuberculosis patients, because a state law provides that the city shall be reimbursed in part for its provision of hospital care of tuberculosis patients but that no means test shall be applied to such patients. Although the municipal hospitals are maintained for the care of residents of the city, in emergency any sick person is admitted.

The municipal hospitals are responsible for providing the indigent sick with the amount and type of hospital care they need. Serious discrepancy between the demand for care and the supply of facilities has complicated this task until very recently. As more and more patients required care, the volume of hospital facilities did not increase proportionally. Serious overcrowding in some of the hospitals resulted. Five of the general hospitals operated during the study period at occupancy rates close to or even above 100 per cent, as against a rate of 80 to 85 per cent, which is

[1] Except at Sydenham Hospital, where private and semi-private services are available. This hospital was formerly operated under voluntary auspices. Taken over by the city in 1949, the private and semi-private services were continued. The data on the comparatively few private or semi-private patients were not reported separately for the purpose of this study.

usually accepted as desirable.[1] The special tuberculosis hospitals operated at an average occupancy rate of 102, as against the usually accepted standard of 90 per cent.

THE PATIENTS

Of the 121,952 patients discharged from the wards of the 31 participating hospitals during the study period, four-fifths were from general hospitals, nearly one-eighth from the two psychiatric hospitals, and a little more than one-twelfth from the other special hospitals. The number of discharges, the bed complement,

TABLE 2. PATIENTS DISCHARGED, BED COMPLEMENT, AND AVERAGE DAILY CENSUS, BY TYPE OF HOSPITAL[a]

Type of hospital	Patients discharged		Beds at end of project period		Average daily census	
	Number	Per cent	Number	Per cent	Number	Per cent
Total	121,952	100.0	17,483	100.0	16,657	100.0
General	96,875	79.5	9,421	53.9	8,760	52.6
Under 350 beds	14,828	12.2	1,218	7.0	1,082	6.5
350 to 699 beds	22,302	18.3	1,923	11.0	1,878	11.3
700 beds and over	59,745	49.0	6,280	35.9	5,800	34.8
Special	25,077	20.5	8,062	46.1	7,897	47.4
Tuberculosis	3,343	2.7	4,093	23.4	4,075	24.5
Cancer	2,349	1.9	524	3.0	420	2.5
Psychiatric	14,627	12.0	1,028	5.9	1,054	6.3
Chronic disease	819	.7	1,472	8.4	1,728	10.4
Contagious disease	3,939	3.2	945	5.4	620	3.7

[a] Unless otherwise specified all tables relate to 31 New York City municipal hospitals; all data relate to the six-month period of the project.

and the average daily census for the respective hospitals during the study period, classified by type of hospital, are shown in Table 2.

The number of discharges in this study does not represent an equivalent number of different patients, since most of the patients who were discharged more than once from a municipal

[1] The occupancy rate is the usual yardstick for utilization of hospital inpatient facilities. It is the average daily patient census expressed as a percentage of the bed complement.

hospital during the study period were counted more than once. Some of this duplication reflects hospitalization for distinct illnesses, but in other instances it results from recurring hospital stays, in the same hospital or in different ones, for the same illness. It should be noted, however, that when patients are transferred from one to another hospital within any one of the three municipal hospital centers the transfer is not counted as a discharge.

The terms "patient," "discharge," and "discharged patient" will be used interchangeably in the following portions of this report.

Demographic Characteristics

Among the discharged patients 46 per cent were male and 54 per cent were female. But when obstetrical patients are excluded from consideration, the sex distribution is quite different; the patient load then becomes 55 per cent male and 45 per cent

TABLE 3. PATIENTS, BY SEX AND BY COLOR

Sex	Number			Per cent	
	Total	White	Nonwhite	White	Nonwhite
Total	121,952[a]	79,452	42,333	65.2	34.8
Male	56,146	40,406	15,740	72.0	28.0
Female	65,639	39,046	26,593	59.5	40.5

Color	Per cent	
	Male	Female
Total	46.1	53.9
White	50.9	49.1
Nonwhite	37.2	62.8

[a] Includes 167 patients for whom either color or sex was not reported.

female. When all sex-specific conditions are excluded, the percentages become 57 and 43. In comparison with these proportions, it may be noted that of the city's total population in 1950, only 48 per cent were male.

About 65 per cent of the discharged patients were white and 35 per cent nonwhite, whereas of the total population of the city

only 10 per cent were nonwhite. Such disproportion of nonwhite patients is to be expected because the municipal hospitals accommodate chiefly the indigent and medically indigent. Therefore, the data collected in the study will not reflect the comparative prevalence of disease or the relative need for hospital care by the two color groups in the general population.

The sex and color distribution of the patients is shown in Table 3. It will be seen that the white patients were nearly equally divided by sex, but 63 per cent of the nonwhite patients were female. Obstetrical conditions chiefly account for the excess of the nonwhite female patients.

The age and color distribution of the patients is shown in Table 4. The data of this table give an impression that many

TABLE 4. PATIENTS, BY AGE AND BY COLOR

Age in years	Total		White		Nonwhite	
	Number	Per cent	Number	Per cent	Number	Per cent
Total	121,952[a]	100.0	79,286	100.0	42,217	100.0
Under 1	3,983	3.3	2,214	2.8	1,769	4.2
1 to 4	6,135	5.0	3,679	4.6	2,456	5.8
5 to 14	8,326	6.8	5,750	7.3	2,576	6.1
15 to 24	20,008	16.5	10,461	13.2	9,547	22.6
25 to 34	22,362	18.4	10,574	13.3	11,788	27.9
35 to 44	15,472	12.7	9,237	11.7	6,235	14.8
45 to 54	13,075	10.8	9,536	12.0	3,539	8.4
55 to 64	12,466	10.3	10,376	13.1	2,090	5.0
65 to 74	12,368	10.2	10,791	13.6	1,577	3.7
75 and over	7,308	6.0	6,668	8.4	640	1.5

[a] Includes 449 patients for whom age, color, or condition on discharge was not reported.

wards of the municipal hospitals convey, namely, that the numbers of nonwhite patients in the younger and middle ages are almost as large as the numbers of white patients, while most of the aged patients are white. The age distribution of the two color groups shown by the percentages of this table are strikingly different, almost two-thirds of the nonwhite patients being in the age span 15 through 44 years, as compared with less than two-fifths of the white patients. This difference is explained in part by

the large number of nonwhite obstetrical patients. The number of nonwhite patients exceeds the number of whites only in the group 25 through 34. Their number declines steadily beyond middle age, whereas for the white patients a second peak is reached between 55 and 74 years. Yet in proportion to their numbers in the population, the nonwhite patients greatly outnumber the white patients at all ages.

Table 5 compares the age-color ratios of patients to the population of the city. In each age group the nonwhite ratios are much higher than those for whites. Of nonwhite infants under one year of age, 106 per thousand are treated in municipal hospitals,

TABLE 5. PATIENTS PER 1,000 POPULATION, BY AGE AND BY COLOR[a]

Age in years	Patients per 1,000 population		
	Total	White	Nonwhite
Total	15.5	11.1	54.4
Under 1	31.8	20.4	106.3
1 to 4	11.3	7.7	39.9
5 to 14	8.5	6.6	24.9
15 to 24	18.8	11.0	81.1
25 to 34	17.2	9.3	70.5
35 to 44	11.8	7.9	44.1
45 to 54	11.4	9.1	37.6
55 to 64	15.3	13.5	46.4
65 to 74	27.8	25.5	72.8
75 and over	45.6	43.4	97.6

[a] 1950 population data for New York City were used.

while only 20 per thousand white infants of the same age reach the municipal hospitals. These high ratios for nonwhite patients under one year of age are not explained by infants born in the hospitals and cared for only in the newborn nurseries (who are not counted as patients[1]); they reflect rather the large number of nonwhite infants admitted to the pediatric services. Except for infants, the highest ratios for nonwhites are those for the childbearing ages and for the aged.

[1] See p. 27.

Classification by Diagnosis

It has been explained in Chapter 2 that the medical diagnoses of the patients were reported for use in the study in the detail of the Standard Nomenclature, and were summarized in the process of analysis by classification both into the ISC diagnostic categories and into the fewer categories of the authors' Summary List. Both of these classifications, it has been explained, are inclusive of the full range of diagnoses covered by the Standard Nomenclature.

TABLE 6. DISTRIBUTION OF INTERNATIONAL STATISTICAL CLASSIFICATION (ISC) AND OF SUMMARY LIST (SL) DIAGNOSES BY FREQUENCY OF OCCURRENCE

Frequency	Number of diagnoses of specified frequency	Patients involved	
		Number	Per cent
ISC DIAGNOSES			
Total	955	121,952	100
5,000 or more	1	13,944	11
2,500 to 4,999	3	12,193	10
1,500 to 2,499	5	10,301	8
1,000 to 1,499	12	14,005	11
500 to 999	31	22,573	19
250 to 499	40	14,071	12
25 to 249	359	30,516	25
Under 25	504	4,349	4
SL DIAGNOSES			
Total	196	121,952	100
5,000 or more	2	18,972	16
2,500 to 4,999	7	23,515	19
1,500 to 2,499	8	15,856	13
1,000 to 1,499	11	14,072	12
500 to 999	36	25,993	21
250 to 499	37	13,413	11
1 to 249	94	10,131	8
None	1	–	–

Table 6 is concerned with the numbers of patients included in the diagnostic categories of these respective classifications. It

will be seen that in each section of the table a few diagnostic categories account for relatively large numbers of patients. In the ISC list the 21 most frequently occurring diagnoses account for about 40 per cent of all discharges. On the other hand, the 504 ISC diagnoses which occurred least frequently account for only 4 per cent. It is this infrequency of occurrence of more than half

TABLE 7. PERCENTAGE OF PATIENTS FOR WHOM ONE OR MORE ADDITIONAL DIAGNOSES WERE REPORTED, FOR SELECTED DIAGNOSES

SL diagnosis and code number	Per cent
ACUTE CONDITIONS	
Hypertrophy of tonsils and adenoids, 109	5.9
Scarlet fever, 14	11.3
Acute appendicitis, 119	16.1
Gastro-enteritis, colitis, 123	21.7
Lobar pneumonia, 105	42.4
Bronchopneumonia, 106	44.4
Acute rheumatic fever, 90	44.6
Internal injury of chest, abdomen, and pelvis, 195	50.3
Concussion of brain, 193	50.7
Otitis media without mention of mastoiditis, 87	51.9
Burns, 199	52.2
Fracture of skull, 184	64.8
CHRONIC CONDITIONS	
Cataract, 84	28.1
Ulcer of stomach, 116	29.7
Glaucoma, 85	31.9
Asthma, 56	34.7
Acute rheumatic heart disease, 91	35.2
Syphilis of central nervous system, 9	35.3
Senile psychosis, 66	35.7
Tuberculosis of respiratory system, 1	37.9
Varicose veins of lower extremities, 99	39.5
Coronary artery disease, 94	44.7
Chronic rheumatic heart disease, 93	45.0
Cholecystitis without mention of calculi, 132	45.5
Cirrhosis of liver, 130	46.3
Bronchitis, 108	48.9
Other arteriosclerotic and degenerative heart disease, 95	49.8
Hypertensive disease, 97	52.3
Bronchiectasis, 113	54.1
Hyperplasia of prostate, 141	54.4
Benign neoplasm of uterus, 49	57.5
Other vascular lesions affecting central nervous system, 75	58.1
Cerebral hemorrhage, embolism, and thrombosis, 74	67.5
Diabetes mellitus, 59	68.2
General arteriosclerosis, 98	68.9

of the diagnoses of the ISC list that makes a still more condensed list of diagnoses desirable for the analysis of morbidity data. In the Summary List the nine most frequently occurring categories account for 35 per cent of all the discharged patients.

Tabulation was not made of the diagnoses reported in addition to the main diagnoses, but the fact of reporting an additional diagnosis was tabulated. Additional diagnoses would be expected mainly in connection with long-term hospital stays, and especially with chronic diseases. Table 7 bears out this expectation to some extent but also shows that for some acute conditions additional diagnoses were frequently reported.

The Seasonal Factor

The patients discharged from the participating hospitals during the six months selected for the study comprised a little less than half of the total number discharged during the full year 1952. Of patients discharged alive during the year, 49 per cent

TABLE 8. PERCENTAGE DISTRIBUTION BY MONTH OF PATIENTS DISCHARGED ALIVE AND OF DEATHS, ALL MUNICIPAL HOSPITALS, 1952

Month	Patients discharged alive	Deaths
Total	100.0	100.0
January	8.8	9.1
February	8.5	8.8
March	9.2	9.4
April	8.8	8.3
May	8.9	8.4
June	8.5	8.6
July	8.3	7.9
August	8.0	7.1
September	7.5	7.3
October	8.0	8.4
November	7.5	8.1
December	8.0	8.6

left the hospitals during the period of the study; of total deaths, 48 per cent occurred during these months. Table 8 compares for all municipal hospitals the percentage distributions by month of

patients discharged alive and of deaths during the full year. In both columns of the table the percentages are similar from month to month.

As stated earlier, the data for the six-month period are not adequate for analysis of the seasonal influence in hospital morbidity by diagnosis, since for some diseases the months omitted are those for which more frequent admissions to the hospitals would be expected.

Chapter IV

SPECIFIC DIAGNOSES BY SEX, COLOR, AND AGE

In chapter 3 some effects of excepting certain large diagnostic groups in making general statements about the influence of demographic characteristics were shown. The difficulties of isolating the effect of the several demographic factors that may influence the incidence of disease were also suggested. In this chapter the problem is approached from the standpoint of specific diagnoses.

Appendix Table 55 contains the detailed classification by age and sex of white and of nonwhite patients in each of the 196 Summary List diagnostic categories. In the present discussion, however, it will be helpful to confine attention to a smaller number of diagnoses, and for this purpose the 53 ISC diagnoses that were reported for 500 or more patients have been selected. Data for these most frequently reported specific diagnoses are contained in Tables 9 and 11.[1] The diagnoses are listed in these tables in the sequence of the ISC code numbers. These 53 diagnoses account for 77,277 patients, or 63 per cent of the total number.

Diagnosis and Sex

The distribution of patients by sex is of great importance to the hospital planner and administrator, since in most hospital services separate accommodations have to be provided for each sex. For municipal hospitals where ward care is the rule, the proportion of patients of each sex to be accommodated is of particular con-

[1] The 53 diagnoses contained in these tables are ISC 3-digit categories, with the exception that the 3-digit category 420, arteriosclerotic heart disease, including coronary disease, is divided into 420.0 and 420.1.

TABLE 9. PATIENTS WITH ISC DIAGNOSES ACCOUNTING FOR 500 OR MORE DISCHARGES, BY DIAGNOSIS, SEX, AND COLOR

Diagnosis and ISC code number	Number of patients[a]					Per cent male	Per cent nonwhite		
	Total	Male	Female	White	Non-white		Total	Male	Female
Pulmonary tuberculosis, 002	4,896	3,344	1,538	3,045	1,834	68.5	37.5	34.8	43.6
Acute poliomyelitis, 080	596	347	249	512	84	58.2	14.1	15.0	12.9
Measles, 085	880	483	395	619	259	55.0	29.4	28.8	30.4
Chickenpox, 087	616	336	280	454	162	54.5	26.3	26.8	25.7
Malignant neoplasm of lung and bronchus, 163	517	448	69	453	64	86.7	12.4	12.5	11.6
Uterine fibromyoma, 214	875	–	875	215	658	–	75.2	–	75.2
Asthma, 241	913	443	469	597	314	48.6	34.4	32.3	36.5
Diabetes mellitus, 260	1,486	550	932	1,081	400	37.1	26.9	24.4	28.5
Schizophrenic disorders, 300	3,830	1,827	2,000	2,941	869	47.7	22.7	21.6	24.0
Involutional melancholia, 302	660	194	465	610	48	29.4	7.3	4.1	8.6
Senile psychosis, 304	1,081	377	703	970	107	34.9	9.9	8.8	10.8
Psychosis with cerebral arteriosclerosis, 306	1,097	620	475	961	128	56.6	11.7	12.1	11.4
Alcoholic psychosis, 307	1,507	1,224	278	976	516	81.5	34.2	34.9	33.5
Psychosis of other demonstrable etiology, 308	601	358	243	462	133	59.6	22.1	21.8	23.5
Other and unspecified psychoses, 309	525	261	264	404	114	49.7	21.7	23.8	20.1
Neurotic-depressive reaction, 314	686	286	400	560	123	41.7	17.9	18.2	17.8
Pathological personality, 320	619	459	160	441	178	74.2	28.8	26.4	35.6
Alcoholism, 322	2,960	2,329	626	2,137	783	78.8	26.5	26.0	30.8
Cerebral hemorrhage, 331	1,121	576	545	893	214	51.4	19.1	15.3	24.0
Cerebral embolism and thrombosis, 332	907	499	407	742	162	55.1	17.9	16.0	20.1
Epilepsy, 353	603	391	211	328	262	65.0	43.4	43.0	47.9
Arteriosclerotic heart disease, 420.0	3,699	2,180	1,514	3,177	513	59.0	13.9	12.1	16.6
Heart disease involving coronary arteries, 420.1	1,179	825	353	1,100	70	70.0	5.9	5.5	7.4
Other and unspecified hypertensive heart disease, 443	2,229	992	1,236	1,570	654	44.5	29.3	28.5	30.1
General arteriosclerosis, 450	592	343	248	502	89	58.0	15.0	14.9	15.3
Varicose veins of lower extremities, 460	604	346	257	511	92	57.4	15.2	15.3	15.2
Acute nasopharyngitis, 470	823	478	345	464	358	58.1	43.5	41.8	46.1
Acute tonsillitis, 473	825	402	422	442	382	48.8	46.3	44.8	47.9
Lobar pneumonia, 490	728	480	248	358	370	65.9	50.8	52.1	48.4
Bronchopneumonia, 491	1,311	772	537	796	513	59.0	39.1	41.6	35.8

Hypertrophy of tonsils and adenoids, 510	1,074	497	576	721	352	46.3	32.8	29.8	35.4
Ulcer of duodenum, 541	644	518	126	488	156	80.4	24.2	23.0	29.4
Acute appendicitis, 550	918	523	393	627	289	57.1	31.5	31.4	31.8
Hernia without mention of obstruction, 560	1,436	1,060	373	943	489	74.0	34.1	32.5	38.6
Gastro-enteritis and colitis, except ulcerative, 571	814	430	383	496	317	52.9	38.9	34.4	44.1
Cirrhosis of liver, 581	821	581	240	668	152	70.8	18.5	16.4	23.8
Cholecystitis without mention of calculi, 585	534	136	398	405	129	25.5	24.2	16.9	26.6
Infections of kidney, 600	516	101	414	296	219	19.6	42.4	33.7	44.7
Hyperplasia of prostate, 610	770	770	–	677	93	100.0	12.1	12.1	–
Redundant prepuce and phimosis, 615	618	618	–	216	401	100.0	64.9	64.9	–
Other complications arising from pregnancy, 648	1,562	–	1,562	591	969	–	62.0	–	62.0
Abortion without mention of sepsis or toxemia, 650	3,598	–	3,598	1,548	2,040	–	56.7	–	56.7
Delivery without complication, 660	13,944	–	13,944	6,285	7,640	–	54.8	–	54.8
Cellulitis and abscess, 692	1,282	761	520	869	411	59.4	32.1	30.1	35.2
Prematurity, 776	932	475	457	421	505	51.0	54.2	54.1	54.3
Observation without need for further medical care, 793	1,279	601	675	780	494	47.1	38.6	30.0	46.5
Ill-defined and unknown conditions, 795	844	433	410	556	283	51.4	33.5	30.3	38.0
Fracture of face bones, 802	745	561	184	511	228	75.3	30.6	29.2	37.0
Fracture of radius and ulna, 813	1,097	641	456	867	225	58.4	20.5	20.7	20.2
Fracture of femur, 820, 821	1,008	383	625	904	104	38.0	10.3	13.6	8.3
Fracture of tibia and fibula, 823	1,150	720	429	823	326	62.6	28.3	28.2	28.7
Open wound of scalp, 850	811	619	190	527	274	76.5	33.8	33.0	37.9
Concussion of brain, 852	1,914	1,314	598	1,244	644	68.7	33.6	31.7	39.3

[a] Numbers include the discharges with no report on color or sex.

cern. In other hospitals private and semi-private rooms permit a greater degree of flexibility. In the New York municipal hospitals only the pediatric services, which accommodate children usually through the age of 12 years, are without segregation by sex.

Sex-Specific Conditions. Chapter 3 has shown that a majority of the patients reported for this study were females, 54 per cent, but that when obstetrical patients are omitted, males predominated with 55 per cent of the total. There are, however, other sex-specific diagnoses that deserve consideration.

Among the 53 diagnoses included in Table 9, four are exclusively female conditions, namely, uterine fibromyoma and the three major obstetrical diagnoses—delivery without complication, abortion without mention of sepsis or toxemia, and other complications arising from pregnancy. These four, with other exclusively female conditions, account for 25,525 patients, or over one-fifth of the total number reported in the study.

Two of the 53 diagnoses are exclusively male conditions, namely, hyperplasia of prostate and redundant prepuce and phimosis. They, together with exclusively male conditions not among the most frequently occurring diagnoses, account for 2,020 discharges, or less than 2 per cent of the total number.

When all the sex-specific diagnoses are excluded, the excess of males over females becomes even more marked. Males comprised 57 per cent of all the patients having nonsex-specific diseases, although only 48 per cent of the city population was male.

Among the 47 ISC diagnoses in which both sexes are represented, there are 36 in which males were more than 48 per cent of the total, that is, a higher proportion than the males in the general population of the city, leaving only 11 for which the proportion of female patients exceeds the female population of the city.

Conditions with Predominance of Males. Among the 36 predominantly male diagnoses is prematurity. Of the premature infants, 51 per cent were male. This proportion corresponds almost exactly to the sex ratio for all births in the city.

Among the 35 diagnoses in which males predominate, excluding prematurity, the highest proportion of men, 87 per cent, was reported for malignant neoplasm of the lung and bronchus. This proportion tends to support the view frequently advanced that this condition, now under intensive scientific investigation concerning etiology, is much more common among men than among women.

Next in proportion is alcoholic psychosis, with 82 per cent male. Two other diagnoses with alcohol as etiology, namely, alcoholism and cirrhosis of liver due to alcohol, are also high on the list, their percentages of male patients being 79 and 71 respectively.

Males accounted for 80 per cent of the patients with ulcer of the duodenum, 74 per cent of those with hernia of abdominal cavity without obstruction, 57 per cent of those with acute appendicitis, and 53 per cent of those with gastro-enteritis and colitis.

Most of the traumatic conditions, especially those of the head and brain, are found considerably more frequently among the male patients. As many as 77 per cent of patients with open wound of the scalp were male, 75 per cent of those with fracture of the face bones, and 69 per cent of those with concussion of the brain. The male proportion is high also for fractures of the tibia and fibula, 63 per cent, and fractures of radius and ulna, 58 per cent.

Nearly 69 per cent of the patients with pulmonary tuberculosis were male. This figure closely matches other epidemiological data, such as those on tuberculosis mortality and on tuberculosis prevalence in this city. For lobar pneumonia the proportion was 66 per cent and for bronchopneumonia 59 per cent male.

All but one of the diseases of the circulatory system included among the most frequently reported ISC diagnoses are predominantly male. Included are heart disease involving coronary arteries, arteriosclerotic heart disease, general arteriosclerosis, and varicose veins of the lower extremities.

The predominance of male patients with the diagnosis of varicose veins, a condition usually regarded as typically female, may

seem strange. However, it should be remembered that these are main diagnoses and that varicose veins is a frequent secondary diagnosis of women hospitalized for obstetrical and gynecological conditions.

In addition to alcoholic psychosis, four other of the psychiatric categories in Table 9 show a preponderance of male patients. Among them is included the diagnosis psychosis with cerebral arteriosclerosis, with 57 per cent male. Three diseases of the nervous system are also male predominant—epilepsy, cerebral embolism and thrombosis, and cerebral hemorrhage.

The male predominance of acute poliomyelitis, 58 per cent, is consistent with known epidemiological facts. Measles is likewise known to be more prevalent among male than female children.

Conditions with Predominance of Females. The 11 nonsex-specific diagnoses with female predominance include six in which 60 per cent or more of the patients were women. The excess of female patients is particularly remarkable for infections of the kidney, 80 per cent, and cholecystitis without mention of calculi, 75 per cent.

The high rate of female patients with involutional melancholia, nearly 71 per cent, may be explained by the fact that physicians often use this diagnostic term for psychiatric conditions occurring in association with the menopause. The patients with neurotic depressive reaction, 58 per cent female, probably likewise include women with climacteric conditions. There is also an excess of female patients with the diagnosis senile psychosis, 65 per cent being women. The preponderance of female patients with diabetes mellitus, 63 per cent, and fracture of femur, 62 per cent, corresponds with frequent observations on the incidence of these conditions.

For hypertrophy of tonsils and adenoids the proportion of females is 54 per cent. The excess of females for this diagnosis is explained by a relatively large number of adult female patients, the indication for tonsillectomy probably being established in the course of a prenatal health examination.

Sex Distribution Shown by the Summary List. Examination of Appendix Table 55 confirms the conclusion drawn from the data

for the 53 most frequently occurring ISC diagnoses, namely, that most of the nonsex-specific conditions that lead to hospitalization in the municipal hospitals show male predominance.

Among 145 diagnostic categories included in the Summary List for which at least 100 patients were reported, 16 were female sex-specific and three were male sex-specific. Of the 126 remaining large groups in the Summary List, 98 had proportions of males above the average for males in the general population.

Diagnosis and Age

Table 10 is concerned with the distribution of all patients by age and sex. The percentage distributions by age of both male and female patients are shown, first for all diagnoses combined, and then after omitting the patients having sex-specific diagnoses.

TABLE 10. PERCENTAGE DISTRIBUTION BY AGE OF ALL PATIENTS AND PATIENTS OTHER THAN THOSE WITH SEX-SPECIFIC DIAGNOSES, BY SEX

Age in years	Male patients		Female patients	
	Total	Other than those with sex-specific diagnoses	Total	Other than those with sex-specific diagnoses
Total	100.0	100.0	100.0	100.0
Under 1	4.0	3.9	2.7	4.3
1 to 4	6.6	6.3	3.7	6.1
5 to 14	9.2	9.3	4.8	7.7
15 to 24	8.6	8.7	23.2	11.3
25 to 34	11.9	12.2	24.0	13.9
35 to 44	12.9	13.3	12.6	13.0
45 to 54	13.9	14.2	8.1	11.3
55 to 64	13.5	13.5	7.5	11.3
65 to 74	12.8	12.4	7.9	12.3
75 and over	6.6	6.2	5.5	8.8

The age distribution of males is not greatly changed by elimination of the sex-specific diagnoses; the proportions in age groups under 5 years and over 65 years become slightly smaller because one of the two male-specific conditions affects almost exclusively the very young males and the other occurs predominantly among the aged. The two age distributions for females, however, are

TABLE 11. PATIENTS WITH ISC DIAGNOSES ACCOUNTING FOR 500 OR MORE DISCHARGES, PERCENTAGE DISTRIBUTION BY AGE, BY SEX, COLOR, AND DIAGNOSIS

Diagnosis and ISC code number	Male					Female					White					Nonwhite				
	Under 15 years	15–24 years	25–44 years	45–64 years	65 years and over	Under 15 years	15–24 years	25–44 years	45–64 years	65 years and over	Under 15 years	15–24 years	25–44 years	45–64 years	65 years and over	Under 15 years	15–24 years	25–44 years	45–64 years	65 years and over
Pulmonary tuberculosis, 002	4.9	8.7	37.0	40.4	9.0	8.3	26.5	49.0	11.5	4.7	5.3	12.6	34.1	37.9	10.1	7.1	17.0	52.0	20.5	3.4
Acute poliomyelitis, 080	77.2	15.3	6.3	1.2	–	67.1	20.9	12.0	–	–	70.3	19.7	9.2	0.8	–	89.3	4.8	5.9	–	–
Measles, 085	97.7	0.8	1.4	–	–	96.4	1.3	2.0	0.3	–	97.1	0.9	1.8	0.2	–	97.3	1.2	1.5	–	–
Chickenpox, 087	81.5	9.2	8.1	–	1.2	87.1	6.8	5.4	0.7	–	81.5	9.3	7.9	0.4	0.9	91.4	4.9	3.7	–	–
Malignant neoplasm of lung and bronchus, 163	–	–	5.6	65.2	29.2	–	–	14.5	37.7	47.8	–	–	5.7	62.3	32.0	–	–	14.1	56.2	29.7
Uterine fibromyoma, 214	–	–	–	–	–	–	1.6	75.0	22.6	0.8	–	0.5	58.1	40.5	0.9	–	2.0	80.4	16.7	0.9
Asthma, 241	20.1	5.9	17.4	39.2	17.4	13.0	12.4	38.4	26.4	9.8	12.6	8.0	22.9	37.4	19.1	23.9	11.4	38.2	23.6	2.9
Diabetes mellitus, 260	3.3	3.1	15.6	43.7	34.3	2.5	3.0	13.0	44.3	37.2	2.6	2.8	9.2	42.4	43.0	3.0	3.8	26.7	48.7	17.8
Schizophrenic disorders, 300	6.5	21.7	58.2	13.0	0.6	1.8	19.6	60.0	17.7	0.9	3.8	20.5	57.5	17.3	0.9	5.3	20.8	64.3	9.5	0.1
Involutional melancholia, 302	–	–	2.1	88.1	9.8	–	–	14.0	83.2	2.8	–	–	9.4	85.7	4.9	–	–	25.0	70.8	4.2
Senile psychosis, 304	–	–	0.3	9.3	90.4	–	–	0.1	9.4	90.5	–	–	0.1	9.0	90.9	–	–	0.9	13.1	86.0
Psychosis with cerebral arteriosclerosis, 306	–	–	0.2	24.7	75.1	–	–	0.4	28.5	71.1	–	–	0.3	24.7	75.0	–	–	–	39.1	60.9
Alcoholic psychosis, 307	0.3	2.1	54.2	40.2	3.2	0.4	2.9	62.4	32.1	2.2	–	1.1	46.4	48.6	3.9	–	4.5	73.8	20.3	1.4
Psychosis of other demonstrable etiology, 308	1.4	7.0	30.9	44.1	16.6	2.5	7.4	33.3	35.4	21.4	1.3	5.4	28.3	44.2	20.8	0.8	13.5	45.1	29.3	11.3
Other and unspecified psychoses, 309	1.2	19.0	45.3	27.9	6.6	0.8	15.6	43.9	29.4	10.3	0.5	15.6	41.8	31.9	10.2	1.7	23.7	54.4	17.6	2.6
Neurotic-depressive reaction, 314	0.7	18.2	48.3	26.5	6.3	0.5	30.4	52.3	13.5	3.3	0.3	24.3	47.9	22.1	5.4	0.8	30.1	63.4	4.9	0.8
Pathological personality, 320	0.2	40.8	48.5	9.8	0.7	0.6	39.4	50.6	8.1	1.3	0.2	40.2	47.2	11.3	1.1	0.5	41.6	53.4	4.5	–
Alcoholism, 322	0.3	5.3	53.0	37.4	4.0	0.5	7.1	66.6	22.9	2.9	0.3	4.2	50.9	39.9	4.7	0.5	9.6	69.6	19.3	1.0
Cerebral hemorrhage, 331	0.5	0.4	4.4	45.6	49.1	0.2	0.4	6.8	36.3	56.3	–	0.3	4.4	39.2	56.1	0.5	0.5	10.8	49.5	38.8
Cerebral embolism and thrombosis, 332	–	0.2	2.8	38.4	58.6	–	0.2	5.7	30.8	63.3	–	0.3	3.1	31.5	65.1	–	–	8.7	50.6	40.7
Epilepsy, 353	10.2	13.6	44.0	28.3	3.9	19.2	16.4	40.4	19.7	4.3	15.2	17.1	35.4	27.1	5.2	11.1	11.4	51.9	22.9	2.7
Arteriosclerotic heart disease, 420.0	–	0.1	1.6	32.7	65.6	–	–	1.6	27.3	71.1	–	–	1.3	27.9	70.8	–	0.4	3.1	46.6	49.9
Heart disease involving coronary arteries, 420.1	0.1	0.1	8.3	52.6	38.9	–	–	6.5	37.7	55.8	0.1	0.1	6.9	47.4	45.5	–	–	21.4	62.9	15.7
Other and unspecified hypertensive heart disease, 443	–	0.1	5.0	48.9	46.0	–	0.4	8.0	38.9	52.7	–	0.1	3.6	38.4	57.9	–	0.7	14.1	55.2	30.0
General arteriosclerosis, 450	–	–	1.5	19.2	79.3	–	–	1.2	12.9	85.9	–	–	1.0	15.1	83.9	–	–	3.4	24.7	71.9
Varicose veins of lower extremities, 460	–	1.4	17.0	49.3	32.3	–	4.1	24.1	47.2	24.6	–	2.0	17.2	48.7	32.1	–	5.4	33.7	45.7	15.2
Acute nasopharyngitis, 470	74.6	5.7	10.9	5.9	2.9	66.1	11.0	16.8	4.1	2.0	73.1	6.0	11.0	6.0	3.9	68.4	10.4	16.5	3.9	0.8
Acute tonsillitis, 473	82.6	7.2	7.7	2.0	0.5	62.6	14.2	17.3	5.0	0.9	74.2	10.4	11.1	3.6	0.7	70.1	11.3	14.4	3.4	0.8
Lobar pneumonia, 490	14.6	5.6	38.2	25.3	16.3	20.6	12.5	31.4	14.5	21.0	20.4	7.0	18.1	22.9	31.6	13.0	8.9	53.2	20.3	4.6
Bronchopneumonia, 491	35.6	5.8	17.5	20.7	20.4	38.6	6.3	14.3	17.1	23.7	32.6	4.8	8.5	22.4	31.7	43.3	8.0	27.9	14.4	6.4
Hypertrophy of tonsils and adenoids, 510	86.4	6.6	6.6	0.4	–	68.9	17.4	13.2	0.5	–	81.4	11.8	6.4	0.4	–	67.9	13.6	17.9	0.6	–
Ulcer of duodenum, 541	0.2	3.7	35.1	42.3	18.7	–	7.1	36.5	38.1	18.3	0.2	3.7	29.3	45.1	21.7	–	6.4	54.5	30.1	9.0
Acute appendicitis, 550	34.0	23.3	27.0	11.7	4.0	31.6	33.8	21.6	8.4	4.6	33.7	28.4	22.0	10.5	5.4	31.5	26.6	30.5	9.7	1.7
Hernia without mention of obstruction, 560	24.2	6.8	16.2	30.8	22.0	23.7	1.6	24.2	28.2	22.3	14.5	4.4	14.4	36.6	30.1	42.5	7.6	25.8	17.6	6.5
Gastro-enteritis and colitis, except ulcerative, 571	44.7	11.9	23.7	13.9	5.8	36.3	17.7	23.0	14.4	8.6	43.6	13.7	18.3	14.9	9.5	36.3	16.1	31.2	12.9	3.5
Cirrhosis of liver, 581	–	0.7	23.1	58.0	18.2	–	1.3	31.0	53.1	14.6	–	0.6	20.2	59.0	20.2	–	2.0	48.0	46.1	3.9
Cholecystitis without mention of calculi, 585	–	1.5	22.0	31.6	44.9	–	7.8	30.9	35.9	25.4	–	3.0	23.7	35.8	37.5	–	16.3	44.2	31.8	7.7
Infections of kidney, 600	9.9	5.9	34.7	25.7	23.8	7.5	37.2	36.7	12.1	6.5	11.1	24.7	33.1	17.6	13.5	3.7	39.7	40.6	11.0	5.0
Hyperplasia of prostate, 610	–	–	1.2	29.2	69.6	–	–	–	–	–	–	–	1.0	27.6	71.4	–	–	2.1	40.9	57.0
Redundant prepuce and phimosis, 615	87.5	5.2	4.4	1.3	1.6	–	–	–	–	–	82.4	6.5	6.0	1.4	3.7	90.3	4.5	3.5	1.2	0.5
Other complications arising from pregnancy, 648	–	–	–	–	–	0.1	48.9	50.7	0.3	–	–	49.6	50.2	0.2	–	0.2	48.5	51.0	0.3	–
Abortion without mention of sepsis or toxemia, 650	–	–	–	–	–	0.1	39.9	59.7	0.3	–	–	37.4	62.1	0.5	–	0.2	41.7	58.0	0.1	–
Delivery without complication, 660	–	–	–	–	–	0.3	50.1	49.5	0.1	–	–	50.3	49.6	0.1	–	0.4	50.0	49.5	0.1	–
Cellulitis and abscess, 692	22.8	8.5	30.3	23.3	15.1	23.1	13.8	22.7	24.4	16.0	22.8	8.3	19.9	28.2	20.8	23.1	15.8	42.6	14.4	4.1
Prematurity, 776	100.0	–	–	–	–	100.0	–	–	–	–	100.0	–	–	–	–	100.0	–	–	–	–
Observation without need for further medical care, 793	20.9	14.4	30.1	21.6	12.8	16.1	20.0	40.0	17.1	6.8	16.1	16.7	30.1	23.0	14.1	21.7	18.4	43.9	13.4	2.6
Ill-defined and unknown conditions, 795	16.3	12.5	28.1	31.3	11.8	9.5	20.3	36.4	24.5	9.3	12.4	14.0	28.6	31.5	13.5	14.1	20.9	38.9	21.2	4.9
Fracture of face bones, 802	10.4	11.2	36.8	32.1	9.5	13.0	16.8	37.0	19.6	13.6	11.9	12.7	27.4	33.7	14.3	9.2	12.3	57.9	18.4	2.2
Fracture of radius and ulna, 813	59.0	10.6	14.6	11.4	4.4	30.9	4.6	15.1	29.2	20.2	49.1	8.2	9.6	20.2	12.9	40.9	8.0	35.1	13.8	2.2
Fracture of femur, 820, 821	18.6	3.4	9.2	22.0	46.8	5.6	1.1	3.9	20.0	69.4	8.0	1.5	3.8	21.1	65.6	32.7	6.7	25.0	17.3	18.3
Fracture of tibia and fibula, 823	21.6	11.4	29.8	27.0	10.2	14.7	6.8	34.1	29.0	15.4	20.1	10.6	3.1	31.6	14.6	16.4	7.4	52.4	17.9	5.9
Open wound of scalp, 850	7.8	13.4	38.8	28.4	11.6	14.8	10.6	35.4	17.5	21.7	8.2	11.9	27.0	32.6	20.3	12.1	14.2	59.1	12.8	1.8
Concussion of brain, 852	34.9	14.7	28.2	15.8	6.4	27.3	16.9	28.5	16.4	10.9	30.2	17.6	23.2	18.9	10.1	37.4	11.3	38.5	10.6	2.2

markedly different; the omission of patients with obstetrical conditions greatly reduces the high proportion of females from 15 to 35 years of age.

"*Age-Specific*" *Diseases*. The discrepancies between the sex proportions for various age groups result partly from the kinds of diagnoses that bring persons of different ages to the hospital. For certain periods of life there may be said to be "age-specific" diseases, although such diseases are not usually limited to particular age groups. Other diseases afflict persons within wide ranges of age, some without any obvious influence of the age factor and others with definite tendency to change in frequency, either increasing or decreasing, with advance in age.

Table 11 shows for each of the 53 most frequently reported ISC diagnoses the age distribution of male and female and also of white and nonwhite patients. Although broad age categories are used in this table, the figures illustrate the well-recognized wide differences in age distribution for various specific diseases. They also show the expected general similarity of the age distributions for the two color groups.

For six conditions—measles, chickenpox, hypertrophy of tonsils and adenoids, acute poliomyelitis, acute tonsillitis, and acute nasopharyngitis—more than 70 per cent of the patients were children under 15 years. While the first four of these diseases are conditions for which a predominance of children is usual, the high proportions of child patients with acute tonsillitis and acute nasopharyngitis reflect a feature typical to hospital rather than to general morbidity, and particularly to hospital morbidity among the indigent. Acute nasopharyngitis—the common cold—as a rule does not require hospital care But children suddenly afflicted with high temperature may be admitted promptly to a hospital, especially when unfavorable living conditions complicate care at home. In such situations the condition may often prove to be only the common cold. Similar explanation may account for an important proportion of hospitalized tonsillitis cases.

In the age group 15 to 24 years the most frequent diagnosis is normal delivery. Fifty per cent of all patients with this diagnosis

are in this age group, and they comprise 46 per cent of all female patients of this age. While normal deliveries are equally divided between women under 25 years and those 25 years and over, 60 per cent of the patients having abortions are 25 or over.

For three of the psychiatric conditions, for both sexes, more than half of the patients are in the 25 to 44-year age group. They are schizophrenic disorders, alcoholic psychoses, and alcoholism.

The age group 45 to 64 years is particularly significant for malignant neoplasms of lung and bronchus, heart disease involving coronary arteries, and cirrhosis of the liver. These are conditions in which the aggregate number of males greatly exceeds that of females.

Senile psychosis, psychosis with cerebral arteriosclerosis, and general arteriosclerosis are found, as is to be expected, primarily in the age group 65 years and over. To a less extent, also, arteriosclerotic heart disease, cerebral embolism and thrombosis, cerebral hemorrhage and heart disease involving coronary arteries are found predominantly among patients in the advanced age group.

Diagnosis and Color

Nonwhite patients are represented in relatively very high proportions for some diagnoses and in relatively very small proportions for others. The most striking predominance of nonwhite patients, as shown in Table 9, is among women with uterine fibromyoma, for which the proportion nonwhite is 75 per cent. For the three obstetrical diagnoses included in the table, 55, 57, and 62 per cent of the patients were nonwhite.

Of the infants with the diagnosis prematurity, 54 per cent were nonwhite. This is almost the same as the proportion nonwhite among women delivered in the municipal hospitals during the study period. But inasmuch as some of the premature infants cared for in the municipal hospitals are transferred from voluntary hospitals, this correspondence may lack significance.

Nonwhites are also substantially overrepresented in comparison with their general proportion among the patients for the

diagnoses redundant prepuce and phimosis (explained by the high proportion of nonwhite women delivered), lobar pneumonia, acute tonsillitis, acute nasopharyngitis, epilepsy, and infections of the kidney.

On the other hand, the proportions of nonwhites are relatively small for the following conditions: heart disease involving coronary arteries, involutional melancholia, senile psychosis, fracture of the femur, psychosis with cerebral arteriosclerosis, hyperplasia of prostate, malignant neoplasm of lung and bronchus, acute poliomyelitis, arteriosclerotic heart disease, general arteriosclerosis, varicose veins of the lower extremities, cerebral embolism and thrombosis, neurotic-depressive reaction, cirrhosis of liver, cerebral hemorrhage.

Relatively small proportions of nonwhite patients for diseases that are associated with old age are not surprising, since higher death rates of nonwhites and the smaller proportion of nonwhites in the upper-age groups in the general population would tend to reduce the proportion of nonwhites for these conditions. The scarcity of nonwhites for malignant neoplasm of the lung and bronchus, heart disease involving coronary arteries, and acute poliomyelitis, however, is less readily explainable.

Color and Age. Some of the differences in the age distribution between the color groups are worth special mention. The figures of this study for pulmonary tuberculosis are in accordance with the epidemiological observation that the shift in prevalence of tuberculosis toward the higher age bracket has been more pronounced among white than among nonwhite persons.

The high frequency of fibromyoma of the uterus among nonwhite women has already been mentioned. It is important to note here that the nonwhite women hospitalized for this condition were considerably younger than the white ones, the proportions of these patients under 45 years of age being 82 per cent for nonwhites and only 59 per cent for whites.

Fifty per cent of the nonwhite patients with hernia without obstruction were under 25 years of age as compared with only 19 per cent of the white patients. One wonders what the reason for this striking difference may be.

In contrast to these marked differences in age distribution, there is close correspondence between the age distributions of the two color groups for women with both normal and pathological obstetrical conditions.

Color and Sex. As might be expected, the proportions of nonwhite male and nonwhite female patients for most of the nonsex-specific diagnoses included in Table 9 are similar. It is the large number of nonwhite obstetrical patients that accounts for the greater proportion of nonwhites among all female than among all male patients.

Among the male patients, nonwhites contribute at one extreme only 4 per cent of the cases for involutional melancholia, and at the other extreme 65 per cent of the cases of redundant prepuce and phimosis.

Among women patients, the lowest proportion of nonwhite is 7 per cent for heart disease involving coronary arteries, and the highest proportion is 75 per cent for uterine fibromyoma.

Some of the differences in the distribution by color of patients with given conditions are related to the different age composition of the two population groups. But in other instances, the differences, involving as they do a complexity of biological, social, economic, and other factors, cannot be readily explained. It seems evident, as has already been indicated, that the high proportion of nonwhite obstetrical patients is due to the economic disadvantages of this portion of the city's population. But what is the explanation for the extremely high proportion of nonwhite women with fibromyoma of the uterus? Do nonwhite women have a higher disposition than white women for this type of neoplasm, or is this merely a result of the high cost of operations, which bring a larger proportion of nonwhite women to the municipal hospitals?

Chapter V

LENGTH OF STAY AND CONDITION ON DISCHARGE

Increasingly, in recent years use has been made of statistical measurements as an aid in describing the services and in judging the effectiveness of hospitals, especially of their medical care programs. The two items most commonly used for these purposes, both for comparison of different hospitals and of the same hospital at different times, are the average length of stay of patients and the proportion of patients dying in the hospital. Comparison of the length of stay has usually been made in terms of general averages covering all patients discharged during a given period. Death rates have been computed both as gross general rates covering all deaths in the hospital in the period, and also as net general rates excluding the deaths occurring within 48 hours following admission.

In placing confidence in such general measurements, sight is lost of the fact that, when applied to any competently operated institution, it is the specific composition of the patient load rather than the effectiveness of the services and their administration that is likely to have most influence on these averages and rates. The composition by diagnosis is probably the most important determining factor. The effect of differences in the proportion of patients with particular diseases on the general average length of stay and on the general death rate for a hospital can, in fact, be so great that, unless it can be assessed and due account taken of it, these averages are meaningless.

The data of this chapter will illustrate the importance of recognizing variations in length of stay and in the proportion of deaths of patients with different characteristics, and particularly with different diagnoses.

LENGTH OF STAY

In this project, the length of stay of each discharged patient was recorded in hours under two days, and in number of completed days thereafter. For purposes of analysis, the recorded lengths of stay were classified in the process of machine tabulation into 16 categories. These categories and their frequencies among the nearly 122,000 patients are shown in Table 12. The discussion of duration of hospital stay in this and later chapters deals with data on length of stay in these categories or in summarizations of them. It should be noted that two of the categories, 7 to 13 days and 14 to 30 days, proved to be too broad for meaningful analysis of some of the disease groups. Their subdivision for routine morbidity reporting is therefore recommended in Chapter 14.

TABLE 12. ALL PATIENTS, BY LENGTH OF STAY

Length of stay	Number	Per cent
Total	121,952[a]	100.0
Under 24 hours	10,666	8.7
24 to 47 hours	6,262	5.1
2 days	5,485	4.5
3 days	8,108	6.7
4 days	9,230	7.6
5 days	9,788	8.0
6 days	8,230	6.8
7 to 13 days	26,725	21.9
14 to 30 days	20,621	16.9
31 to 60 days	8,847	7.3
61 to 90 days	2,869	2.4
91 to 135 days	1,763	1.4
136 to 180 days	856	0.7
181 to 365 days	1,375	1.1
366 to 730 days	725	0.6
731 days and over	357	0.3

[a] Includes 45 patients for whom length of stay or condition on discharge was not reported.

Twenty-five per cent of all the patients were discharged in less than four days and another 22 per cent within the next three days. At the other extreme, 4 per cent stayed in the hospital for

more than three months. In the provision of hospital care, of course, the comparatively few long-stay patients count very heavily.

Diagnostic Differences

The distribution of patients with each of the 53 ISC diagnoses which accounted for at least 500 discharges is shown for eight length-of-stay categories in Table 13. The first impression gained from this table is that patients remained in the hospital for widely varying lengths of stay, regardless of the specific diagnosis, or whether the disease was acute or chronic. For 52 of the 53 diagnoses, patients were discharged within each of the six intervals comprising the first two months. Even in the two long-stay categories, 61 to 90 days and 91 days and over, patients with most of the diseases are found.

On closer inspection, some grouping of the diagnoses in terms of duration of stay emerges. Thus, if the term "short stay" is applied to conditions for which at least 60 per cent of the patients were discharged within less than four days' stay, the following are numerically significant short-stay conditions: hypertrophy of tonsils and adenoids, redundant prepuce and phimosis, fracture of radius and ulna, open wound of scalp, and the diagnoses collectively called "other complications arising from pregnancy," which include chiefly women admitted during pregnancy for such manifestations as false labor and threatened abortion. But some of the patients with these and with other minor conditions remained in the hospital for extended periods. Protracted hospitalization of patients with such conditions is probably to be explained by the fact that the reported main diagnosis was not their only pathology. Complication of the main condition, or the presence of another, perhaps chronic, condition, may prolong the hospital stay of these patients.

On the other hand, short hospital stays may occur among patients with serious conditions of all types, including chronic diseases that as a rule require long-term medical care. At least 25 per cent of the patients with the following well-defined chronic conditions were discharged from the hospital after a stay

TABLE 13. PATIENTS WITH ISC DIAGNOSES ACCOUNTING FOR 500 OR MORE DISCHARGES, PERCENTAGE DISTRIBUTION BY LENGTH OF STAY, BY DIAGNOSIS

Diagnosis and ISC code number	Percentage distribution of patients by length of stay							
	Under 48 hours	2 to 3 days	4 to 6 days	7 to 13 days	14 to 30 days	31 to 60 days	61 to 90 days	91 days and over
Pulmonary tuberculosis, 002	3.0	2.6	2.8	6.7	15.7	15.5	10.2	43.5
Acute poliomyelitis, 080	6.5	4.0	14.6	45.5	24.2	2.7	0.3	2.2
Measles, 085	1.6	9.3	63.0	22.1	2.8	0.8	0.2	0.2
Chickenpox, 087	1.3	4.5	39.6	50.0	4.4	–	–	0.2
Malignant neoplasm of lung and bronchus, 163	8.9	5.6	8.7	16.2	23.4	22.7	9.7	4.8
Uterine fibromyoma, 214	3.2	5.6	8.1	33.9	43.0	5.5	0.5	0.2
Asthma, 241	13.6	14.1	23.1	29.9	14.7	3.5	0.4	0.7
Diabetes mellitus, 260	7.8	4.9	12.5	22.8	26.8	12.2	5.7	7.3
Schizophrenic disorders, 300	1.5	3.0	6.7	46.4	34.8	5.8	1.2	0.6
Involutional melancholia, 302	1.8	3.9	7.6	47.7	34.3	4.1	0.3	0.3
Senile psychosis, 304	4.0	1.9	7.8	47.8	30.3	5.8	1.2	1.2
Psychosis with cerebral arteriosclerosis, 306	3.0	3.2	6.3	41.8	36.0	6.7	1.9	1.1
Alcoholic psychosis, 307	3.9	12.8	25.7	32.9	20.7	3.2	0.6	0.2
Psychosis of other demonstrable etiology, 308	4.3	5.0	6.7	32.3	32.1	14.3	3.0	2.3
Other and unspecified psychoses, 309	20.6	19.4	15.8	19.0	19.8	3.6	1.0	0.8
Neurotic-depressive reaction, 314	12.2	19.2	28.1	25.4	11.1	2.8	0.6	0.6
Pathological personality, 320	3.9	4.2	8.4	20.8	51.3	10.5	0.6	0.3
Alcoholism, 322	19.8	24.1	26.7	18.9	8.1	2.1	0.2	0.1
Cerebral hemorrhage, 331	24.7	9.6	11.2	14.9	16.1	9.6	5.2	8.7
Cerebral embolism and thrombosis, 332	12.3	8.6	13.3	21.2	19.5	10.9	3.9	10.3
Epilepsy, 353	24.5	14.1	18.1	24.4	13.3	3.5	1.0	1.1
Arteriosclerotic heart disease, 420.0	12.4	7.0	14.3	23.8	23.9	10.9	3.1	4.6
Heart disease involving coronary arteries, 420.1	28.2	8.4	8.4	12.7	23.5	15.3	2.0	1.5
Other and unspecified hypertensive heart disease, 443	10.5	8.1	13.9	25.3	24.2	11.1	2.5	4.4
General arteriosclerosis, 450	8.6	5.9	9.1	17.9	19.6	15.2	7.1	16.6

Varicose veins of lower extremities, 460	7.5	6.6	15.4	22.4	25.4	14.8	3.3	4.6
Acute nasopharyngitis, 470	9.0	16.7	31.0	31.6	8.5	2.2	–	1.0
Acute tonsillitis, 473	7.0	19.5	38.9	27.6	6.3	0.7	–	–
Lobar pneumonia, 490	6.5	5.6	14.3	32.6	27.5	9.9	1.6	2.0
Bronchopneumonia, 491	6.3	6.5	17.3	37.4	22.2	6.7	1.3	2.3
Hypertrophy of tonsils and adenoids, 510	53.3	32.4	10.0	3.7	0.5	0.1	–	–
Ulcer of duodenum, 541	4.0	5.7	10.7	28.9	33.4	14.2	2.0	1.1
Acute appendicitis, 550	5.2	3.3	22.1	55.3	11.8	2.1	0.2	–
Hernia without mention of obstruction, 560	6.3	4.4	7.5	39.3	32.5	7.0	1.5	1.5
Gastro-enteritis and colitis, except ulcerative, 571	20.5	20.4	23.6	24.4	9.5	1.0	0.4	0.2
Cirrhosis of liver, 581	9.9	10.0	10.7	18.3	24.6	15.1	4.5	6.9
Cholecystitis without mention of calculi, 585	6.6	7.1	13.5	26.6	31.1	11.8	2.4	0.9
Infections of kidney, 600	5.8	10.7	30.0	32.0	15.1	4.3	1.6	0.5
Hyperplasia of prostate, 610	3.9	3.5	6.5	10.5	32.7	28.8	9.0	5.1
Redundant prepuce and phimosis, 615	23.8	47.3	12.8	11.8	3.7	0.6	–	–
Other complications arising from pregnancy, 648	45.6	23.6	18.5	10.8	1.3	0.1	0.1	–
Abortion without mention of sepsis or toxemia, 650	17.0	27.3	37.6	16.0	1.7	0.2	0.1	0.1
Delivery without complication, 660	0.7	11.2	70.4	15.0	2.3	0.3	0.1	–
Cellulitis and abscess, 692	5.5	13.6	27.9	29.9	15.7	5.1	0.9	1.4
Prematurity, 776	21.9	2.5	3.4	6.8	30.4	27.6	5.6	1.8
Observation without need for further medical care, 793	43.0	16.0	13.6	14.2	10.4	2.2	0.4	0.2
Ill-defined and unknown conditions, 795	42.8	15.5	11.9	15.3	11.4	2.3	0.7	0.1
Fracture of face bones, 802	22.6	14.0	20.4	21.9	15.3	4.4	0.5	0.9
Fracture of radius and ulna, 813	56.7	14.0	9.3	9.9	6.7	1.9	0.5	1.0
Fracture of femur, 820, 821	5.7	3.0	3.9	8.5	16.6	22.9	13.8	25.6
Fracture of tibia and fibula, 823	23.7	10.5	13.4	15.6	16.9	11.0	4.6	4.3
Open wound of scalp, 850	58.4	18.4	11.8	7.8	2.8	0.7	–	0.1
Concussion of brain, 852	31.3	19.7	21.8	19.2	6.1	1.4	0.3	0.2

of less than four days: asthma (28 per cent), neurotic-depressive reaction (31 per cent), cerebral hemorrhage (34 per cent), heart disease involving coronary arteries (37 per cent), and epilepsy (39 per cent). Chronic diseases with at least 25 per cent of the discharges occurring within less than seven completed days include: diabetes mellitus (25 per cent), cerebral embolism and thrombosis (34 per cent), arteriosclerotic heart disease (34 per cent), and alcoholic psychosis (42 per cent).

The causes for short hospitalization of patients with these and other long-term diseases are various. For some diagnoses death is an important cause of early discharges, especially for coronary artery disease and cerebral hemorrhage. For many of the patients with psychiatric conditions, the admission to a municipal hospital serves only the purposes of diagnosis and screening. Many of the patients with some long-term conditions, primarily those with cardio-vascular diseases, can leave the hospital as soon as the acute attack that necessitated their admission is over. Patients with other conditions may require a short hospitalization for specific diagnostic or therapeutic measures, such as a lumbar puncture or the tapping of an ascites.

It is thus obvious that for many patients afflicted with a chronic disease, hospitalization may be only an episode in the course of a long-term medical regime. From the clinical point of view, distinction has always been made between acute and chronic, and from the medical care standpoint between short-term and long-term diseases. From the aspect of hospital care, a third distinction emerges, that between short-stay and long-stay diseases.

The operation of home-care services by all but one of the municipal general hospitals has greatly increased the frequency of short-stay hospitalizations. These services make it possible for many patients with chronic diseases to be cared for at home during periods of quiescence of their condition and to return to the wards temporarily in the event of exacerbation.

Among the large group of patients who were in the hospital from 7 to 13 days, accounting for 22 per cent of the total number, were many with surgical conditions. For instance, 39 per cent of the patients with hernia and 55 per cent of those with acute

appendicitis had stays of this duration. As mentioned before, this stay-category, as well as that of 14 to 30 days, is too broad. If, as recommended, future tabulations provide shorter length-of-stay intervals, more meaningful information on patients who require hospital care of such durations will become available.

For only two diagnoses listed in Table 13, pulmonary tuberculosis and fracture of femur, did as many as 60 per cent of the patients studied stay in the hospital more than one month. For more than a third of the premature infants, and of the patients with malignant neoplasm of lung and bronchus, general arteriosclerosis, and hyperplasia of prostate, the stay was more than a month.

Demographic and Other Factors

Age is probably the most important single demographic characteristic determining length of hospital care. In the cross-tabulation of age and length of stay, all patients under 35 years and all hospital stays under seven days were consolidated into

TABLE 14. ALL PATIENTS, PERCENTAGE DISTRIBUTION BY LENGTH OF STAY, BY AGE

Age in years	Percentage distribution by length of stay				
	Under 7 days	7 to 30 days	31 to 90 days	91 to 180 days	181 days and over
Total	47.4	38.8	9.7	2.1	2.0
Under 35	59.1	32.9	5.4	1.2	1.4
35 to 44	46.3	41.2	8.3	2.0	2.2
45 to 54	36.4	44.9	12.7	2.9	3.1
55 to 64	32.3	45.9	15.5	3.5	2.8
65 to 74	29.6	46.3	18.0	3.8	2.3
75 and over	27.6	48.0	17.5	4.0	2.9

single categories. Table 14, which contains this cross-tabulation, demonstrates a close relationship between age of patient and duration of hospital care. The majority of patients under 35 years stayed less than one week. The proportion of patients with stays of this length decreases for each successive age group, and the proportions with longer stays, with minor exceptions, increase with increasing age.

Two reasons may explain this relationship. First, it may be a function of the diseases that bring patients of various ages to a hospital. This was brought out by the analyses presented in Chapter 4. In that chapter Table 11 showed that most of the diagnoses for which the majority of patients were discharged after stays of less than seven days are typical of the younger age groups, for example, the various obstetrical conditions, hypertrophy of tonsils, measles, and redundant prepuce and phimosis. On the other hand, many of the patients who stayed in the hospital for 31 days or more had diseases that are usually found in the older age groups, such as fracture of femur, general arteriosclerosis, and hyperplasia of prostate.

The relationship between age and length of stay might also be explained by the fact that aged patients with given diseases may require more extended hospital care than young persons with the same conditions. That this is so only to a minor extent will be shown in Chapter 13, in which the hospitalization of aged patients is discussed.

Socioeconomic and other factors related to living standards and cultural patterns probably also have an influence on duration of hospital care of patients with given diseases, but such analysis was not attempted in this study.

The overall medical care provisions in a community and their accessibility to people of various economic levels have an important bearing on the length of time that patients in need of long-term medical care, particularly those with chronic diseases, have to stay in a hospital. The role that organized home-care services play in this regard has already been mentioned. The expansion of visiting nurse, homemaker, and related services will tend to broaden the scope of care at home for patients disabled with chronic conditions.

Within the past few years institutional facilities other than hospitals, offering attendant and nursing care, as well as medical supervision in varying degrees, have become increasingly available in New York City. They offer programs appropriate for many chronic-disease patients. The year 1952 was a time of transition in the provision of this type of care.

Comparison of Hospitals

Table 15 offers a comparison of the distributions of the patients discharged from each of the municipal general hospitals in five length-of-stay categories. The approximate average length of stay for each hospital is also given in the last column. The hospitals are listed in the table in decreasing order of this average.

TABLE 15. PATIENTS OF GENERAL HOSPITALS, PERCENTAGE DISTRIBUTION BY LENGTH OF STAY AND APPROXIMATE AVERAGE LENGTH OF STAY, BY HOSPITAL

Hospital	Percentage distribution by length of stay					Approximate average length of stay[a]
	Under 48 hours	2 to 6 days	7 to 30 days	31 to 90 days	91 days and over	
Total	16.3	36.2	35.7	9.2	2.6	16.6
Metropolitan	9.8	41.2	33.8	9.9	5.3	28.2
City	12.9	39.3	33.8	9.1	4.9	23.2
Bellevue General	16.2	29.8	37.6	13.1	3.3	19.1
Gouverneur	12.2	28.5	41.0	14.4	3.9	19.0
Queens General	12.6	33.8	41.1	10.4	2.1	17.1
Harlem	9.8	41.2	37.7	8.9	2.4	16.8
Fordham	13.1	31.9	43.1	10.0	1.9	15.8
Morrisania	18.2	37.9	32.5	9.0	2.4	15.1
Coney Island	20.8	30.8	35.8	10.5	2.1	14.2
Greenpoint	8.4	43.5	38.3	8.2	1.6	14.1
Lincoln	8.4	46.9	35.8	7.5	1.4	13.7
Kings County General	26.8	33.3	30.4	7.5	2.0	13.4
Cumberland	10.5	43.0	37.7	7.7	1.1	12.5
Sydenham	9.1	39.6	45.5	4.9	0.9	10.7

[a] Total days of care during project period divided by number of patients discharged during period.

These 14 hospitals, it should be remembered, are of the same type-of-service category (general) and operate under the same control (municipal). And yet the details of their medical care programs differ substantially because of the different composition of their patient loads with respect to diagnosis and age, and because of the sociocultural characteristics of their neighborhoods. Medical board policy and availability of special items of equipment may put further marks of individuality on each hospital. The different patterns of length-of-stay distribution in these 14 general hospitals reflect these various factors.

Sydenham and Lincoln Hospitals, for instance, operate large obstetrical services. The under-seven-day stays, therefore, include many patients hospitalized for delivery. Queens General and Coney Island Hospitals, because of their location and their role within the districted ambulance system, have relatively large numbers of patients with traumatic and other emergency conditions, many of whom may require only brief hospital care. City and Metropolitan Hospitals, which kept comparatively large proportions of their patients for long periods (4.9 and 5.3 per cent, respectively, being discharged after more than three months), operate large tuberculosis services. In City Hospital 14 per cent of the beds, and in Metropolitan as many as 30 per cent, are designated for care of tuberculosis patients. This factor alone may account for their larger proportions of long-stay patients. Tuberculosis patients in municipal general hospitals that are without organized tuberculosis services remain only for the relatively short time, usually less than two weeks, that is necessary for the establishment of a specific diagnosis and arrangement of transfer to special care.

Municipal general hospitals are, administratively and traditionally, to a large extent neighborhood institutions. New York City's neighborhoods differ widely as to sociodemographic characteristics, including the age composition of their populations. These differences are reflected in the hospital populations. In Gouverneur Hospital, located in the Lower East Side, for instance, 25 per cent of all discharged patients were 65 years and over, but in Cumberland, which is now surrounded by large housing developments for veterans, less than 12 per cent were aged. That 18 per cent of Gouverneur's and only 9 per cent of Cumberland's patients stayed for more than a month may be explained partly by the differences in the ages of their patients.

For general hospitals, the approximate average length of stay of patients is commonly computed by dividing the total number of patient days during a given period by the number of discharges during that period. Such a figure has, admittedly, the advantage that it can be obtained easily, requiring only knowledge of the numbers of days and of discharges; it can, also, be stated briefly

and simply. However, the value of this average appears doubtful for most of the purposes for which it is used, because it is so greatly influenced by differences in the characteristics, especially in the diseases, of the patients concerned.

In Table 15 the averages of the 14 general hospitals range from 11 days for Sydenham to 28 days for Metropolitan. The large obstetrical service of one and the large tuberculosis service of the other of these hospitals help to explain the difference. The average stay for seven of the hospitals is within the relatively narrow range of 14 to 17 days. But these similar averages may be the product of markedly differing distributions of diagnoses and ages of patients and may therefore reflect widely different patterns of hospital care. Coney Island and Greenpoint Hospitals, for instance, have for this period the same average length of stay, namely, 14 days, but 21 per cent of the patients in Coney Island remained less than 48 hours, while in Greenpoint only 8 per cent had so short a stay and a correspondingly higher percentage stayed from two to six days. Similarly, Queens General and Harlem Hospitals have like averages, although their percentage of stays under 48 hours differ significantly.

The use of averages of hospital stay without consideration of the distribution of the stays into specific categories may lead to ill-advised actions. The matter of per diem cost may illustrate this point. For most patients the initial days of hospitalization are most expensive, since patients are then likely to require larger amounts of laboratory and x-ray services, and more medical and nursing attendance, than later. The per diem costs of short stays are, therefore, as a rule much greater than those of extended stays. This differential applies equally to short stays caused by actually acute conditions, such as acute appendicitis or traumatic shock, and to exacerbations of chronic conditions, such as diabetic coma or cardiac decompensation. Other factors being the same, the per diem costs in general hospitals with the length-of-stay patterns of, for example, Coney Island and Greenpoint Hospitals, can therefore differ substantially. An attempt to equalize the per diem costs of two such hospitals because their average length of stay is the same might result in serious curtail-

ment, and hence impairment, of service in the hospital having the larger fraction of short-stay patients.

It is thus obvious that average length-of-stay data for general hospitals are likely to be misleading. Distributions of patients by length-of-stay categories are more meaningful than averages, but it is only the disease-specific distributions of length-of-stay data that are truly indicative.

Ultimately, significant average lengths of stay may be established for selected specific diseases as a result of the routine collection and analysis of hospital morbidity data. The diseases may primarily be those for which patients require specific types of care and hence comparatively similar periods of hospitalization, as for instance maternity care. As shown in Table 13, of the patients hospitalized for "delivery without complication" 70 per cent were in the hospital for four, five, or six days. This accumulation of discharges within a narrow range seems to indicate a specific average for this condition. Its use for comparative evaluation appears sound, if applied in conjunction with the data on actual distribution.

CONDITION ON DISCHARGE

The tabulations of the study make use of three categories of outcome of hospital stay, namely, discharged alive with medical consent, discharged alive against medical advice, and dead. As shown in Table 16, only 8 per cent of the patients studied died in the hospital; 81 per cent were discharged with medical consent; and 11 per cent left without it. These proportions vary greatly for different hospitals and for different type-of-service groups of hospitals.

Irregular Discharges

The discharges without medical consent, in hospital language irregular discharges, represent patients who "sign themselves out." They are impressive in number, accounting for 11 per cent of the patients in this study. The group does not, however, seem to justify detailed analysis, since differences in medical policies

and in administrative practices in the hospitals influence materially the proportion of irregular discharges.

The tuberculosis hospitals had the largest proportion of irregular discharges. Their 30 per cent of discharges occurring against medical advice is appallingly high, but not surprisingly so. Patients who reach the stage where they can "just no longer take it" are well known in institutions that provide long-term care for tuberculosis patients. During the project period 987 patients left a special tuberculosis hospital against medical advice, more than

TABLE 16. ALL PATIENTS, PERCENTAGE DISTRIBUTION BY CONDITION ON DISCHARGE, BY TYPE OF HOSPITAL

Type of hospital	Discharged alive		Deaths
	With medical consent	Against medical advice	
Total	80.9	11.1	8.0
General	79.3	12.5	8.2
Tuberculosis	60.5	29.5	10.0
Cancer	73.5	1.9	24.6
Psychiatric	95.1	1.7	3.2
Chronic disease	52.9	6.0	41.1
Communicable disease	95.2	3.1	1.7

three-quarters of them after a stay of more than a month. The proportions of irregular discharges of tuberculosis patients are to some extent influenced by differences in practice with regard to granting short home leaves, the so-called weekend passes. It was not possible in this study to investigate all the factors that contribute to the occurrence of irregular discharges.

From the general hospitals, 13 per cent of the discharges were against medical advice. The time at which patients sign themselves out may shed light on the underlying reasons. Of more than 12,000 irregular discharges from general hospitals, 39 per cent occurred within two days after admission. This group includes many patients with slight injuries. When requested to stay in the hospital for observation of possible aftereffects of trauma,

TABLE 17. PATIENTS WITH ISC DIAGNOSES ACCOUNTING FOR 500 OR MORE DISCHARGES, NUMBER AND PERCENTAGE OF DEATHS, BY DIAGNOSIS

Diagnosis and ISC code number	Number of deaths		Per 100 discharged patients
	Total	Under 48 hours	
Pulmonary tuberculosis, 002	477	45	9.7
Acute poliomyelitis, 080	23	11	3.9
Measles, 085	–	–	–
Chickenpox, 087	1	1	0.2
Malignant neoplasm of lung and bronchus, 163	235	29	45.5
Uterine fibromyoma, 214	3	–	0.3
Asthma, 241	18	6	2.0
Diabetes mellitus, 260	182	40	12.2
Schizophrenic disorders, 300	12	1	0.3
Involutional melancholia, 302	6	–	0.9
Senile psychosis, 304	102	9	9.4
Psychosis with cerebral arteriosclerosis, 306	118	3	10.8
Alcoholic psychosis, 307	46	12	3.1
Psychosis of other demonstrable etiology, 308	92	8	15.3
Other and unspecified psychoses, 309	25	9	4.8
Neurotic-depressive reaction, 314	13	2	1.9
Pathological personality, 320	–	–	–
Alcoholism, 322	20	8	0.7
Cerebral hemorrhage, 331	653	248	58.3
Cerebral embolism and thrombosis, 332	437	92	48.2
Epilepsy, 353	20	9	3.3
Arteriosclerotic heart disease, 420.0	1,008	303	27.3
Heart disease involving coronary arteries, 420.1	536	279	45.5
Other and unspecified hypertensive heart disease, 443	474	137	21.3
General arteriosclerosis, 450	191	31	32.3
Varicose veins of lower extremities, 460	7	–	1.2
Acute nasopharyngitis, 470	1	1	0.1
Acute tonsillitis, 473	–	–	–
Lobar pneumonia, 490	89	38	12.2
Bronchopneumonia, 491	209	65	15.9
Hypertrophy of tonsils and adenoids, 510	–	–	–
Ulcer of duodenum, 541	38	9	5.9
Acute appendicitis, 550	9	3	1.0
Hernia without mention of obstruction, 560	36	6	2.5
Gastro-enteritis and colitis, except ulcerative, 571	4	1	0.5
Cirrhosis of liver, 581	210	37	25.6
Cholecystitis without mention of calculi, 585	22	2	4.1
Infections of kidney, 600	34	6	6.6
Hyperplasia of prostate, 610	79	7	10.3
Redundant prepuce and phimosis, 615	1	–	0.2

TABLE 17—(*Continued*)

Other complications arising from pregnancy, 648	–	–	–
Abortion without mention of sepsis or toxemia, 650	3	1	0.1
Delivery without complication, 660	5	3	–
Cellulitis and abscess, 692	19	1	1.5
Prematurity, 776	256	199	27.5
Observation without need for further medical care, 793	6	–	0.5
Ill-defined and unknown conditions, 795	96	71	11.4
Fracture of face bones, 802	66	41	8.9
Fracture of radius and ulna, 813	6	2	0.5
Fracture of femur, 820–821	199	10	19.7
Fracture of tibia and fibula, 823	23	5	2.0
Open wound of scalp, 850	7	3	0.9
Concussion of brain, 852	34	15	1.8

patients who feel well frequently insist upon leaving and do so by signing themselves out. Procedure in other hospitals may preclude admission to the wards of cases with slight injuries, the necessary care being provided through emergency and outpatient facilities. Such difference in practice influences, of course, the proportion of irregular discharges.

Another 39 per cent of the irregular discharges from the general hospitals occurred after from two to six days' stay. Among these discharges are those of many women who insist upon going home as early as three days after delivery. If such early discharge is against the hospital's policy, the women sign themselves out.

Diagnostic Differences in Death Rates

The frequency of deaths among patients with specific diseases is recorded in Table 17. The conditions included are again the ISC diagnoses accounting for at least 500 discharges. Since deaths occurring within 48 hours after admission to a hospital require separate consideration, the number of such early deaths also is shown for each diagnosis. Most of the patients who died within 48 hours may have reached the hospital too late for effective care. For this reason these deaths are omitted in the computation of the so-called net, or institutional, death rate.

As many as 26 per cent of the 9,775 deaths reported during the six months of this study were "48-hour deaths." As shown in Table 17, most of them were the outcome of relatively few conditions. For many prematurely born infants, the first 48 hours of life are decisive for survival. Patients with coronary artery disease, cerebral hemorrhage, and intestinal obstruction often die shortly after the acute attack. The early deaths of hospital patients with such diseases as cirrhosis of liver, malignant neoplasms, and respiratory tuberculosis may on the other hand reflect medical care management rather than clinical aspects. Many of these patients are brought to the hospital only after it has become impossible to cope at home or in a nonmedical institution with an increasingly deteriorating condition.

The final column of Table 17 gives the percentage of deaths for each of the 53 diagnoses included. The complete absence of deaths among the patients hospitalized for such conditions as measles, acute tonsillitis, and tonsillectomy (ISC diagnosis 510), and for complications during pregnancy (ISC diagnosis 648), is to be expected. The fact that 14,146 women were delivered with only five deaths occurring reflects the remarkable achievement of modern obstetrics. Concerning the infrequent deaths of patients with diseases that are ordinarily nonfatal, it should be recalled that the diagnoses reported and tabulated are those for which the patients were admitted to the hospitals. Some of the deaths may have been caused by a complication of the main condition or an accessory chronic condition.

The largest proportions of deaths were from cerebral hemorrhage, cerebral embolism and thrombosis, heart disease involving coronary arteries, and malignant neoplasm of lung and bronchus. It should be noted that even for these serious conditions taken together more than half of the patients left the hospital alive.

Demographic and Other Factors

The evaluation of the relative frequency of all deaths among hospitalized patients should include, besides the diagnosis, consideration of socioeconomic factors, psychological and cultural patterns, and the availability of other community resources. The

decisions, for example, of some advanced cancer patients to seek terminal care in a hospital and of others to leave the hospital to die at home are often not based chiefly on medical factors. In this investigation, only the factors age and color of patients were studied. These data are summarized in Table 18. As might be expected, deaths are relatively more frequent in the upper age groups, but the apprehension of many aged people that once hospitalized they must expect to die is certainly unjustified. Nearly four out of five of the patients aged 65 to 74 years included in the study were discharged alive. Even of the patients 75 years and over 70 per cent left the hospital alive.

TABLE 18. ALL PATIENTS, PERCENTAGE OF DEATHS, BY AGE AND COLOR

Age in years	Total	White	Nonwhite
Total	8.0	9.7	4.8
Under 1	9.7	9.1	10.5
1 to 4	1.7	1.7	1.7
5 to 14	0.7	0.7	0.7
15 to 24	0.7	0.7	0.6
25 to 34	1.4	1.4	1.4
35 to 44	4.0	3.9	4.1
45 to 54	9.7	9.4	10.4
55 to 64	15.6	15.2	17.5
65 to 74	22.0	21.7	24.2
75 and over	29.6	29.9	27.3

Of the white patients of all ages nearly 10 per cent died as against less than 5 per cent of all nonwhite patients. The differences in age and diagnostic composition of the two color groups described in Chapters 3 and 4 explain this difference in the proportion of deaths of the two groups. For the individual age categories, it will be seen, the death rates of the two groups are strikingly similar.

Comparison of Hospitals

In Table 16 it was shown that the gross death rates of groups of hospitals operating different types of program were widely different. The rates range from 1.7 per cent for the communicable disease hospitals to 41.1 per cent for the single hospital for chronic diseases. The rate in the cancer hospitals is 24.6. Even in these

hospitals three out of four patients were discharged alive. In the not too distant past, it may be recalled, some cancer hospitals were labeled institutions for the incurable. The death rate of 10 per cent for tuberculosis hospitals would be higher were it not for the substantial numbers of discharges against medical advice.

The rate of 8.2 for the general hospitals is analyzed in Table 19. The gross rates of general hospitals ranged from 2.1 per cent for Sydenham to 14.9 for Queens General. Omitting deaths within 48 hours of admission did not appreciably change the relative positions of the hospitals. The net general death rates ranged from 1.6 per cent for Sydenham to 10.6 for Queens General.

TABLE 19. PATIENTS OF GENERAL HOSPITALS, NUMBER OF DEATHS, PERCENTAGE UNDER 48 HOURS, AND GROSS AND NET GENERAL DEATH RATES, BY HOSPITAL

Hospital	Deaths	Per cent under 48 hours	Gross general death rate[a]	Net general death rate[b]
Total	7,995	30.2	8.2	5.8
Queens General	953	28.9	14.9	10.6
Gouverneur	166	45.2	13.2	7.2
Fordham	600	29.7	12.6	8.9
Morrisania	533	31.7	9.2	6.3
Coney Island	297	39.4	8.9	5.4
Kings County General	2,039	30.3	8.4	5.9
Greenpoint	269	33.1	8.1	5.4
Harlem	718	33.4	8.0	5.3
City	446	25.6	7.4	5.5
Lincoln	388	40.5	7.2	4.3
Metropolitan	472	22.9	7.0	5.4
Bellevue General	847	23.5	6.1	4.7
Cumberland	202	31.2	5.3	3.6
Sydenham	65	24.6	2.1	1.6

[a] Deaths per 100 discharged patients.

[b] Deaths minus under-48-hour deaths per 100 discharged patients.

Differences in quality of care and in administrative practices, which may account for some of the difference in the death rates, cannot explain variations of this dimension. The patient loads of these general hospitals differ so widely that different average outcomes of hospital stay are to be expected. The value of general death rates, whether gross or net, thus appears doubtful.

As already emphasized, it is the composition of the patient load by diagnosis that has the most decisive influence on the death rate of a hospital. A single condition with a distinctive rate, if the number of cases involved is relatively large, can radically influence the general death rate. Since the large number of women hospitalized for delivery account for almost no deaths, the net general death rate of a general hospital in which a larger than average proportion of the discharges are of patients hospitalized for delivery is likely to be relatively low. For example, no comparison of gross or net general death rates of Lincoln Hospital, a fourth of whose patients were hospitalized for delivery, with that of City Hospital, where only 10 per cent of the patients were admitted for this nonfatal condition, should be made without such qualifying additional information. Disease-specific rates should be available when comparisons are desired of the proportions of deaths in individual hospitals.

Chapter VI

OBSTETRICAL CONDITIONS

This chapter is concerned with patients of the municipal hospitals having an obstetrical condition as the main diagnosis, whether or not the pregnancy was terminated during the given hospital stay. Hospital patients with obstetrical conditions have various common characteristics. They are obviously of the same sex and their ages do not vary widely. As a rule, they stay only a few days and are discharged well. In most instances, the need for hospital care is known long in advance. Thus, many persons, who in the emergency of an unforeseen illness would have to resort to the ward of a municipal hospital, are able to make provision for obstetrical care in other hospitals.

Obstetrical Diagnoses

In other respects the group of obstetrical patients includes individuals with marked differences. While most pregnancies progress without complications and require only one hospital stay, some patients are admitted during the course of the pregnancy for serious complications, such as toxemia. They, as well as the patients admitted for conditions that prove to be false labor or threatened abortion, leave the hospital undelivered and may be readmitted in connection with the same pregnancy. Still other obstetrical patients are admitted for postpartum care only.

With regard to hospital administration, it should be noted that admission to the obstetrical service is restricted to women expected to deliver a viable fetus. Women in earlier stages of pregnancy are admitted to the gynecological service. For women admitted after delivery, the obstetrical services usually provide separate accommodations.

The diagnoses for obstetrical patients, as for other patients, were reported in the terms of the Standard Nomenclature and were translated by the project office into those of the ISC. Most of the conditions related to pregnancy and childbirth are included in both schemes as obstetrical conditions. However, pregnancy terminated by therapeutic abortion, which is included under the ISC group title "Deliveries and complications of pregnancy, childbirth, and the puerperium" is not a medical diagnosis according to the Standard Nomenclature, but rather a surgical intervention. In these cases the underlying condition that necessitated the intervention was therefore reported as main diagnosis. Thus, these patients are not included among obstetrical patients in this study. The Standard Nomenclature, furthermore, does not distinguish between spontaneous abortion and abortion induced for other than therapeutic reasons. Accordingly, patients with these diagnoses could not be separated in the tabulations of this study. The Summary List category 156, "Abortion, spontaneous or unspecified," therefore combines all cases reported in this study as abortion.

The ISC does not provide for such significant information as whether the patient was a primi- or multipara, whether the delivery produced a live birth or a stillbirth, whether the delivery was term or premature, or whether the birth was single or multiple. The third edition of the Standard Nomenclature offered terms for these and related aspects of delivery in a supplementary classification,[1] but special arrangement of the project schedule would have been necessary for recording this additional information for the obstetrical patients. The information was therefore not obtained in this study. Data on parity, prematurity, and stillbirths are available for all births in the city from the regular reporting of births. The relation between these items and the hospital stay of obstetrical patients is probably not sufficiently important to require the inclusion of these items in hospital morbidity reporting.

[1] The third edition of the Standard Nomenclature offered separate codes for term and premature deliveries resulting in stillbirths, discriminating even between antepartum and intrapartum deaths, but only a single code for deliveries resulting in live births.

The tabulation of data on obstetrical patients followed the pattern adopted for other diagnostic groups. This resulted in the loss of significant details on length of stay, which should be given in more detail within the 7 to 13 day category for obstetrical cases.

Patients in the Study

During the six months of the study, a total of 20,552 patients with obstetrical conditions as main diagnosis were discharged. These obstetrical cases were nearly 17 per cent of the discharges from all the municipal hospitals and nearly 22 per cent of those from the 13 general hospitals that provided obstetrical service.

TABLE 20. OBSTETRICAL PATIENTS, BY DIAGNOSIS

Diagnosis and SL code number	Number	Per cent
Total	20,552	100.0
Pregnancy, terminated		
Delivery without complication, 158	13,944	67.8
Delivery with obstetrical complications, 160	202	1.0
Abortion, spontaneous or unspecified, 156	3,598	17.5
Ectopic pregnancy, 154	179	0.9
Pregnancy, not delivered		
Toxemia of pregnancy, 153	212	1.0
Other complications and conditions of pregnancy, 155	1,874	9.1
Postpartum admission		
Without complications, 159	466	2.3
With puerperal complications, 162	77	0.4

A considerable number of patients included in the study whose main diagnosis was not an obstetrical condition were also pregnant. Since the character of additional diagnoses was not analyzed in this study, however, the number of these additional pregnancies is not known. Pregnant patients in tuberculosis and other special hospitals are temporarily transferred to a general hospital for delivery and postpartum care whenever feasible.[1]

On the other hand, many of the patients whose main diagnosis is an obstetrical condition are found to be suffering also from nonobstetrical conditions, such as diabetes mellitus, heart disease, or other chronic diseases. These nonobstetrical conditions, as indicated later, may be the cause of the long hospital stays of some obstetrical patients.

[1] Only five deliveries took place in the special hospitals.

The specific main diagnoses for obstetrical patients are shown in Table 20. A little more than two-thirds of these patients were delivered during the recorded hospital stay without a reported complication. It should be noted, however, that minor complications, including the very common simple laceration of the perineum were not reported in this study. Obstetrical complications, including "retained placenta," were reported for only 202 of the delivered patients. Among the cases which led to "pregnancy wastage" were 3,598 spontaneous or unspecified abortions and 179 cases of ectopic pregnancy. Other instances of "pregnancy wastage," namely, those due to stillbirths and neonatal deaths cannot be ascertained from this type of report. A total of 2,086

TABLE 21. OBSTETRICAL PATIENTS, NUMBER AND PERCENTAGE DISTRIBUTION BY AGE, BY DIAGNOSIS AND COLOR

Diagnosis, SL code number, and color	Number	Percentage distribution by age		
		Under 25 years	25 to 34 years	35 years and over
Total	20,552[a]	48.0	42.5	9.5
White	9,053	47.6	40.8	11.6
Nonwhite	11,477	48.3	43.8	7.9
Delivery without complication, 158				
White	6,291	50.3	39.2	10.5
Nonwhite	7,646	50.4	42.3	7.3
Delivery with obstetrical complications, 160				
White	90	48.9	40.0	11.1
Nonwhite	111	46.8	46.8	6.4
Abortion, spontaneous or unspecified, 156				
White	1,548	37.4	46.3	16.3
Nonwhite	2,041	41.9	49.0	9.1
Ectopic pregnancy, 154				
White	57	22.8	49.1	28.1
Nonwhite	120	23.3	64.2	12.5
Toxemia of pregnancy (not delivered), 153				
White	97	39.2	41.2	19.6
Nonwhite	115	40.9	42.6	16.5
Other complications and conditions of pregnancy (not delivered), 155				
White	719	48.1	41.7	10.2
Nonwhite	1,154	48.2	42.9	8.9
Postpartum admission, 159, 162				
White	251	51.0	41.4	7.6
Nonwhite	290	54.5	39.0	6.5

[a]Includes 22 patients for whom color was not reported.

pregnant women left the hospital undelivered. Of these, 212 were known to have been cared for intermittently for toxemia of pregnancy. Nearly 1,000 had been admitted for what subsequently proved to be false labor and more than 600 for threatened abortion.

The distribution of the patients with obstetrical diagnoses by color and age is shown in Table 21. Of the deliveries in municipal hospitals nearly 55 per cent were those of nonwhite women. This is much higher than the proportion nonwhite among all patients discharged, 35 per cent. The proportion of nonwhite infants born in the city during the study period was only 15 per cent. Two out of three of the ectopic pregnancies were those of nonwhite women.

Fifty per cent of the delivered women, white and nonwhite alike, were under 25 years of age; but 11 per cent of the white women were 35 years and over, as against 7 per cent of the nonwhite. Women with the diagnoses abortion and ectopic pregnancy were somewhat older than those delivered. This disparity is more marked among white than nonwhite women. As many as 16 per cent of the white women with abortion were 35 years of age and over, compared with 9 per cent of the nonwhite. Only 33 of the delivered women were under 15 years of age and only 17 were 45 years and over.

Length of Stay and Condition on Discharge

Although the obstetrical patients constituted nearly 17 per cent of all discharged patients studied, they accounted for only 6 per cent of the total days of service during the study period because the stay for obstetrical care is typically short. The concept of adequate duration of postpartum hospital care has changed greatly. Twenty years ago, women with normal delivery usually stayed in the hospital for ten days. Now, five to six days is a standard widely accepted.

Seventy per cent of the delivered patients were in the hospital four, five, or six days: 21 per cent were discharged in four days, 28 per cent in five days, and 21 per cent in six days. As many as 1,746 delivered patients, or 12 per cent, were in the hospital for less than four days. The adequacy of postpartum care of many

of these women seems questionable. Most of them left the hospital against medical advice. Since early ambulation after delivery has become routine practice, some hospitals encounter difficulty in retaining women who feel well and are eager to rejoin their families. Some of the hospitals with significant proportions of early obstetrical discharges are now conducting thorough follow-up studies of the effect of this shortened postpartum care.

The 14,146 women delivered, for whom length of stay is shown in Table 22, include 2,116 women for whom additional diagnoses of nonobstetrical nature were reported. These conditions were

TABLE 22. OBSTETRICAL PATIENTS, PERCENTAGE DISTRIBUTION BY LENGTH OF STAY, BY DIAGNOSIS

Diagnosis and SL code number	Percentage distribution by length of stay							
	Under 2 days	2 days	3 days	4 days	5 days	6 days	7 to 13 days	14 days and over
Delivery, 158, 160	1.0	2.2	9.2	20.6	28.2	21.1	15.0	2.7
Abortion, spontaneous or unspecified, 156	17.0	9.1	18.2	16.3	12.2	9.1	16.0	2.1
Ectopic pregnancy, 154	1.1	0.6	–	–	0.6	7.3	74.7	15.7
Toxemia of pregnancy (not delivered), 153	11.8	7.5	14.2	10.8	16.0	10.4	24.1	5.2
Other complications and conditions of pregnancy (not delivered), 155	42.2	11.5	11.9	8.6	7.0	4.3	12.3	2.2
Postpartum admission, 159, 162	4.4	6.1	17.3	24.9	26.2	15.6	4.4	1.1

clearly cause for extended hospital care. Nearly 41 per cent of those with additional diagnoses stayed longer than six days. Two out of three of the delivered patients who remained 14 days or more had additional diagnoses.

As few as ten deaths occurred among the discharged obstetrical patients. Of these ten patients, five were delivered in the hospital, three had abortions, one died before delivery, and one was delivered before admission. None, it should be stressed, of the patients with ectopic pregnancies died. These figures are further evidence of the progress in modern obstetrics and in quality of modern hospital care.

Instrumental Deliveries

According to the instructions, manipulative interventions, such as breech extraction and version, were not reported. The reports on interventions were limited to Cesarean section and forceps delivery. The total of 439 Cesarean sections means that slightly over 3 per cent of all the deliveries were performed in this way. Of the women having Cesarean section, 87 were 35 years and over. They were 7 per cent of the delivered women in this age group, whereas less than 3 per cent of the delivered women under 35 years of age had this intervention. Nearly 45 per cent of the patients with Cesarean section stayed in the hospital ten days or longer.

A total of 1,863 forceps interventions, constituting 13 per cent of all deliveries, were reported. It is doubtful, however, if forceps applications were fully reported. Some obstetricians may refrain from recording low forceps as an instrumental delivery. The Standard Nomenclature in its section for operations provides an overall 5-digit term for "application of, or delivery by, obstetric forceps." By addition of a sixth digit, the forceps application may be specified as low, mid, or high. But many of the reports for this study were limited to the 5-digit indication, making it impossible to tabulate the type of forceps intervention.

Chapter VII

TRAUMATIC CONDITIONS

THE TERM "TRAUMATIC CONDITIONS" here covers all conditions included under the ISC group title "Accidents, poisonings, and violence." An external etiological element, the trauma, is the common characteristic of these conditions, which vary widely as to type. This group of diagnoses accounted for 12 per cent of all discharges in this study.

Traumatic conditions are of interest from two different aspects: the external cause and the nature of injury sustained. Both are important. The ISC provides two classifications, making it possible to compile statistics of traumatic conditions according to both the cause and the type of injury. Use of the two classifications would require, of course, the recording of both sets of data. A data-collecting agency, therefore, must decide whether to cover both aspects of traumatic conditions or, if only one, which one.

The standard death certificate includes information for both classifications, but mortality statistics are usually published by external cause only. Hospitals, however, are primarily, if not exclusively, concerned with the nature of the injury, because it, rather than the external cause, determines the amount and type of hospital care needed. Hospital records, therefore, give preference to the diagnosis by type of injury. Moreover, the Standard Nomenclature does not provide terms, not even alternative or supplementary ones, for the recording of external causes of injury. The diagnostic data on patients with traumatic conditions in this report, therefore, are necessarily limited to the nature of the injury.

In the classification by nature of injury, the ISC takes account first of the type of affection, such as fracture, dislocation, burn, effect of poison. Injuries that affect particular organs or regions

TABLE 23. TRAUMATIC PATIENTS, PERCENTAGE OF DEATHS AND DISTRIBUTION BY LENGTH OF STAY, BY DIAGNOSIS

Diagnosis (nature of injury) and SL code number	Number of patients	Per cent of deaths	Percentage distribution by length of stay						
			Under 24 hours	24 to 47 hours	2 to 4 days	5 to 6 days	7 to 13 days	14 to 30 days	31 days and over
Total	15,182	4.5	25.7	10.0	19.9	8.5	14.8	10.4	10.7
Fractures, 184–189	5,831	6.3	24.1	6.8	14.3	6.8	13.5	14.3	20.2
Dislocations, sprains, strains, 190–192	709	0.4	30.3	10.7	18.6	8.6	15.1	10.9	5.8
Concussion of brain, 193	1,914	1.8	17.6	13.7	29.8	11.7	19.2	6.1	1.9
Other head injury, 194	1,258	5.5	38.9	14.3	23.2	6.9	9.8	4.9	2.0
Laceration and open wound, 196	1,998	1.3	26.7	10.1	23.0	10.5	18.4	8.4	2.9
Superficial injury, 197	1,364	0.5	35.0	15.6	23.1	9.4	10.5	4.6	1.8
Burns, 199	400	8.5	10.5	4.2	14.0	5.2	19.3	19.5	27.3
All other injuries, 195, 198, 200	1,035	8.8	18.5	7.6	21.7	9.8	18.0	12.8	11.6
Effects of poisons, 203	673	7.3	31.9	14.3	20.2	8.8	13.8	7.0	4.0

rather than the body as a whole are further subdivided by site involved. Effects of poison are subdivided by nature of the poisonous agent.

The data on discharged patients with traumatic conditions probably include less duplication because of readmissions and transfers than those of any other condition, with the possible exception of obstetrical patients. Multiple diagnoses are comparatively frequent among trauma patients. This is to be expected since many accidents produce a combination of injuries, either of different types, such as fracture and dislocation, or of the same type, affecting different sites.

The ISC provides combined terms for some of these combinations, such as "multiple fractures involving both upper limbs, and upper limb with rib(s) and sternum." It furthermore includes such stipulations as that the term "concussion of brain" should be used only if there is no accompanying fracture of the skull or face bones. Such combinations and distinctions can be made if the diagnoses are coded from the complete history of the case. But in this study the decision as to the condition to be recorded as the main diagnosis had to be left to the reporting physician. Because the Standard Nomenclature does not provide codes for combined sites in the same manner as the ISC, and because the only diagnostic information available referred to the main diagnosis as determined by the reporting physician, this project could not make full use of the ISC terms for combined or for mutually exclusive traumatic diagnoses.

Finally, the significance of the data on hospital patients with minor injuries is impaired for the purpose of reflecting total incidence of trauma because of differences in medical care practice. For example, in many hospitals it is accepted practice to treat patients with fracture of the wrist in the outpatient department, but the medical policy of other hospitals may favor admission to the ward for a short period of observation.

Diagnoses

A total of 15,182 patients with traumatic conditions were discharged in the course of the study period from the wards of the

TABLE 24. TRAUMATIC PATIENTS, PERCENTAGE MALE AND DISTRIBUTION BY AGE, BY DIAGNOSIS AND COLOR

Diagnosis (nature of injury), SL code number, and color	Number	Per cent male	Percentage distribution by age						
			Under 5 years	5 to 14 years	15 to 24 years	25 to 34 years	35 to 44 years	45 to 64 years	65 years and over
Total	15,182[a]	63.3	7.0	15.2	12.8	15.7	14.3	21.3	13.7
White	10,437	63.4	6.0	15.9	12.5	10.5	11.7	24.9	18.5
Nonwhite	4,729	63.2	9.1	13.6	13.5	27.3	20.3	13.2	3.0
Fractures, 184–189									
White	4,546	59.0	3.9	18.7	8.8	6.8	9.1	26.8	25.9
Nonwhite	1,282	60.9	6.4	16.7	10.0	24.2	20.9	16.6	5.2
Dislocations, sprains, strains, 190–192									
White	495	61.6	1.0	12.2	17.8	17.6	14.4	26.1	10.9
Nonwhite	214	55.1	0.9	12.6	17.3	32.3	21.5	13.1	2.3
Concussion of brain, 193									
White	1,260	71.2	9.1	20.8	17.5	11.3	11.8	18.8	10.7
Nonwhite	652	64.0	13.8	23.6	11.3	20.6	17.9	10.6	2.2
Other head injury, 194									
White	854	75.3	4.4	8.1	10.5	11.0	13.9	32.1	20.0
Nonwhite	402	71.4	8.8	8.0	13.5	31.2	24.5	12.0	2.0
Laceration and open wound, 196									
White	1,070	76.9	5.0	15.4	21.4	18.5	14.0	18.5	7.2
Nonwhite	921	73.5	3.3	7.2	19.1	36.8	22.5	10.3	0.8
Superficial injury, 197									
White	864	60.5	5.0	17.5	12.6	11.9	15.6	24.0	13.4
Nonwhite	499	55.3	7.8	15.9	13.9	27.9	18.5	12.4	3.6
Burns, 199									
White	246	55.3	19.3	12.7	7.4	12.7	13.5	21.7	12.7
Nonwhite	154	58.4	23.4	14.9	9.1	22.8	17.5	9.1	3.2
All other injuries, 195, 198, 200									
White	633	63.8	11.6	8.1	12.5	10.1	11.4	28.7	17.6
Nonwhite	401	65.3	13.1	9.3	12.3	24.2	18.8	18.8	3.5
Effects of poisons, 203									
White	469	44.6	15.7	2.8	15.0	14.6	16.7	23.2	12.0
Nonwhite	204	40.7	32.0	5.5	17.0	21.0	12.5	9.0	3.0

[a] Includes 16 patients for whom color was not reported.

14 municipal general hospitals. The nature of injury of these patients is shown in Table 23. Fractures, the most important group, accounted for 38 per cent of the total. Next in importance are lacerations and open wounds, and concussion of brain, each 13 per cent. Only 4 per cent of these patients were hospitalized for the effects of poison. Less than 3 per cent had burns, but it seems worthy of note that within six months as many as 400 persons suffered burns serious enough to require admission to the municipal hospitals alone.

The seriousness of the clinical condition of patients with these injuries differs widely. Many of them are critically ill. Six per cent of the patients with fractures and 9 per cent of both those with burns and those with internal injuries died in the hospital. Many were admitted to the hospital in an extreme condition. Of the 678 deaths of patients with traumatic conditions, 36 per cent occurred within 48 hours after admission. Eleven deaths due to burns, 15 to laceration, and 25 due to poisoning occurred within 24 hours. Some of these patients died before a complete diagnostic study was possible. This may explain the early deaths of patients with the main diagnosis of lacerations.

Length of Stay

The seriousness of the condition of many traumatic patients is likewise reflected in the length of hospital care as shown in Table 23. Nearly 11 per cent of the patients with these typically acute conditions remained in the hospital for longer than a month. Difficult, sometimes repeated, operations, often necessitating extended orthopedic treatment and rehabilitation, may require prolonged hospital stays.

On the other hand, very few causes for hospitalization, among them tonsillectomy and false labor, include as many short-stay patients as do traumatic conditions. Among the 26 per cent of the traumatic patients who remained for less than 24 hours are many who were admitted for initiation of treatment, or for observation for possible complications. But among these early discharges were also patients who died shortly after admission and patients who left against medical advice.

Demographic Analysis

Some of the demographic data concerning the trauma patients are summarized in Table 24. More than 63 per cent of these patients were male. Increased exposure to occupational risks, participation in more hazardous play and sports activities, and more frequent involvement in acts of violence suggest the explanation for the excess of male patients, but lack of data on external causes prevents substantiation of these assumptions. Patients with lacerations and open wounds show the widest difference in sex distribution—more than three times as many males as females.

About 31 per cent of both male and female patients with traumatic conditions were nonwhite. This compares with 28 per cent nonwhite among all male patients, and with 34 per cent among all female patients excluding those with obstetrical conditions.

Various types of traumatic conditions were found in widely different proportions in the two color groups. While the ratio of white to nonwhite patients is nearly four to one for fractures, it is scarcely more than one to one for lacerations and open wounds.

The comparative significance of traumatic conditions for patients of different ages may be seen in Table 25. Traumatic conditions play a leading role in the hospitalization of children. Thus, the children aged 5 to 14 with traumatic conditions constitute 34 per cent of all patients in this age group. Injuries to children present a hazard that modern society has not yet learned to prevent. The more we succeed in lessening or preventing other childhood diseases, the more impressive relatively becomes the toll taken by traumatic conditions. Children under 15 years constituted more than 30 per cent of all patients with burns, concussion of brain, fracture of the skull, and fractures of the upper extremity.

Fracture Diagnoses

The 5,831 fracture cases warrant special analysis because of both the diversity of clinical conditions covered by the generic diagnosis "fracture" and the large volume of such cases.

The possible number of fracture diagnoses in terms of the Standard Nomenclature is tremendous, since each bone of the body may be affected, whether alone or in combination with one or more. Furthermore, the Nomenclature provides separate diagnoses for specific portions of many of the bones, for example, as many as 16 for the femur. Moreover, the type of fracture is identified by such discrimination as simple, compound, or incomplete. The ISC, in its classification by nature of the injury, provides 30 terms for fractures, distinguishing the bone involved, including two for fracture of the femur, namely, fracture of neck and of other and unspecified parts.

TABLE 25. TRAUMATIC PATIENTS, NUMBER AND PERCENTAGE OF ALL PATIENTS, BY AGE

Age in years	Number	Per cent of all patients
Total	15,182[a]	15.7
Under 5	1,052	13.1
5 to 14	2,289	34.3
15 to 24	1,928	11.4
25 to 34	2,379	13.1
35 to 44	2,166	19.0
45 to 64	3,212	16.7
65 and over	2,065	12.9

[a] Includes 91 patients for whom age was not reported.

In Table 26 statistics are presented for 12 fracture diagnoses that seem significant for hospital morbidity. Some of these are individual ISC categories, but others combine several categories. It will be seen that fractures occur at all ages, but fractures of certain sites are more frequent in particular age groups. Thus, fractures of the upper extremity occur most frequently during the years of play and sport, from 5 to 34. On the other hand, fractures of the lower extremity are more likely to occur later. These hospital data confirm the significance of fracture of the femur as a hazard of old age; 61 per cent of the patients with fracture of femur were 65 years of age or older. The fact that 612 aged persons with fracture of the femur had to be cared for in the munici-

TABLE 26. FRACTURE PATIENTS, PERCENTAGE MALE AND DISTRIBUTION BY AGE, BY SITE OF FRACTURE

Site of fracture and ISC code number	Number	Per cent male	Percentage distribution by age					
			Under 5 years	5 to 14 years	15 to 34 years	35 to 54 years	55 to 64 years	65 years and over
Total	5,831	59.4	4.5	18.3	19.7	23.5	12.8	21.2
Skull, 800, 801, 803	162	74.1	22.3	20.3	25.0	16.9	13.5	2.0
Face bones, 802	746	75.2	4.7	6.4	30.3	35.5	12.6	10.5
Vertebral column, 805, 806	171	55.0	–	2.9	28.1	32.2	17.5	19.3
Trunk, 809	125	55.2	2.4	5.6	17.6	20.8	23.2	30.4
Upper extremity	2,142[a]	61.7	5.2	32.4	18.8	18.1	11.7	13.8
Clavicle and scapula, 810, 811	193	61.7	13.0	23.8	21.2	17.1	11.4	13.5
Humerus, 812	490	54.7	5.7	23.1	9.6	18.4	16.1	27.1
Radius and ulna, 813	1,097	58.4	4.3	43.1	15.5	15.5	10.7	10.9
Carpal and metacarpal bones, 814, 815	354	81.1	2.2	17.3	40.5	26.1	9.1	4.8
Lower extremity	2,485	52.2	3.2	11.3	16.5	24.4	12.9	31.7
Femur, 820, 821	1,008	38.0	4.5	6.1	4.0	10.4	14.3	60.7
Tibia and fibula, 823	1,150	62.6	2.9	16.1	24.6	32.4	11.9	12.1
Tarsal and metatarsal bones, 825	104	61.5	–	6.7	21.2	50.0	13.5	8.6
All other, 822, 824, 826–829	223	58.7	0.4	12.6	28.8	34.7	12.2	11.3

[a] Includes 8 with fracture of other upper extremity sites.

TABLE 27. FRACTURE PATIENTS, PERCENTAGE OF DEATHS AND DISTRIBUTION BY LENGTH OF STAY, BY SITE OF FRACTURE

Site of fracture and ISC code number	Per cent of deaths	Percentage distribution by length of stay							
		Under 24 hours	24 to 47 hours	2 to 4 days	5 to 6 days	7 to 13 days	14 to 30 days	31 to 60 days	61 days and over
Total	6.3	24.1	6.8	14.3	6.8	13.5	14.3	9.9	10.3
Skull, 800, 801, 803	13.6	9.9	5.5	16.0	6.8	22.9	32.1	4.3	2.5
Face bones, 802	8.8	14.8	7.9	20.1	14.2	21.8	15.3	4.4	1.5
Vertebral column, 805, 806	4.7	7.0	1.8	12.3	8.1	18.7	20.5	19.3	12.3
Trunk, 809	8.0	5.6	2.4	8.8	6.4	8.0	32.8	27.2	8.8

Upper extremity									
Total, 810–819	1.0	42.3	9.4	16.3	6.0	11.2	8.7	3.9	2.2
Clavicle and scapula, 810, 811	0.5	34.9	15.1	16.7	5.7	13.0	9.9	2.6	2.1
Humerus, 812	3.1	23.5	8.2	15.1	7.3	14.9	15.9	10.0	5.1
Radius and ulna, 813	0.5	46.8	9.9	17.9	5.4	9.9	6.7	1.9	1.5
Carpal and metacarpal bones, 814, 815	–	58.5	6.8	13.0	5.9	8.8	4.5	2.2	0.3
Lower extremity									
Total, 820–829	9.5	14.2	5.0	11.1	5.3	12.2	16.2	15.6	20.4
Femur, 820, 821	20.8	4.1	1.6	4.1	2.7	8.5	16.6	22.9	39.4
Tibia and fibula, 823	2.0	16.9	6.7	16.3	7.7	15.6	16.9	11.0	8.9
Tarsal and metatarsal bones, 825	1.0	31.7	6.7	10.6	6.7	18.3	15.4	8.7	1.9

TABLE 28. PATIENTS WITH POISONINGS, BY SEX AND AGE, BY POISONOUS AGENT

Poisonous agent and ISC code number	Total[a]	Male	Female	Under 1 year	1 to 4 years	5 to 14 years	15 to 24 years	25 to 44 years	45 to 64 years	65 years and over
Total	673	292	381	9	128	24	104	213	126	62
Barbiturates, 971	171	50	121	1	2	1	25	78	52	10
Corrosives and caustics, 964	131	59	72	1	27	4	44	30	12	13
Carbon monoxide, 968	50	27	23	–	5	7	5	15	8	9
Lead and compounds, 966	46	18	28	–	42	2	–	1	1	–
Other gases and vapors, 969	34	22	12	–	5	2	–	15	9	2
Aspirin and salicylates, 972	23	9	14	2	9	–	6	6	–	–
Alcohol, 961	13	10	3	–	–	–	–	7	5	1
Industrial solvents, 963	9	3	6	–	4	–	1	3	1	–
Venom, 978	9	3	6	–	7	2	–	–	–	–
Mercury and compounds, 965	8	4	4	–	2	–	1	3	1	1
Arsenic, antimony, and compounds, 967	8	5	3	–	3	–	1	2	1	–
Unspecified or unknown poison, 979	152	72	80	3	17	4	21	51	30	24
All others, 960, 962, 970, 973–977	19	10	9	2	5	2	–	2	6	2

[a] Totals include 7 patients for whom age was not reported.

pal hospitals within the comparatively short period of six months, indicates that extension of safety measures is an important field for geriatrics. Efforts to this end will require knowledge of the external causes of trauma, for which study of case histories will be necessary.

The amount of hospital care needed by fracture patients and the outcome of such care depend on numerous factors, including the bone or bones involved, the presence or absence of complications, and the general state of a patient's health, which in turn depends partly on age.

The figures of Table 27 suggest that among fractures those of the femur and of the skull offer the poorest chances of survival, the former partly because complications often prove fatal to patients with this injury who are of advanced age. Fractures of the femur, those of the vertebral column, and those of the trunk required longest periods of hospitalization.

Poisonings

In Table 28 the patients hospitalized for "effects of poisons" are classified by the nature of the poisonous agent and by sex and age.

It is impressive that within six months as many as 673 patients needed care in the municipal hospitals for this diagnosis. In discussing the magnitude of this problem mortality figures have usually been cited. But they are significant only for poisonings with high proportions of fatal outcome, such as those due to carbon monoxide and barbiturates.

Section 86 of the Sanitary Code of the City of New York requires reporting by both hospitals and physicians of poisons by drugs and of "any other poisoning by inhalation or ingestion of toxic agents." But it is well known that the requirement has not been observed satisfactorily. Data on hospital patients extracted routinely from medical charts would probably be more complete than those obtained from special reports.

The age distribution of the patients with poisoning is noteworthy, especially the high proportion of children under 15 years.

Chapter VIII

PSYCHIATRIC CONDITIONS WITH SPECIAL REFERENCE TO ALCOHOLISM

In the total morbidity of the community psychiatric conditions are of major importance. The New York municipal hospitals, however, play a specifically limited part in the care of patients with these conditions. State institutions are equipped for the treatment and custodial care of these patients. The municipal hospitals admit persons appearing to have psychiatric conditions only for observation and diagnosis, discharging them or holding them for commitment to state institutions, depending upon the diagnosis and the general prognosis.

The Department of Hospitals operates two psychiatric hospitals for observation and diagnosis. Both are units of municipal hospital centers. For patients whose conditions are diagnosed as psychoses in need of care in mental institutions, measures leading to commitment are taken. When space is not available in long-term-care institutions, patients may remain in the municipal hospitals for relatively long periods awaiting transfer.

All Psychiatric Conditions

The term "psychiatric conditions" as used here refers to conditions classified in the ISC as psychoses, psychoneurotic disorders, and disorders of character, behavior, and intelligence.

Table 29 summarizes the data about psychiatric patients discharged from municipal hospitals during the study period. The group is an important one in sheer bulk of discharges, totaling 15,360 patients. This is second among the large diagnostic groups;

TABLE 29. PSYCHIATRIC PATIENTS, PERCENTAGE MALE AND NONWHITE, AND DISTRIBUTION BY AGE, BY DIAGNOSIS

Diagnosis and SL code number	Number	Per cent male	Per cent nonwhite	Percentage distribution by age						
				Under 25 years	25 to 34 years	35 to 44 years	45 to 54 years	55 to 64 years	65 to 74 years	75 years and over
Total	15,360	57.8	23.5	17.0	21.2	21.3	16.2	9.8	8.3	6.2
Psychotic conditions	9,482	52.4	20.5	11.9	19.7	18.6	15.9	11.4	11.8	9.8
Schizophrenic disorders, 64	3,830	47.7	22.8	24.7	34.9	24.2	11.8	3.7	0.6	0.1
Involutional melancholia, 65	660	29.4	7.3	–	–	10.5	49.8	34.8	4.6	0.3
Senile psychosis, 66	1,081	34.9	10.1	–	0.1	0.1	1.3	8.1	39.5	50.9
Psychosis with cerebral arteriosclerosis, 67	1,097	56.5	11.8	–	–	0.3	4.0	22.3	43.0	30.4
Alcoholic psychosis, 68	1,507	81.2	34.6	2.3	21.9	34.0	28.1	10.7	2.8	0.2
Other and unspecified psychoses, 69	1,307	55.5	21.2	11.7	16.4	21.8	19.6	17.4	10.0	3.1
Nonpsychotic conditions	5,878	66.4	27.6	24.8	23.3	24.8	16.4	6.9	2.5	0.4
Psychoneurotic disorders, 70	1,479	38.5	21.9	28.4	30.1	20.4	10.8	6.5	3.1	0.7
Pathological personality, 71	619	74.2	28.8	40.9	29.7	19.2	8.3	1.1	0.8	–
Alcoholism, 72	2,960	78.7	27.0	6.0	21.8	34.1	24.5	9.8	3.3	0.5
Other nonpsychotic psychiatric conditions, 73	820	66.7	41.7	75.6	12.9	5.2	4.6	1.6	0.1	–

it follows obstetrical conditions and has a slightly larger number of patients than traumatic conditions.

The conditions of 62 per cent of psychiatric patients were diagnosed as psychoses. Three diagnostic groups account for nearly 80 per cent of all the patients with psychotic conditions—schizophrenia and senile and alcoholic psychoses—each of them predominant in a specific span of life.

As many as 3,830 patients were diagnosed as having one of the psychoses collectively referred to as schizophrenic disorders, or dementia praecox. As is to be expected, a large proportion of them, nearly 60 per cent, were adults under 35 years of age. A total of 2,178 patients had psychoses typical of old age, approximately equally divided into those specified as senile psychosis and psychosis with cerebral arteriosclerosis. Just over 1,500 patients had an alcoholic psychosis, which is found most frequently in middle age. Of them 62 per cent were in the age group 35 to 54 years.

Neither schizophrenic nor senile conditions show a strongly marked predominance of either sex; but four out of five of the patients with alcoholic psychosis were male.

For a comparatively small group of 660 patients the diagnosis of involutional melancholia was reported. The majority of them were in their late forties and fifties, and more than 75 per cent were women. As stated earlier, this diagnosis is restricted by many physicians to depressive states associated with the menopause.

Among the 1,307 patients classified in the category "Other and unspecified psychoses," were 523 for whom no diagnosis could be made during the given hospital stay. The age distribution suggests that many of them may ultimately require the definite diagnosis "schizophrenia."

Nonwhites constitute only 21 per cent of all patients with psychotic conditions. This low proportion is mainly due to the small representation of nonwhite patients among those with old-age psychoses. This is to be expected in view of the age composition of the nonwhite population; but the distribution by color of the schizophrenic patients, of whom more than three out of four were white, seems noteworthy.

TABLE 30. PSYCHIATRIC PATIENTS, PERCENTAGE DISTRIBUTION BY LENGTH OF STAY AND NUMBER OF DEATHS, BY DIAGNOSIS

Diagnosis and SL code number	Percentage distribution by length of stay										Number of deaths
	Under 24 hours	24 to 47 hours	2 days	3 days	4 days	5 to 6 days	7 to 13 days	14 to 30 days	31 to 60 days	61 days and over	
Total	4.3	3.7	4.4	6.0	5.5	9.2	33.2	26.1	5.8	1.8	450
Psychotic conditions	1.8	1.9	2.0	3.6	3.4	6.9	41.2	31.4	5.8	2.0	402
Schizophrenic disorders, 64	0.6	0.9	1.1	2.0	2.2	4.5	46.4	34.8	5.8	1.7	12
Involutional melancholia, 65	0.9	0.9	1.5	2.4	2.7	4.9	47.7	34.3	4.1	0.6	6
Senile psychosis, 66	2.1	1.9	0.6	1.3	2.6	5.2	47.8	30.3	5.8	2.4	102
Psychosis with cerebral arteriosclerosis, 67	1.2	1.8	1.1	2.1	1.5	4.8	41.8	36.0	6.7	3.0	118
Alcoholic psychosis, 68	1.7	2.2	4.0	8.8	8.0	17.7	32.9	20.6	3.2	0.9	46
Other and unspecified psychoses, 69	5.9	4.7	4.8	5.8	4.5	6.0	26.9	29.1	9.0	3.3	118
Nonpsychotic conditions	8.3	6.8	8.1	10.1	8.8	12.9	20.2	17.7	5.7	1.4	48
Psychoneurotic disorders, 70	8.5	6.8	9.1	8.9	9.9	14.7	23.1	14.0	3.7	1.3	15
Pathological personality, 71	0.8	3.1	1.9	2.3	2.4	6.0	20.8	51.2	10.5	1.0	–
Alcoholism, 72	10.8	9.0	10.3	13.8	11.4	15.3	18.9	8.1	2.2	0.2	22
Other nonpsychotic psychiatric conditions, 73	4.5	1.6	3.0	4.5	2.2	6.1	19.3	33.8	18.7	6.3	11

Of the nearly 5,900 patients with nonpsychotic psychiatric conditions, more than half were hospitalized for alcoholism. Approximately 1,500 showed one of the psychoneurotic disturbances. This term covers a wide variety of conditions. For nearly half of the group, 686 patients, the more specific diagnosis of neurotic-depressive reaction was reported. Many of them are persons who are sent to a municipal psychiatric hospital for observation following threatened or attempted suicide.

Among the 820 other nonpsychotic patients were 236 with the diagnosis "drug addiction," many of whom are young males, including many nonwhites. In 1952 the problem of drug addiction among juveniles was acute in New York City. The new special hospital, Riverside, was in operation during only part of the study period.

The figures of Table 30 on length of stay again reflect the fact that most of the psychiatric patients in the municipal hospitals are there only for emergency care or for screening as to need for long-term care. Two-thirds stayed less than two weeks; one-third for less than one week. Only 8 per cent stayed more than a month.

Most of the patients with psychoneurotic and behavior problems, including alcoholism, were discharged after a relatively short stay. Among the psychotic patients, however, 41 per cent stayed from 7 to 13 days and 31 per cent from 14 to 30 days. Both groups include patients awaiting transfer to mental institutions. It may commonly require from ten days to two weeks to process a psychiatric commitment. When there are complications, or when the receiving institution does not have a suitable vacancy, longer delays in transfer may occur.

Alcoholic Conditions

The remaining portion of this chapter is concerned with the two groups of psychiatric conditions that result from excessive use of alcohol, namely, alcoholism and alcoholic psychosis. The term "alcoholism" covers both the acute and the chronic states; the latter is often referred to as "alcoholic addiction." The term "alcoholic psychosis" includes conditions variously designated

"delirium tremens," "alcoholic hallucinosis," and "Korsakoff's psychosis." "Cirrhosis of liver with alcoholism" is not classified as an alcoholic condition, but instead as a condition of the digestive system.

Among all the patients studied there were 4,467 cases of alcoholic etiology, for one-third of whom the diagnosis was alcoholic psychosis and for two-thirds, alcoholism. Most of the diagnoses of alcoholism were not specified further. Only 304 cases were reported as acute and 245 as chronic alcoholism.

During the past two decades the concept of alcoholic conditions has undergone major revision. The classification of these conditions reflects the change. Whereas alcoholism and alcoholic psychosis are both now included in the ISC category "Mental, psychoneurotic, and personality disorders," until 1948 the International List of Causes of Death classified alcoholism in the category "Chronic poisonings and intoxications."

According to the Hospital Discharge Study, during the year 1933 as many as 15,576 patients with alcoholism were discharged from the municipal and voluntary hospitals in New York City. The significance of alcoholism as a cause for hospitalization of male persons in the prime of life was then described as follows:

> The prevalence of alcohol poisoning as a cause for hospital admission in the male population of the age group of 35 to 44 years is striking; one out of every seven discharges of this age group has this diagnosis. No other single condition is responsible for as many hospital discharges per 100,000 male population of this age as is alcohol poisoning.[1]

At that time, acutely intoxicated persons who made nuisances of themselves, including those found drunk in hallways or on park benches, were sent by the police to the psychiatric unit of Bellevue Hospital. Frequenters of the Municipal Lodging House, then located in the vicinity of Bellevue, often sought admission to that hospital's psychiatric wards when the Lodging House refused to admit them because they were intoxicated. Now, in order to be admitted to a municipal hospital, alcoholic patients must be

[1] Deardorff, Neva R., and Marta Fraenkel, *Hospital Discharge Study*. Vol. 2, *Hospitalized Illness in New York City*. Welfare Council of New York City, 1943, p. 107.

actually sick or else the danger of a serious complication must be established by an admitting physician. Ordinary "drunks" are no longer accepted for hospital care in New York City; they are now considered a police rather than a hospital problem. In 1933 persons with the diagnosis "alcoholism" accounted for 7.4 per cent of all patients discharged from the municipal hospitals, whereas in 1952 the proportion was 2.4 per cent.

The treatment of alcoholism as a mental or personality disorder requires elaborate measures. In most instances, thorough teamwork by psychiatrists, psychologists, social workers, and other experts is needed to diagnose the underlying factors, to give the integrated treatment that may be necessary for the often complex disorder, and to guide patients through the phases of physical, mental, and vocational rehabilitation. At present, patients admitted for alcoholism to the municipal psychiatric hospitals in New York are treated only for their acute symptomatology. They remain in the hospital until their symptoms are cleared up, usually for a few days only. Medical attention to complicating conditions, however, may delay the discharge. If the prognosis is promising, patients may be referred to a mental hygiene clinic or be brought into contact with Alcoholics Anonymous. Only the serious alcoholic cases are likely to be transferred to state institutions.

Nearly all of the patients with alcoholic psychosis and the majority of those with alcoholism were in the two psychiatric hospitals. Although "Bellevue Psycho" is no longer the phrase with which to threaten persons who are overindulging, it is nevertheless true that 41 per cent of the patients with the diagnosis "alcoholism" were in this hospital. Another 30 per cent were in the psychiatric unit of Kings County Hospital Center. The others were scattered among various general hospitals. The six general hospitals in Manhattan accounted for 563 of these discharges, as compared with fewer than 300 from the general hospitals in the other boroughs.

Additional diagnoses were reported for 21 per cent of the patients having alcoholism as the main diagnosis. Fractures and other injuries lead the list of supplementary diagnoses, followed

by such related complications as cirrhosis of liver, psychoneurotic conditions, and avitaminoses, and by such unrelated chronic conditions as cardiovascular disease and tuberculosis. On the other hand, alcoholism was occasionally reported as an additional diagnosis. In these instances also combination with injuries was found most frequently. In such cases the main diagnosis may be determined by the relative seriousness of the respective conditions. Occasionally a complication may make an admission necessary that would not be justified by the intoxication alone.

Heretofore, readmissions have been especially frequent among alcohol addicts. Relapse is a characteristic of the condition as long as hospital care is confined to symptomatic treatment rather than being extended to etiological treatment and rehabilitation.

A special review of the records of all the patients with the diagnosis "alcoholism" who were discharged during the study period showed that 93 per cent were discharged only once from the same hospital during the six-month period, 5 per cent twice, and 2 per cent more than twice. Thus, for this diagnosis multiple discharges from the same hospital seem to be far less important than formerly. One woman, however, was discharged seven times and one man eight times within the six months. Moreover, the picture reflected by these figures does not show the full scope of the problem, since these counts do not include the possible hospitalization of these patients prior to the study period nor their possible care in other hospitals during the period.

As already indicated, alcoholic conditions in the municipal hospitals are found predominantly among male patients. Nearly 79 per cent of all patients with alcoholism and 81 per cent of those with alcoholic psychosis were men.

As many as one out of three of the patients with these diagnoses were between 35 and 44 years of age. They accounted for 10 per cent of all discharges in this age group and were equal in number to the aggregate of tuberculosis and cancer patients of this age. Alcoholic conditions accounted for 16 per cent of all the male patients in the age group 35 to 44 years.

Among the patients with alcoholic conditions, 29 per cent were nonwhite. The age distribution of the white and nonwhite pa-

tients is shown in Table 31. The patients with alcoholism were, as would be expected, younger than those with alcoholic psychosis. The nonwhite patients were markedly younger than the white. The fact that there were as many as 209 patients under 25 years of age, including a few under 15 years, is of great significance to the community.

TABLE 31. ALCOHOLIC PATIENTS, NUMBER AND PERCENTAGE DISTRIBUTION BY AGE, BY DIAGNOSIS AND COLOR

Diagnosis, SL code number, and color	Number	Percentage distribution by age					
		Under 25 years	25 to 34 years	35 to 44 years	45 to 54 years	55 to 64 years	65 years and over
Alcoholic psychosis, 68							
White	976	1.1	14.0	32.4	33.9	14.7	3.9
Nonwhite	516	4.5	36.8	37.0	17.0	3.3	1.4
Alcoholism, 72							
White	2,137	4.5	17.3	33.6	27.8	12.1	4.7
Nonwhite	783	10.1	34.2	35.4	15.6	3.7	1.0

The duration of stay of the patients with alcoholic conditions was shown in Table 30. Formerly when such hospitals as Bellevue had to give shelter to intoxicated persons, hospital stays of one day were common there. The sobering-up process could usually be achieved within 24 hours. Now, when all admissions for alcoholic conditions are preceded by psychiatric screening, only patients with acute mental symptoms are admitted. In more than half of the cases, care was required for from two to six days. Alcoholic patients with an acute physical symptomatology are referred to general hospitals where care of short duration may usually clear up the symptoms, but complications may cause extended hospital stays.

Chapter IX

TUBERCULOSIS

THE PROVISION OF ADEQUATE INSTITUTIONAL FACILITIES for tuberculosis patients has long been one of New York City's most important medical care problems. In the municipal hospitals in 1952, tuberculosis was the diagnosis accounting for the largest number of patient days—over 26 per cent of the total number. The proportion of patients requiring this major share of the beds used was much smaller, however. During the six-month period of this project, 5,368 tuberculosis patients were discharged, or only 4 per cent of the total number. Nearly all of them, 5,028, had tuberculosis of the respiratory system. The analysis of project data in this chapter is concerned only with this principal group of tuberculosis patients.

Tuberculosis Trends in New York City

Trends in the epidemiology of tuberculosis can generally be derived from statistics of deaths and of cases of the disease. In New York City, information on the demographic characteristics of all known tuberculosis patients and the type of care they are receiving currently is available through the register of tuberculosis patients maintained by the Department of Health. The Department of Hospitals also maintains special counts of the tuberculosis patients cared for in each of its hospitals and of the days of care they receive.

The trends of mortality and of morbidity for pulmonary tuberculosis in the city since 1910 are summarized in Table 32. The decline in mortality continuing over this entire period has been truly dramatic. From first place during many years early in the century, this disease has been reduced to tenth place in order of importance as a cause of death. Even since 1950 the death rate

has continued to drop year by year and, in fact, notwithstanding the low rate reached in 1950, the reduction has been at a more rapid rate since 1950 than earlier.

The prevalence rate of pulmonary tuberculosis for the city, as indicated by registered cases, has also declined progressively over the 43 years covered by the table. The full extent of the decline in prevalence of the disease may not be shown by these figures, inasmuch as cases were not so well reported in the earlier years of the period as now.

TABLE 32. DEATHS AND REGISTERED CASES OF PULMONARY TUBERCULOSIS, NEW YORK CITY, SELECTED YEARS, 1910 TO 1953[a]

Year	Deaths		Registered cases at end of year	
	Number	Per 100,000 population	Number	Per 100,000 population
1910	8,692	182	27,477	576
1920	6,165	110	27,919	496
1930	4,457	64	18,866	272
1940	3,323	45	19,846	266
1950	2,154	27	17,985	228
1951	1,978	25	17,911	223
1952	1,460	18	17,278	213
1953	1,183	15	17,045	210

[a] Source: Department of Health, City of New York.

The 17,278 pulmonary tuberculosis patients for whom both demographic and clinical information was recorded in the register of the Department of Health at the end of 1952 are represented by the specific prevalence rates by sex, color, and age contained in Table 33. Although the completeness of reporting of cases in the register has not been tested, much effort is expended in obtaining reports of new cases as they are found and in maintaining information concerning their condition, so that a good deal of confidence can presumably be placed in these rates.

The main deductions to be made from the figures of the table are that: (1) for both sexes and all age groups the rates are much higher for nonwhites than for whites; (2) for both color groups

the rates for males are higher than those for females for ages over 25 years; (3) for males of both color groups, the rates increase steadily with age up to the group 55 to 64 years, and fall somewhat for ages 65 and over; (4) for females of both color groups, the rates increase up to the group 25 to 34 years and decline thereafter.

The reasons for the great improvement in the control of tuberculosis are to be found partly in the effectiveness of new therapeutic weapons, especially in recent years, and partly in the

TABLE 33. PREVALENCE RATES OF PULMONARY TUBERCULOSIS BY COLOR, SEX, AND AGE, NEW YORK CITY, END OF YEAR 1952[a]

Color and sex	Registered cases per 100,000 population							
	Under 5 years	5 to 14 years	15 to 24 years	25 to 34 years	35 to 44 years	45 to 54 years	55 to 64 years	65 years and over
White								
Male	3.0	4.3	119.8	209.5	244.2	396.8	470.5	412.9
Female	3.5	6.3	144.6	203.9	161.2	107.2	73.1	97.9
Nonwhite								
Male	20.3	27.4	492.7	947.4	980.6	1200.5	1248.1	932.3
Female	12.9	62.9	636.0	753.7	495.1	343.1	238.3	208.5

[a] Source: Department of Health, City of New York. 1950 population figures were used in computing the rates.

community's sustained awareness of the problem and responsiveness to it. Present intensive case-finding and follow-up programs represent two of the measures which have contributed largely to reduce the relative importance of this disease.

It is well known that during the first half of this century the care of tuberculosis patients became increasingly the concern of institutions. At the end of 1910, only 22 per cent of the known pulmonary tuberculosis patients in the city were in hospitals. But at the end of 1952, well over half, 56 per cent, of the total number of registered patients were under care in hospitals, and of the hospitalized patients, 53 per cent were in the municipal hospitals.

The type, as well as the proportion, of institutional care of patients with this disease has undergone change over the period covered by the table. The emphasis has shifted from out-of-town sanatorium care to hospitalization within the city. Of the hos-

pitalized tuberculosis cases at the end of 1952, three-fourths were in hospitals located within the city. Of the tuberculosis patients in the municipal hospitals, only 361 were in the municipal sanatorium located outside the city.

Department of Hospitals' Tuberculosis Program

The Department of Hospitals conducts a comprehensive tuberculosis program. Its main component is inpatient care but home care and outpatient services are included. Much attention is also given to research and teaching.

During the study period, the Department operated seven special tuberculosis hospitals having a complement of 4,093 beds at the end of the period. There were 927 additional beds in the tuberculosis services of six other municipal hospitals. The tuberculosis beds in the municipal hospitals constituted the majority of such beds in the city. Approximately 1,300 beds were available in nine voluntary and proprietary hospitals.

As a result of the large number of tuberculosis patients for whom care in a hospital was considered the desirable mode of care, the Department of Hospitals took various kinds of action during the decade preceding this project. Construction of new hospitals was planned and other more promptly effective measures were taken. The cooperation of voluntary and proprietary hospitals was secured to admit an increasing number of tuberculosis patients. A hospital which had been leased to the federal government was recovered and opened as a special tuberculosis hospital and parts of other municipal hospitals were converted to tuberculosis wards. Some obsolete facilities continued to be used and occupancy rates above approved standards were tolerated in the tuberculosis services in preference to having patients cared for in their own homes during the infectious stages of the disease.

Home care, which was introduced by two of the tuberculosis hospitals in 1949 and 1950 as an emergency device, quickly developed into an essential therapeutic tool. For tuberculosis patients, as for other patients, the psychological influence of reestablished family and home life proved to be curative. The home-

care services, therefore, were not only continued but expanded after the acute bed shortage was removed.

While the planning and construction of new tuberculosis hospitals was proceeding, developments in tuberculosis epidemiology and medical care required revision of plans. The new Kings County Tuberculosis Hospital is a case in point. It was planned in 1946 as a combined tuberculosis and chronic disease hospital, but because of the urgent need for tuberculosis beds it was decided before completion of the hospital to use it exclusively for tuberculosis patients. When the scope of thoracic surgery was broadened, the surgical facilities in this new hospital were extended to make it possible to perform such new and major lung operations as lobectomy and pneumonectomy. Following two years of use, several of the surgical wards of this hospital were designated for the care of patients in need of thoracic surgery for conditions other than tuberculosis.

This study was made during a period which proves to have been one of major changes in the treatment of tuberculosis. Antibiotics, primarily streptomycin, which had already come into wide use, had at first been hailed enthusiastically, but their effects were increasingly being found to be impaired by resistance to the drug. In the summer of 1952, the use of the isonicotinic acid compounds progressed from the stage of experimentation to routine therapeutic use in the municipal hospitals; these compounds are now being used in varying combinations with antibiotics.

Tuberculosis Patients in the Study

Over 93 per cent of all the tuberculosis patients studied suffered from tuberculosis of the respiratory system. Of these patients, 4,912 had a pulmonary condition and 116 had tuberculous pleurisy. The other tuberculosis patients are not discussed here. They included 86 with tuberculosis of the lymphatic system, 83 with tuberculosis of the bones and joints, 51 with tuberculosis of the central nervous system, 38 with tuberculosis of the genito-urinary system, and 82 with tuberculosis of other sites.

It should be noted here, again, that in this study patients represent patients discharged during the study period, and that

the number of different individuals involved is not known. The extent of duplication may be larger for tuberculosis than for most other conditions. For various reasons, tuberculosis patients are subject to repeated discharges. Many undergo preliminary diagnostic study in a general hospital before receiving care in a special hospital. Discharges against medical advice are frequent and most of them result in early readmission, often for another comparatively short episode.

TABLE 34. RESPIRATORY TUBERCULOSIS PATIENTS, PERCENTAGE DISTRIBUTION BY AGE, BY SEX AND COLOR

Sex and color	Number	Percentage distribution by age							
		Under 5 years	5 to 14 years	15 to 24 years	25 to 34 years	35 to 44 years	45 to 54 years	55 to 64 years	65 years and over
Total	5,028[a]	3.5	2.6	14.4	20.6	20.3	19.3	11.7	7.6
White	3,106	3.0	2.5	12.8	15.2	18.7	22.0	15.7	10.1
Nonwhite	1,903	4.4	2.7	17.1	29.3	22.9	15.0	5.2	3.4
Male	3,419	3.1	1.9	8.9	15.5	21.6	24.7	15.4	8.9
White	2,215	2.3	1.6	7.8	10.5	19.2	26.9	19.9	11.8
Nonwhite	1,204	4.5	2.6	10.8	24.7	26.2	20.5	7.0	3.7
Female	1,590	4.5	3.9	26.5	31.5	17.4	7.8	3.8	4.6
White	891	4.7	4.7	25.3	26.9	17.6	9.5	5.2	6.1
Nonwhite	699	4.3	2.9	28.0	37.3	17.2	5.6	2.0	2.7

[a] Includes 19 patients for whom sex or color was not reported.

In the study no analysis of the patients has been made with respect to either the degree of advancement of the condition (minimal, moderately advanced, far advanced) or the activity of the infectious process (active, inactive, arrested). The latter classification was introduced by the National Tuberculosis Association and has been widely accepted. It is incorporated in the fourth edition of the Standard Nomenclature, but was not in the third edition, which was used in reporting the diagnoses for the study.

Demographic Analysis

Table 34 shows the distribution by age of the respiratory tuberculosis patients discharged during the study period, by sex and color. More than two-thirds of the patients, 68 per cent, were

males. This proportion matches fairly closely that of male cases in the citywide register at the end of 1952, which was 64 per cent. The two sex groups show somewhat different color distributions: 65 per cent of the male patients were white, but only 56 per cent of the female patients. The largest sex-color group, the white males, accounted for 44 per cent of the tuberculosis patients in this study, whereas white males accounted for 47 per cent of the registered tuberculosis patients in the city.

Forty-nine per cent of the male patients were 45 years of age or over, as compared with only 16 per cent of the female patients. This difference can be explained largely by the difference in prevalence rates for the two sexes shown in Table 33. In the rhythm of modern life, it appears, the accumulation of strain lowers the resistance of men in later middle age to such an extent that they may break down with tuberculosis. For women, on the other hand, the extra burden of pregnancy and childbirth may reduce resistance at an earlier age.

There are very marked differences between the age distributions of the two color groups. Nearly 48 per cent of the white patients were 45 years of age or over, but only 24 per cent of the nonwhites.

Length of Stay and Proportion of Deaths

The distribution of respiratory tuberculosis patients by duration of stay and the proportion of deaths are shown in Table 35. The length of stay shows a rather wide range. That 15 per cent of these patients were in the hospital for less than two weeks and 31 per cent for not more than 30 days may seem surprising for this chronic disease, for the treatment of which extended institutional care has long been considered a main requirement. Patients who left the hospital against medical advice largely account for these relatively short stays. As already pointed out, some are caused by administrative practice, which provides that patients with inconclusive chest pathology are admitted to a general hospital for diagnostic and screening purposes. When the positive diagnosis of tuberculosis is established, they are transferred to special hospitals.

While the short stays inflate the number of discharges, it is the long-stay tuberculosis patient who presents the challenge for hospital care planning. As many as 43 per cent of all the respiratory tuberculosis patients discharged during the project period stayed more than three months. As many as 620 patients stayed more than a year. Many therapeutic regimes, both medical and surgical, require extended hospital care. Some of the hospitals provide intensive rehabilitation and vocational retraining programs for long-stay tuberculosis patients.

TABLE 35. RESPIRATORY TUBERCULOSIS PATIENTS, NUMBER, PERCENTAGE DISTRIBUTION, AND PERCENTAGE OF DEATHS, BY LENGTH OF STAY

Length of stay	Patients		Per cent of deaths
	Number	Per cent	
Total	5,028[a]	100.0	9.6
Under 48 hours	153	3.1	29.4
2 to 13 days	611	12.2	18.3
14 to 30 days	798	15.9	7.9
31 to 60 days	794	15.8	6.0
61 to 90 days	514	10.2	5.6
91 to 135 days	428	8.5	8.6
136 to 180 days	318	6.3	7.5
181 to 365 days	791	15.8	7.2
366 to 730 days	478	9.5	8.6
731 days and over	142	2.8	18.3

[a] Includes one patient for whom length of stay was not reported.

Table 36 is concerned with the relation of length of stay to age of the respiratory tuberculosis patients. It indicates a distinct tendency for length of stay to decline with increasing age of the patient. Thus, 49 per cent of the patients under 35 years had stays of three months or more. The proportion is smaller for each successive age group in the table. Only 31 per cent of the patients 65 years or over had stays of this length.

Over 90 per cent of the respiratory tuberculosis patients left the hospital alive. This proportion is, of course, greatly influenced by the large number of irregular discharges. Table 37 shows that deaths accounted for very few of the discharges among the young

TABLE 36. RESPIRATORY TUBERCULOSIS PATIENTS, PERCENTAGE DISTRIBUTION BY LENGTH OF STAY, BY AGE

Age in years	Percentage distribution by length of stay						
	Under 7 days	7 to 30 days	31 to 60 days	61 to 90 days	91 to 180 days	181 to 365 days	366 days and over
Total	8.4	22.7	15.8	10.2	14.8	15.8	12.3
Under 35	6.8	20.5	14.4	9.2	16.7	18.9	13.5
35 to 44	8.9	24.7	15.4	10.0	14.5	14.9	11.6
45 to 54	10.2	24.1	15.4	10.9	12.6	14.4	12.4
55 to 64	8.3	22.6	19.0	12.1	14.4	11.9	11.7
65 and over	10.7	26.1	20.4	11.8	12.0	10.4	8.6

TABLE 37. RESPIRATORY TUBERCULOSIS PATIENTS, PERCENTAGE OF DEATHS, BY COLOR AND AGE

Age in years	Total	White	Nonwhite
Total	9.6	9.9	8.9
Under 25	2.8	2.1	3.7
25 to 34	4.8	3.8	5.6
35 to 44	7.1	5.7	9.0
45 to 54	14.6	13.8	16.4
55 to 64	16.2	15.4	20.2
65 and over	24.3	24.5	23.4

and middle-aged patients. The proportion of deaths increases with age, and nearly one out of four of the patients 65 years and over died in the hospital. The proportions of all white and of all nonwhite respiratory tuberculosis patients who died were closely similar, but the analysis by age shows that for each age under 65 a somewhat larger proportion of the nonwhite patients died.

Chapter X

CANCER

THE TERM "CANCER" AS USED IN THIS REPORT refers to malignant neoplasms of all types and sites, including neoplasms of the lymphatic and hematopoietic tissues. Neoplasms of unspecified nature are not included.

Since New York City does not maintain a cancer reporting system, regularly compiled information indicative of the incidence and prevalence of cancer in this city can now be found only in mortality statistics. Mortality data do not provide an adequate yardstick for measuring the medical and hospital needs of cancer patients throughout the often extended span of their illness, but they are important as a basis of reference. The trend of cancer mortality in the city since 1920 is shown by the following figures:

Year	Number of deaths	Rate per 100,000 population
1920	5,317	93.5
1930	8,125	117.0
1940	12,310	164.9
1950	15,509	196.5
1951	15,840	197.0
1952	16,521	204.2
1953	16,554	204.2

The large increase in the number, and in the rate, of deaths from malignant neoplasms is probably explained by a composite of factors. Refined diagnostic measures, as well as the rapidly increasing age of the population, undoubtedly contribute substantially to the apparent increase in the incidence of cancer.

The importance of deaths from cancer for persons in different age, sex, and color groups in New York City in 1950 may be seen from the specific rates given in Table 38. Although the general rates for males are higher than those for females, and the general rates for whites of both sexes are higher than those for nonwhites, the age analysis shows that these differences are not consistent. In both color groups the rates for females are higher than those for males at ages 25 through 54 years, and for both sexes the nonwhite rates exceed those for whites at ages 35 through 64 years. For both sexes and both color groups the specific death rates rise steeply with age.

TABLE 38. CANCER DEATH RATES BY SEX, COLOR, AND AGE, NEW YORK CITY, 1950

Sex and color	Rates per 100,000 population							
	Total	Under 25 years	25 to 34 years	35 to 44 years	45 to 54 years	55 to 64 years	65 to 74 years	75 years and over
Total	196.5	13.2	26.9	81.6	236.8	537.3	939.8	1,531.5
Male	213.5	15.6	23.5	65.7	233.3	604.7	1,118.4	1,902.1
White	219.8	16.6	24.6	64.2	225.3	591.5	1,119.9	1,912.9
Nonwhite	152.9	7.1	15.1	78.5	323.3	838.1	1,085.7	1,612.2
Female	180.6	10.8	30.0	95.8	240.2	469.4	782.7	1,264.2
White	185.9	11.3	29.7	92.5	233.7	464.0	781.9	1,267.9
Nonwhite	133.8	6.3	31.8	122.8	312.2	558.9	797.0	1,183.9

Table 39 presents cancer mortality rates by age and by sex for the city in 1950, for specific cancer diagnoses, that is, by site of the primary tumor. Generally, these diagnostic rates rise steadily and sharply over the age span. Cancer of the brain and other parts of the nervous system is the chief exception. The rate for this diagnosis declines considerably in the later ages.

Cancer Patients in This Study

Cancer patients in need of institutional care are accommodated in various kinds of facilities, in general as well as in special hospitals, and in institutions for long-term care of either hospital or nursing home type. Nearly two-thirds of the cancer patients included in this study were in general hospitals. The others were in

TABLE 39. CANCER DEATH RATES BY SITE OF NEOPLASM, BY SEX AND BY AGE, NEW YORK CITY, 1950

Site of neoplasm and SL code number	Rates per 100,000 population								
	Male	Female	Under 25 years	25 to 34 years	35 to 44 years	45 to 54 years	55 to 64 years	65 to 74 years	75 years and over
Total	213.5	180.6	13.2	26.9	81.6	236.8	537.3	939.8	1,531.5
Buccal cavity and pharynx, 30	8.0	1.7	0.1	0.3	1.4	5.1	14.1	24.9	39.3
Stomach, 31	29.4	17.7	–	0.8	5.0	22.5	60.9	138.2	249.6
Intestines, except rectum, 32	21.3	23.5	0.1	1.8	6.4	20.7	59.8	120.9	249.0
Rectum, 33	16.6	10.3	–	0.9	3.4	13.0	38.2	76.6	123.6
Other digestive organs, 34	26.9	19.0	0.3	1.3	3.3	23.9	68.6	130.8	199.7
Respiratory system, 35	43.7	6.7	0.1	0.8	7.9	36.2	85.6	119.1	114.8
Breast, 36	0.5	36.6	–	3.5	16.7	35.2	44.3	64.0	119.8
Cervix uteri, 37	–	12.0	0.1	2.0	5.7	11.4	15.0	20.2	26.8
Uterus, other and unspecified parts, 38	–	7.9	–	0.5	1.7	6.5	13.6	18.0	16.2
Other female genital organs, 39	–	12.2	0.3	1.5	5.0	11.7	16.8	21.3	23.7
Male genital organs, 40	13.7	–	0.2	0.5	0.7	2.4	13.5	41.1	112.3
Urinary organs, 41	13.3	5.6	0.6	0.5	2.7	6.8	26.6	52.4	94.2
Brain and other parts of nervous system, 42	5.5	3.6	2.4	1.7	3.9	7.3	12.5	7.0	2.5
Bone and connective tissue, 43	2.9	1.8	0.7	0.9	1.5	2.4	5.4	10.3	8.7
Other and unspecified sites, 44	10.7	7.8	0.7	1.6	4.7	9.2	24.3	41.8	84.2
Lymphatic and hematopoietic tissues, 45	21.0	14.0	7.4	8.3	11.8	22.5	38.2	53.0	66.8

TABLE 40. CANCER PATIENTS, PERCENTAGES MALE AND NONWHITE, AND PERCENTAGE DISTRIBUTION BY AGE, BY SITE OF NEOPLASM

Site of neoplasm and SL code number	Number	Per cent male	Per cent nonwhite	Percentage distribution by age					
				Under 35 years	35 to 44 years	45 to 54 years	55 to 64 years	65 to 74 years	75 years and over
Total	5,035	52.1	18.3	5.4	9.7	18.4	26.1	26.4	14.0
Buccal cavity and pharynx, 30	229	77.5	15.3	6.6	5.3	16.3	34.4	24.6	12.8
Stomach, 31	383	66.6	19.6	1.5	2.6	11.8	27.5	35.1	21.5
Intestines, except rectum, 32	344	52.6	16.0	1.7	5.8	14.5	25.9	32.3	19.8
Rectum, 33	248	60.3	12.5	0.4	4.5	13.4	29.5	32.8	19.4
Other organs of digestive system, 34	382	64.9	20.9	0.3	7.3	17.5	24.9	33.0	17.0
Respiratory system, 35	667	87.2	13.0	0.9	5.7	22.2	38.0	27.1	6.1
Breast, 36	492	2.4	18.3	4.3	18.3	22.8	22.6	20.6	11.4
Cervix uteri, 37	447	–	37.6	10.3	22.2	32.2	19.0	13.2	3.1
Uterus, other and unspecified parts, 38	97	–	27.8	1.0	11.3	18.6	27.9	26.8	14.4
Other female genital organs, 39	162	–	17.9	7.4	21.0	25.9	21.6	17.3	6.8
Male genital organs, 40	261	100.0	17.6	–	1.5	7.7	23.8	37.9	29.1
Urinary organs, 41	211	65.9	15.2	4.3	3.8	10.9	22.3	34.1	24.6
Brain and other parts of nervous system, 42	60	50.0	11.7	31.7	20.0	18.3	16.7	13.3	–
Bone and connective tissue, 43	52	67.3	9.6	21.6	9.8	15.7	13.7	29.4	9.8
Other and unspecified sites, 44	535	53.1	15.3	3.0	9.0	17.1	26.0	26.0	18.9
Lymphatic and hematopoietic tissues, 45	465	57.5	15.7	22.4	12.1	16.2	21.3	19.4	8.6

the three special cancer hospitals. Not all patients in the special hospitals, however, are suffering from cancer. Some, admitted with inconclusive diagnoses, are found to have benign neoplasms.

Of the patients included in this study, 5,035 had a malignant neoplasm as the main diagnosis. This number includes, no doubt, some duplication, since patients, particularly some of those with tumors accessible to special types of radiation treatment, may have had more than one hospital stay during the study period.

The Summary List provides 16 diagnostic categories for malignant neoplasms, distinguished according to site. These categories are used in the following discussion.

Demographic Analysis

The distribution of the patients with cancer of specified sites by sex, color, and age is shown in Table 40. Over half of the patients, 52 per cent, were male. Of the 2,411 female patients, 1,186 had tumors of the sex organs or the breast, whereas only 261 of the 2,618 male patients had cancer of sex-specific organs. Male patients were more numerous than female patients for all the diagnoses in the tables that are not sex-specific except malignant neoplasms of the brain and other parts of the nervous system, for which the sexes were evenly divided. The excess of males is highest for malignant neoplasms of the respiratory system. More detailed classification reveals a particularly large proportion of males for cancer of the larynx. Of 113 patients with this diagnosis only four were female.

Eighteen per cent of the cancer patients were nonwhite. This proportion is widely different from that for nonwhite cancer deaths in the city, which in 1950 was only 7 per cent. The fact that the study covers only the municipal hospitals probably explains this difference. The proportion nonwhite was materially higher for female, 22 per cent, than for male patients, 15 per cent. The relatively large number of nonwhite patients with cancer of the uterus largely accounts for this excess. It is of interest to note in this connection that differences in the incidences of cancer of both the cervix and corpus of the uterus in women of different racial and religious backgrounds are at present the subject of a

large-scale investigation. The National Cancer Institute of the United States Public Health Service is studying the relative incidence of cancer of various parts of the uterus among Jewish and non-Jewish, and among white and nonwhite, women. Patients in the New York municipal hospitals are included in this inquiry.

Table 40 shows markedly varying age distributions for hospitalized patients with cancer of different sites. Some of the cancer conditions have a distinct predominance in certain age brackets. Large proportions of cancer of some sites were found among the aged: 56 per cent of the patients with cancer of the stomach and 63 per cent of those with cancer of the male genital organs were 65 years of age or over. Of the female sex-specific cancer patients, 46 per cent were in the middle-age span of 35 to 54 years, and of the patients with malignancies of the lymphatic and hematopoietic tissues, 23 per cent were under 35 years of age.

Amount of Hospital Care

The cancer patients studied account for only 4 per cent of the total discharges from the municipal hospitals during the project period, but a large proportion of them received extended hospital care. The significance of cancer conditions in the total provision for hospital care, therefore, is better demonstrated by data on length of hospital stay than by the number of patients. Well over a third of the cancer patients stayed longer than one month. They accounted for 11 per cent of all patients having stays of over a month.

The fact that cancer patients may be hospitalized for a variety of needs—for diagnosis, for surgical, medical, or radiological treatment, as well as for terminal care—helps to explain the variation in length of stay by diagnosis shown in Table 41.

In broad terms, the hospital stays can be thought of as falling into three categories: short stay (under 7 days), medium stay (7 to 30 days), and long stay (over 30 days). The short stays, which account for a fifth of the discharges in this study, include early hospital deaths and patients admitted for diagnostic and certain therapeutic measures. The medium stays account for 44 per cent of the patients studied. Many of these patients underwent surgery.

TABLE 41. CANCER PATIENTS, PERCENTAGE DISTRIBUTION BY LENGTH OF STAY, BY SITE OF NEOPLASM

Site of neoplasm and SL code number	Percentage distribution by length of stay					
	Under 7 days	7 to 13 days	14 to 30 days	31 to 60 days	61 to 90 days	91 days and over
Total	20.3	16.9	26.9	20.0	8.2	7.7
Buccal cavity and pharynx, 30	19.2	22.3	28.4	16.6	6.1	7.4
Stomach, 31	24.0	18.0	29.8	18.8	5.7	3.7
Intestines, except rectum, 32	16.9	14.2	27.0	25.9	7.3	8.7
Rectum, 33	21.4	15.7	20.5	23.0	8.5	10.9
Other organs of digestive system, 34	23.0	11.5	26.7	22.8	9.4	6.6
Respiratory system, 35	22.2	17.1	23.5	22.2	9.9	5.1
Breast, 36	18.3	19.1	29.5	17.3	6.3	9.5
Cervix uteri, 37	19.5	22.4	28.2	17.0	8.0	4.9
Uterus, other and unspecified parts, 38	15.5	15.5	31.9	24.7	7.2	5.2
Other female genital organs, 39	16.7	17.9	26.6	19.1	8.0	11.7
Male genital organs, 40	12.6	15.3	24.9	21.5	8.8	16.9
Urinary organs, 41	17.5	10.9	23.7	22.3	15.2	10.4
Brain and other parts of nervous system, 42	21.7	8.3	28.3	21.7	8.3	11.7
Bone and connective tissue, 43	23.1	13.5	28.8	23.1	7.7	3.8
Other and unspecified sites, 44	26.0	17.8	28.2	15.5	6.9	5.6
Lymphatic and hematopoietic tissues, 45	19.0	15.9	28.2	18.8	8.4	9.7

The long-stay group represents over a third of the total cancer patients. The inability of families to care at home for patients having advanced cancer of the rectum, the prostate or the urinary organs, combined with the inadequate supply of nonmedical institutional facilities for the care of cancer patients, may explain many of these protracted hospital stays.

Cancer Deaths in Hospitals

Thirty-nine per cent of the cancer patients died in the hospitals. The proportion of deaths and the relative duration of terminal hospital care of patients with cancer of specified sites may be seen in Table 42. The proportion of fatal outcomes ranges from 17 per cent for cancer of the cervix to 59 per cent for cancer of "other organs of digestive system," which includes cancer of the esophagus and of the pancreas. For most of the diagnostic

groups the proportion of deaths is between one-third and one-half of the cases. Various tangible and intangible factors, some medical, others economic or psychological, interplay in decisions to transfer or not to transfer cancer patients in terminal stage previously cared for at home to a hospital, and also in decisions to discharge or not to discharge hospitalized patients in advanced stages so that they may die in their own home.

TABLE 42. CANCER PATIENTS, PERCENTAGE OF DEATHS, BY LENGTH OF STAY AND SITE OF NEOPLASM

Site of neoplasm and SL code number	Percentage of deaths by length of stay						
	Total	Under 7 days	7 to 13 days	14 to 30 days	31 to 60 days	61 to 90 days	91 days and over
Total	39.3	43.2	34.2	35.7	37.8	43.1	52.1
Buccal cavity and pharynx, 30	27.1	38.6	21.6	16.9	28.9	28.6	47.1
Stomach, 31	54.8	66.3	40.6	52.6	51.4	63.6	71.4
Intestines, except rectum, 32	47.1	55.2	46.9	46.2	37.1	76.0	40.0
Rectum, 33	41.9	41.5	53.8	35.3	38.6	47.6	40.7
Other organs of digestive system, 34	59.2	59.1	50.0	60.8	56.3	72.2	60.0
Respiratory system, 35	43.0	45.9	40.4	42.7	43.2	40.9	44.1
Breast, 36	34.3	40.0	24.5	30.3	28.2	45.2	59.6
Cervix uteri, 37	17.4	13.8	13.0	15.1	18.4	25.0	50.0
Uterus, other and unspecified parts, 38	25.8	26.7	20.0	19.4	25.0	42.9	60.0
Other female genital organs, 39	33.3	29.6	31.0	18.6	45.2	46.2	47.4
Male genital organs, 40	31.0	42.4	32.5	35.4	19.6	8.7	40.9
Urinary organs, 41	37.4	37.8	34.8	34.0	36.2	34.4	54.5
Brain and other parts of nervous system, 42	46.7	69.2	40.0	35.3	30.8	20.0	85.7
Bone and connective tissue, 43	32.7	25.0	71.4	26.7	16.7	25.0	100.0
Other and unspecified sites, 44	40.0	40.3	42.1	35.8	41.0	37.8	53.3
Lymphatic and hematopoietic tissues, 45	38.8	38.6	31.1	32.1	43.7	41.0	60.0

As many as 390 of the cancer patients died in the hospital after a stay of three or more months. The data of the study do not permit judgment as to whether hospital care of this extended duration was necessary for most of them, or whether for many at least transfer to a different type of institution would have been appropriate if adequate facilities had been available. The same consideration applies to many of the cancer patients who left the hospital alive after a several months' stay.

Surgical Interventions

Information on surgery performed during the recorded hospital stay was part of the discharge reports. Recent advances in surgical and anesthesia techniques extend the scope of cancer surgery considerably and operations may now be performed successfully on even seriously sick persons.

Cancer diagnoses of five sites were selected for special tabulations regarding surgery. For each of these diagnoses data on age and sex as well as on outcome were tabulated for patients with and without surgical intervention. For patients having operations the length of post-surgical stay was also tabulated. The five diagnoses and their proportions of cases with surgical intervention were as follows: male genital organs, 48.3 per cent; uterus, any part, 45.6 per cent; rectum, 41.9 per cent; breast, 35.6 per cent; and stomach, 24.3 per cent.

The fact that the age of a patient no longer controls the decision for a therapeutic regimen is illustrated by Table 43. The age distributions of the patients with and without surgical intervention for given diagnoses do not show major differences. It will be noted, however, that the percentage of deaths is, for each diagnosis, considerably higher among the patients who were not operated on during the recorded hospital stay. These higher proportions are to be expected, since this group includes the cancer patients who were admitted for terminal care rather than for active treatment.

Many cancer patients require extended post-surgical care in the hospital, as is indicated by Table 44. This applies particularly to colostomy patients, for whom readjustment and rehabilitation measures may be started in the hospital. On the other hand, nearly 60 per cent of the patients with cancer of the uterus who were operated on and were discharged alive left the hospital within two weeks after the intervention.

Immediate post-surgical deaths are infrequent. This may be primarily a triumph of surgical and related skills, but it testifies likewise to good judgment in the selection of patients for operation and in the timing of the intervention.

TABLE 43. CANCER PATIENTS WITH AND WITHOUT SURGICAL INTERVENTION, PERCENTAGE DISTRIBUTION BY AGE AND PERCENTAGE OF DEATHS, FOR SELECTED SITES OF NEOPLASM

Site of neoplasm and report on intervention	Number	Percentage distribution by age						Per cent of deaths
		Under 35 years	35 to 44 years	45 to 54 years	55 to 64 years	65 to 74 years	75 years and over	
Male genital organs								
With intervention	126	–	2.4	7.1	24.6	39.7	26.2	19.8
Without intervention	135	–	0.7	8.1	23.0	36.3	31.9	41.5
Uterus, any part								
With intervention	248	9.3	24.2	27.4	20.6	14.9	3.6	14.1
Without intervention	296	8.1	16.9	31.8	20.6	16.2	6.4	23.0
Rectum								
With intervention	104	–	2.9	14.4	30.8	35.6	16.3	37.5
Without intervention	144	0.7	5.6	12.6	28.7	30.7	21.7	45.1
Breast								
With intervention	175	2.9	19.4	25.7	18.9	25.1	8.0	13.1
Without intervention	317	5.1	17.7	21.2	24.7	18.0	13.3	46.1
Stomach								
With intervention	93	1.1	4.3	17.2	27.9	31.2	18.3	40.9
Without intervention	290	1.7	2.1	10.0	27.4	36.3	22.5	59.3

TABLE 44. CANCER PATIENTS WITH SURGICAL INTERVENTION, BY CONDITION ON DISCHARGE AND LENGTH OF POST-SURGICAL STAY, FOR SELECTED SITES OF NEOPLASM[a]

Site of neoplasm and condition on discharge	Total	Length of post-surgical stay				
		Under 7 days	7 to 13 days	14 to 20 days	21 to 27 days	28 days and over
Male genital organs						
Alive	86	15	23	15	5	28
Dead	25	8	–	3	2	12
Uterus, any part						
Alive	182	46	61	32	9	34
Dead	33	5	6	3	2	17
Rectum						
Alive	51	5	8	5	5	28
Dead	36	16	7	4	2	7
Breast						
Alive	95	7	20	26	14	28
Dead	19	6	4	1	–	8
Stomach						
Alive	49	4	15	12	6	12
Dead	38	11	3	8	6	10

[a] Patients of James Ewing Hospital are not included.

Chapter XI

CIRCULATORY AND OTHER CHRONIC DISEASES

THE VARIOUS CONDITIONS COLLECTIVELY REFERRED TO as "chronic" diseases have steadily increased in importance among the health and medical care problems of modern society. Approximately 49,000, or 40 per cent, of all patients discharged from municipal hospitals during this study had been admitted to hospital care for a chronic disease. The designation of a condition as chronic is, inevitably, somewhat arbitrary. Inclusion or omission of one or another of the diagnoses may be questioned; but the minor revisions which might be made would not change the picture basically.

The most significant categories of chronic diseases considered in this chapter and for each the number of patients discharged during the study period are: diseases of the circulatory system, 11,365; tuberculosis, 5,368; malignant neoplasms, 5,035; and allergic, endocrine, and metabolic conditions, 3,257, including diabetes mellitus, 1,486. It should be observed that nearly 12,000 of the patients with psychiatric conditions should also be classified as chronic disease patients. They are not considered in the following discussion, however, because most of the psychiatric patients are admitted to the municipal hospitals only for the purpose of diagnosis.

The patients with tuberculosis and with cancer have already been discussed separately in Chapters 9 and 10. Nevertheless, it is necessary to include them in the group considered here, since they present an important part of the problem of providing care for chronic patients in the municipal hospitals. Although patients with tuberculosis are cared for primarily in special hospitals or in special services of general hospitals, a large proportion of the

cancer patients are found in general hospitals. One hospital exclusively for chronic diseases was in operation during the study period but this hospital, Goldwater Memorial Hospital, accommodates only 1,500 patients.

In many instances chronic conditions are long-stay conditions but in other instances they are not. As stated in Chapter 5, the length of time patients with chronic diseases remain in the hospital is frequently decided not so much by their clinical condition as by the availability of other proper facilities and services in the community. The project period, May to October, 1952, came at a time when in New York City the care of chronic disease patients in need of long-term care was in a state of transition. Both nursing homes and infirmary accommodations in homes for the aged had long been in inadequate supply. At that time they were already undergoing increase. Moreover, the 1951 amendment to the Social Security Act which broadened the criteria for eligibility for aid to the disabled, made nursing home care possible for many destitute persons suffering from a chronic disease.

Length of Stay for Chronic Diseases

The duration of hospital care of 35,214 patients with chronic conditions is presented in Table 45. The data show marked variability in length of stay for the 33 diagnoses included in the table. The large proportion of extended stays of the respiratory tuberculosis patients, 43 per cent staying 91 days or more, corresponds to expectation. But the numerous early discharges of patients with several of the other conditions at first seem puzzling.

Of the patients included in this table, 47 per cent were discharged after less than 14 days of hospital care. But if the patients with respiratory tuberculosis are excluded, the proportion rises to 52 per cent. Nearly 28 per cent of the discharges of these chronic disease patients occurred within six days; excluding the tuberculosis patients, nearly 31 per cent. Many of the hospitalizations for six days or less are constructive episodes of active treatment in a long-term medical care regime. For example, among the short stays of patients with malignant neoplasms are many for intermediate radiological treatments or for exploratory interven-

TABLE 45. PATIENTS WITH CHRONIC DISEASES, NUMBER, DISTRIBUTION BY LENGTH OF STAY, AND PERCENTAGE OF DEATHS, BY DIAGNOSIS

Diagnosis and SL code number	Number	Percentage distribution by length of stay							Per cent of deaths
		Under 2 days	2 to 6 days	7 to 13 days	14 to 30 days	31 to 60 days	61 to 90 days	91 days and over	
Total	35,214	9.8	17.7	19.6	23.5	13.4	5.0	11.0	20.2
Tuberculosis, respiratory system, 1	5,028	3.0	5.3	6.9	15.9	15.8	10.2	42.9	9.6
Tuberculosis, all other sites, 2–6	340	2.1	10.3	10.6	19.7	20.3	8.8	28.2	12.6
Syphilis of central nervous system, 9	170	7.1	7.1	19.4	29.4	21.2	4.0	11.8	6.5
Malignant neoplasms, 30–45	5,035	7.1	13.3	16.8	26.9	20.0	8.2	7.7	39.2
Nonmalignant and unspecified neoplasms, 46–55	2,446	8.2	24.0	29.9	29.4	5.8	1.1	1.6	3.6
Asthma, 56	913	13.6	37.2	29.9	14.7	3.5	0.4	0.7	2.0
Diabetes mellitus, 59	1,486	7.8	17.4	22.8	26.8	12.2	5.7	7.3	12.2
Deficiency, allergic, endocrine and metabolic conditions, 60–61	579	9.0	31.1	24.2	20.4	9.8	2.2	3.3	5.7
Diseases of blood and blood forming organs, 62–63	704	19.4	21.5	18.2	23.6	10.5	2.8	4.0	2.6
Cerebral hemorrhage and other vascular lesions of central nervous system, 74–75	2,405	19.3	21.3	17.3	18 3	10.3	4.6	8.9	51.2
Multiple sclerosis, 77	82	1.2	11.1	9.9	23.5	16.0	9.9	28.4	22.0
Epilepsy, 78	603	24.5	32.2	24.4	13.3	3.5	1.0	1.1	3.3
Other diseases of central nervous system, 79	519	11.4	22.2	17.4	20.5	11.8	3.6	13.1	14.1
Cataract, 84	303	5.0	6.9	16.2	48.2	15.8	4.6	3.3	1.7
Glaucoma, 85	113	9.7	11.5	39.0	23.9	10.6	–	5.3	–
Chronic rheumatic heart disease, 93	478	7.1	23.9	31.2	17.8	13.4	2.9	3.7	7.3
Coronary artery disease, 94	1,179	28.2	16.8	12.7	23.5	15.3	2.0	1.5	45.5
Arteriosclerotic, degenerative, and other heart diseases, 95–96	4,052	13.2	21.2	23.3	23.8	11.0	3.1	4.4	27.4
Hypertensive disease, 97	2,580	10.7	22.5	25.1	24.3	10.8	2.3	4.3	21.3
General arteriosclerosis, 98	592	8.6	15.0	17.9	19.6	15.2	7.1	16.6	32.3

Bronchiectasis, 113	135	5.9	14.8	20.8	27.4	17.1	4.4	9.6	5.2
Ulcer of stomach, 116	357	8.1	15.7	28.0	30.9	13.7	2.2	1.4	10.1
Ulcer of duodenum, gastrojejunal ulcer, 117	675	4.0	16.7	28.6	33.4	14.2	1.9	1.2	5.8
Chronic enteritis and ulcerative colitis, 124	197	4.1	12.2	25.4	27.9	19.3	5.0	6.1	6.6
Cirrhosis of liver, 130	821	9.9	20.7	18.3	24.6	15.1	4.5	6.9	25.6
Cholelithiasis, 131	278	3.6	7.2	20.1	38.5	26.7	2.5	1.4	5.0
Cholecystitis without mention of calculi, 132	534	6.6	20.6	26.6	31.1	11.8	2.4	0.9	4.1
Nephritis, other than acute, 136	173	7.5	20.3	18.5	28.9	17.9	4.6	2.3	30.6
Calculi of kidney and ureter, 138	269	13.4	30.5	24.9	19.3	8.6	1.9	1.4	1.5
Hyperplasia of prostate, 141	770	3.9	10.0	10.5	32.7	28.8	9.0	5.1	10.3
Salpingitis, oophoritis, other than acute, 146	580	8.4	35.0	30.6	20.3	4.5	1.0	0.2	–
Arthritis, other than acute, 167	717	3.8	16.6	25.5	24.5	11.6	4.6	13.4	4.2
Osteomyelitis, periostitis, other than acute, 169	101	1.0	14.8	15.8	26.8	21.8	6.9	12.9	1.0

tions. Many short stays of patients with such conditions as calculi of the kidney, epilepsy, and asthma are of patients who were admitted to the hospital when stricken with the alarming symptoms of an attack and were discharged as soon as the incident cleared up, often after a few days.

About 37 per cent of all the patients with these conditions stayed in the hospital from two weeks to two months. Stays of this length were reported for at least half of the patients with syphilis of the central nervous system, cataract, cholelithiasis, chronic nephritis, and hyperplasia of prostate.

Only 16 per cent of these patients stayed in the hospital for more than two months, and for only three individual diagnoses was a stay of this length reported for as many as a third of the patients.

Thus, patients with chronic diseases are hospitalized for widely varying lengths of time. The terms "chronic disease" and "long-term medical care" therefore do not necessarily imply long hospital stays. Neither can the term "acute disease" in all instances be associated with short-stay hospital care. Traumatic conditions, for example, which traditionally have been referred to as acute conditions, probably due to the character of the onset rather than to the course of the illness, may frequently require extended hospital care, as was shown for some in Chapter 7.

The final column of Table 45 shows for each of the diagnoses the proportion of patients whose hospital stay was terminated by death. The range extends from no deaths to 51 per cent, a variation that is explained by the fact that the term "chronic disease" refers primarily to the duration rather than the seriousness of a condition.

Long-Stay Conditions

For the purpose of community planning for hospital care it is useful to focus attention on the category of long-stay conditions rather than on the traditional grouping of all chronic or long-term diseases. If, for the sake of discussion, hospitalization of two months or more is considered "long-stay," and if all conditions that cause at least 15 per cent of patients with the condition to

stay for this duration are designated long-stay conditions, then we have the series of diagnoses from the Summary List shown in Table 46. The patients with these conditions accounted for 58 per cent of all patients who had been hospitalized for more than 60 days.

Both because of the number of patients and its large proportion of extended stays, tuberculosis of the respiratory system plays the leading role among long-stay conditions. More than half of the patients with this diagnosis were in the hospital two months or more, and one-eighth of these patients had stays of more than a year. Next in proportion of long stays were empyema and abscess of lung and multiple sclerosis.

The highest proportion of stays of more than a year, 17 per cent, was for multiple sclerosis. During the six-month study period only 82 patients with multiple sclerosis were discharged from the municipal hospitals, and they were less than one-tenth of 1 per cent of all discharged patients. But two out of five of these patients stayed two months or more, and the 82 patients upon discharge had consumed approximately 23,000 days of hospital care. It is roughly estimated that the daily census of multiple sclerosis patients during the six months averaged 150, or nine-tenths of 1 per cent of the ward census. It should be noted that 23,000 days of hospital care would account for 11,000 to 12,000 discharges of patients hospitalized for tonsillectomy, an intervention for which short stay is typical.

Diseases of the Circulatory System

The diseases of the circulatory system, with 11,365 patients, comprise numerically the most important category of chronic disease. This group, subdivided according to the system affected (ISC 400–468), combines a large variety of conditions of widely different significance for health and medical care. Data on demographic characteristics and on length of stay and outcome of these patients in terms of 12 Summary List diagnoses are presented in Appendix tables.

In this discussion, several groups, primarily the peripheral vascular diseases and the diseases of veins and capillaries are dis-

TABLE 46. PATIENTS WITH LONG-STAY CONDITIONS,[a] NUMBER AND DISTRIBUTION BY LENGTH OF STAY, BY DIAGNOSIS

Diagnosis and SL code number	Number	Percentage distribution by length of stay				
		Under 61 days	61 to 90 days	91 to 180 days	181 to 365 days	366 days and over
Total	14,477	68.3	8.9	10.1	7.2	5.5
Tuberculosis, respiratory system, 1	5,028	46.9	10.2	14.8	15.7	12.4
Empyema and abscess of lung, 111	98	59.2	19.4	19.4	2.0	–
Multiple sclerosis, 77	82	62.2	9.8	2.4	8.5	17.1
Tuberculosis, all other sites, 2–6	340	62.9	8.8	14.7	7.4	6.2
Benign neoplasm of central nervous system, 53	38	71.0	5.3	13.1	5.3	5.3
Malignant neoplasm, male genital organs, 40	261	74.3	8.8	12.7	2.7	1.5
Congenital malformation of nervous system, 171	113	74.3	8.9	4.4	10.6	1.8
Malignant neoplasm, urinary system, 41	211	74.4	15.2	9.0	1.4	–
Acute rheumatic fever and chorea, 90, 92	344	75.6	17.1	7.3	–	–
General arteriosclerosis, 98	592	76.4	7.1	8.4	3.2	4.9
Fracture of lower extremity, 189	2,485	79.6	7.9	9.0	2.6	0.9
Malignant neoplasm, brain and other parts of nervous system, 42	60	80.0	8.3	11.7	–	–
Malignant neoplasm, female genital organs other than uterus, 39	162	80.3	8.0	10.5	1.2	–
Malignant neoplasm, rectum, 33	248	80.6	8.5	9.7	0.8	0.4
Pernicious and other hyperchromic anemias, 62	93	80.6	6.5	8.6	1.1	3.2
Osteomyelitis, periostitis, 168–169	166	80.7	8.5	7.2	1.8	1.8
Malignant neoplasm of lymphatic and hematopoietic tissues, 45	465	81.9	8.4	6.7	2.6	0.4
Arthritis, other than acute, 167	717	82.0	4.6	5.5	3.6	4.3
Selected diseases of central nervous system, 79	519	83.2	3.7	3.8	3.1	6.2
Malignant neoplasm, intestines except rectum, 32	344	84.0	7.2	6.7	1.2	0.9
Malignant neoplasm, other organs of digestive system, 34	382	84.0	9.4	5.5	1.1	–
Burns, 199	400	84.0	9.3	5.2	1.5	–
Malignant neoplasm, breast, 36	492	84.1	6.3	5.5	3.1	1.0
Syphilis of central nervous system, 9	170	84.1	4.1	4.7	2.4	4.7
Malignant neoplasm, respiratory system, 35	667	85.0	9.9	4.0	0.9	0.2

[a] Conditions for which 15 per cent or more of the patients stayed 60 days or longer. The diagnoses are listed in order of the proportion of patients with long stays.

TABLE 47. PATIENTS WITH MAJOR DISEASES OF CIRCULATORY SYSTEM, PERCENTAGE OF MALES AND DISTRIBUTION BY AGE, BY DIAGNOSIS

Diagnosis and SL code number	Number	Per cent male	Percentage distribution by age					
			Under 25 years	25 to 44 years	45 to 54 years	55 to 64 years	65 to 74 years	75 years and over
Total	9,274	54.6	3.0	8.7	13.0	22.9	31.6	20.8
Acute rheumatic heart disease, 91	393	44.0	30.3	36.5	17.3	12.0	3.1	0.8
Chronic rheumatic heart disease, 93	478	39.1	23.3	36.7	20.8	13.6	4.8	0.8
Coronary artery disease, 94	1,179	70.0	0.2	7.7	18.0	30.1	29.8	14.2
Other arteriosclerotic and degenerative heart disease, 95	3,706	59.0	0.1	1.6	8.3	22.2	39.0	28.8
Other and unspecified heart disease, 96	346	60.7	7.8	23.3	15.4	23.8	22.1	7.6
Hypertensive disease, 97	2,580	44.1	0.7	9.9	17.1	25.9	30.7	15.7
General arteriosclerosis, 98	592	57.9	–	1.3	3.4	13.2	38.6	43.5

regarded and the analysis is limited to six major circulatory diseases which account for 9,274 patients as shown in Table 47. While more than half of these patients were aged, the proportions in the younger age groups are deserving of attention.

The challenge to planning of medical care and particularly of hospital care for patients with several of these major cardiac conditions is that they may take widely different courses. The course may range from sudden death, often occurring in a state of apparent health and often striking persons in their forties or fifties, to a protracted development in which the person affected "lives with his disease" for many years, often until old age. Some of the patients are in well-compensated condition, others are disabled in various degrees. Many change from one to the other state, often in an unpredictable way. The medical care needs of patients with many of these circulatory diseases thus differ widely. Each patient, in any given phase of his disease, requires a specific type of care. The planning of the complex medical program for these patients, therefore, should be based on knowledge of the amount and type of care needed. But such knowledge has thus far not been available because the data on hospital services rendered to patients with these diseases have not been analyzed on a communitywide scale.

In Table 48 for one group of the patients with diseases of the circulatory system, namely, those with arteriosclerotic and degenerative heart disease, excluding coronary artery disease, information on outcome of the hospital stay is correlated with length of stay. This diagnostic group accounted for 3,706 discharges. These patients had lengths of stay varying from less than 24 hours to more than two years. Deaths, it will be seen, were relatively most frequent among the patients with very short and very long stays.

There are several aspects of these data that have significance for the planning of hospital and other care for patients with chronic conditions. First, most of the patients with arteriosclerotic and degenerative heart disease are seriously sick when admitted to a hospital. They require intensive care which, during the early phase of hospital stay or in case of short stay during its whole

duration, can be compared to that required by patients with acute diseases. This, of course, applies also to many other patients with chronic diseases: the diabetic, for instance, who is rushed to the hospital during acute disturbance of his metabolic condition; the patient with a kidney or gallbladder colic; and particularly the patient suffering from a cerebral hemorrhage.

TABLE 48. PATIENTS WITH ARTERIOSCLEROTIC AND DEGENERATIVE HEART DISEASE, NUMBER AND PERCENTAGE OF DEATHS, BY LENGTH OF STAY[a]

Length of stay	Number	Per cent of deaths
Total	3,706	27.2
Under 24 hours	304	75.3
24 to 47 hours	156	48.1
2 days	100	33.0
3 days	159	32.1
4 days	173	23.7
5 days	168	25.0
6 days	185	27.6
7 to 13 days	884	17.6
14 to 30 days	885	17.9
31 to 60 days	403	19.4
61 to 90 days	116	20.7
91 to 135 days	76	32.9
136 to 180 days	29	37.9
181 to 365 days	32	28.1
366 to 730 days	15	53.3
731 days and over	21	85.7

[a] This table includes only patients classified in SL category 95; patients with coronary artery disease are not included.

Short stays of patients with cardiac and other chronic conditions during such acute, serious attacks mean that general hospitals to a large extent maintain their character of acute-care hospitals though, in line with the changing age and disease patterns of the population, so-called chronic diseases are replacing the so-called acute diseases as causes for admission. The exacerbations of chronic diseases are becoming the acute diseases of our times.

Second, more than half of the patients with degenerative heart disease who left the hospital alive were discharged after less than two weeks of hospital care. In other words, more than half of all

the patients admitted for a condition which is the prototype of a chronic disease had, in the course of their long-term care, a hospitalization of comparatively short duration. None of these patients was "cured" in the hospital—the very connotation of a "degenerative" process precludes such an outcome. For most, if not all, of these patients continuation of medical and related care was required following discharge from the hospital. The term "chronic disease" implies such a need. For some patients hospitalization may have been needed because of an acute attack or a relapse which temporarily exacerbated the chronic condition. Others had reached a state of degeneration where care at home was no longer feasible and, pending arrangement of a new medical care program, temporary hospitalization was necessary. In still other instances, a diagnostic reevaluation or a reassessment and subsequent revision of the present medical regime may have been indicated.

Third, more than 25 per cent of these patients died in the hospital and nearly one out of three of the deaths occurred within 48 hours after admission. Emergency admission and terminal care of patients of this type are among the basic functions of a general hospital. The number, as well as the proportion, of chronic disease patients admitted to hospitals in an extreme condition, is probably on the increase. Critically ill as they are, these patients need much medical, nursing, and related attendance.

Fourth, about 8 per cent of the patients with degenerative heart disease stayed in the hospital for more than two months. Special study would be needed to establish why individual patients remained in the hospital for protracted stays extending to six months, a year, and even more than two years. One may wonder in how many instances active therapeutic measures or other clinical reasons justified continued hospital care of such length. A significant proportion of the cardiac patients who had long stays may have remained because there was no adequate accommodation to which they could be discharged. Community planning in New York in 1952 had not yet fully caught up with the need for varied services for the large volume of patients with this and other chronic diseases. Some links were still missing,

others insufficient in number, in the chain of facilities for an adequate long-term medical care program for the rapidly growing fraction of the population with chronic illnesses. The strain on the available links, especially on the general hospitals, was therefore unduly heavy. Hospitalization thus became for some patients a continuous, perhaps even a permanent, solution of their medical care need rather than an intermediate episode.

Chapter XII

HOSPITALIZATION OF CHILDREN

THIS CHAPTER BRINGS TOGETHER DATA concerning diseases of children that are numerically significant from the standpoint of hospital care, although child patients with some of these conditions have been discussed in earlier chapters. The term "children" as used here covers patients under 15 years of age. This classification is in conformity with the practice of most population studies. In hospital administration, however, pediatric services are usually limited to children under 13 years of age, sometimes to those under 12 years.

The need for hospitalization of children has been shrinking over the years. Medical science has discovered how to reduce the incidence of many of the communicable diseases commonly referred to as childhood diseases, such as diphtheria and whooping cough, and to control the course of others. Mastoiditis, for instance, has practically disappeared from the hospital wards. In many general hospitals it has become possible to convert some of the pediatric wards to adult services in need of additional beds. The communicable disease hospitals, as mentioned earlier, are now partly used for patients with other conditions. The decrease in need for pediatric facilities in the municipal hospitals is due, also, to the fact that care for child patients with such conditions as poliomyelitis, cardiac diseases, and various orthopedic conditions is liberally provided by voluntary groups.

But at the same time, another area in pediatrics has developed, that of care for premature infants. The intensification of this program had led by 1952 to the establishment of five premature centers in municipal hospitals in this city. The term "premature

center," it should be remembered, refers to an organized unit equipped and staffed to accommodate premature infants born elsewhere, as well as those born in the hospital maintaining the center.

Although the proportion of children under 15 years of age in the total population of the city has declined since 1930, the number of children of this age has remained fairly constant at approximately 1,650,000. Both the incidence of reportable diseases and the mortality rate for this age group declined substantially during this period. Infant mortality declined from 57 to 25 per 1,000 live births, and mortality for all children under 15 years declined from 7 to 3 per 1,000 children of that age.

Child Patients Under Fifteen Years

The children under 15 years included in this study comprised 15 per cent of all patients discharged during the study period. They represented a rate of 11.2 per 1,000 population of the same age as compared with 15.5 per 1,000 for total patients. Numbers, percentages of total patients, and rates per 1,000 population were given in Tables 4 and 5 in Chapter 3 for the subgroups of children under one year of age, one to four years, and five to fourteen years.

The children of these ages among the patients studied were distributed as follows by age and color:

	Total	White	Nonwhite	Per cent nonwhite
Total	18,457	11,649	6,808	36.9
Under 1 year	3,986	2,214	1,772	44.5
1 to 4 years	6,136	3,679	2,457	40.0
5 to 14 years	8,335	5,756	2,579	30.9

In Table 49 are listed all Summary List diagnoses that accounted for at least 200 patients of whom at least a fifth were children under 15 years of age. There are 37 such diagnoses. They accounted for 14,476 patients under 15 years of age, or over 78 per cent of all patients of that age.

The variety of conditions is impressive. The classic childhood diseases still rank high in this list, which is arranged according

TABLE 49. PATIENTS UNDER 15 YEARS, NUMBER, PERCENTAGE OF PATIENTS WITH SAME DIAGNOSIS AND DISTRIBUTION BY AGE, BY DIAGNOSIS[a]

Diagnosis and SL code	Number	Per cent of all patients with same diagnosis	Percentage distribution		
			Under 1 year	1 to 4 years	5 to 14 years
Total	18,457	15.1	100.0	100.0	100.0
Term birth, no birth complications, 174	157	100.0	3.9	–	–
Premature birth, no birth complications, 175	932	100.0	23.3	–	–
Full term infant (admitted after birth) 178	271	100.0	6.8	–	–
Whooping cough, 18	304	99.3	2.7	2.0	0.8
Other conditions of early infancy, except diarrhea, 180	138	97.2	2.9	0.3	0.1
Measles, 23	853	96.9	2.1	9.3	2.3
Scarlet fever, 14	149	93.7	0.1	0.8	1.2
Congenital malformations of nervous system, 171	103	91.2	1.2	0.5	0.3
Chickenpox, 25	518	84.1	2.2	4.2	2.1
Hypertrophy of tonsils and adenoids, 109	826	76.9	0.1	3.9	7.0
Otitis media without mention of mastoiditis, 87	200	76.3	0.9	1.4	0.9
Acute poliomyelitis, 20	435	73.0	0.1	1.9	3.7
Acute tonsillitis, 103	596	72.2	1.4	5.8	2.2
Other diseases of upper respiratory tract, 110	1,249	65.5	7.3	10.2	4.0
Other diseases of male genital organs, 143	561	64.3	3.5	4.6	1.7
Other congenital malformations, 173	300	61.0	2.7	1.8	1.1
Mumps, 26	201	60.5	0.1	1.4	1.4
Acute rheumatic fever, 90	189	59.6	–	0.2	2.1
Other diseases of blood and blood-forming organs, 63	274	44.8	0.5	1.9	1.6
Gastro-enteritis, colitis, 123	331	40.7	3.8	1.1	1.3
Bronchitis, 108	127	39.9	1.1	0.8	0.4
Fracture, upper extremity, 188	803	37.5	0.2	1.6	8.3
Bronchopneumonia, 106	482	36.8	4.2	3.7	1.1
Other infective and parasitic diseases, 29	200	35.5	1.1	1.0	1.1
Burns, 199	137	34.3	0.3	1.2	0.6
Acute appendicitis, 119	302	32.9	–	0.5	3.2
Concussion of brain, 193	616	32.2	0.4	3.0	5.0
Other nonpsychotic psychiatric conditions, 73	262	32.0	0.5	0.4	2.6
Other diseases of skin and subcutaneous tissue, 165	675	26.0	3.1	4.3	3.5
Diseases of buccal cavity and esophagus, 115	93	26.0	0.1	0.6	0.6
Other conditions of musculoskeletal system, 170	244	25.5	0.8	0.8	2.0
Other allergic, endocrine, and metabolic conditions, 61	101	25.4	0.6	0.9	0.2
Hernia without obstruction, 121	349	24.3	1.7	2.5	1.5
Effects of poisons, 203	161	23.9	0.2	2.1	0.3
Superficial injury, 197	312	22.9	0.5	1.0	2.8
Undetermined diagnoses and special examinations, 183	919	21.6	8.3	4.1	4.1
Other diseases of central nervous system, 79	106	20.4	0.4	0.8	0.5
All other diagnoses	3,981	4.5	10.9	19.4	28.4

[a] Diagnoses are those having frequencies of 200 or more patients, of whom at least 20 per cent were under 15 years of age.

to the percentage of child patients. But the total number of child patients having these diseases is small: 853 with measles, 518 with chickenpox, 304 with whooping cough, 201 with mumps, and 149 with scarlet fever. Nowadays only a small fraction of the children having some of these diseases, particularly measles, are hospitalized. They are chiefly those living in child-care institutions. Diphtheria accounted for only eight admissions to the municipal hospitals during the study period, and, therefore, does not appear in this list. A total of only 200 children were treated for otitis media. The number of mastoiditis patients was only 12.

In evaluating the data of this table, it should be kept in mind that several of the acute conditions prevalent in childhood are subject to seasonal influences. Since the study covered the period from May through October, the number of measles patients, for instance, may have been below 50 per cent of a full year's quota and the number of acute poliomyelitis patients above 50 per cent. Since tonsillectomies usually are suspended with the beginning of the warm season, the 826 children with hypertrophy of tonsils and adenoids do not represent half of a full year's quota. The totals for diseases of the upper respiratory tract, for gastro-enteritis, and for some other conditions may likewise be influenced by the season covered.

Among diseases that are significant for hospital morbidity of children but that do not appear in Table 49 is tuberculosis, which in this study accounted for 397 patients under 15 years of age. More than half of these children were under 5 years. Tuberculosis of certain sites, especially of the meninges, is predominantly a condition of childhood. Of the total 51 patients with tuberculosis of the meninges, 34 were under 15.

The last three columns of the table distribute the children in each of three age groups by diagnosis. These age groups are discussed separately in the following paragraphs.

Infants

Among the patients under 15 years of age were 3,986 who on admission were less than one year old. These infants constitute 3 per cent of the total number of patients.

As will be recalled, infants discharged from the newborn nursery of a hospital are not classified as patients, but infants discharged from the pediatric service are so classified. Infants are usually transferred from the newborn nursery to pediatric services because they need special care—because of prematurity, congenital malformations, or other conditions. But there are usually in the municipal hospitals also a certain number of infants who are transferred to pediatric wards although physically well, because plans for their future placement, such as adoption or foster care, are not completed when they are physically ready for discharge from the newborn nursery. These infants, in hospital parlance referred to as boarders, are usually classified in the Summary List under "Term birth, no birth complications," but some of the infants listed under "Full term infant, admitted after birth" may also be in the hospital for this social rather than medical reason.

Prematurity is numerically the most important single condition for which children under one year of age received care as patients. The 932 infant patients reported as premature do not constitute the total but only the majority of premature infants cared for. Several of the hospitals accommodate in their newborn nurseries borderline cases of prematurity needing limited special care. These premature infants are not included among the patients discussed here.

Of the premature infants cared for in the pediatric wards, 256 or 27 per cent died. In evaluating this proportion it must be remembered that premature infants in the pediatric wards will include those having least prospect of survival. As many as 199 of the deaths occurred within the first 48 hours, the crucial period in the lives of these infants. Long care is often necessary to save these delicate lives. Forty-eight per cent of those discharged alive stayed more than a month; a few remained in the hospital more than three months.

Of the premature infant patients, 54 per cent were nonwhite. This proportion corresponds almost exactly with the proportion nonwhite among women delivered in municipal hospitals. On the other hand, prematurity was the diagnosis for 29 per cent of the

nonwhite infant patients as compared with only 19 per cent of the white infant patients.

Conditions of the respiratory system were numerically the next most important disease category causing hospitalization for both white and nonwhite infants. Although a majority of these diagnoses were conditions of the upper respiratory tract, which often are of minor nature, 212 infants had pneumonia.

Communicable diseases were reported for 404 infants, 280 white and 124 nonwhite. Nearly all were childhood diseases, such as whooping cough, measles, and chickenpox. Nearly 200 infants were treated for congenital malformations.

Perhaps the most significant aspect of the morbidity among infants today is the rarity of conditions that in the past have been responsible for high rates of infant mortality. For example, in this study only 150 infants were hospitalized for gastro-enteritis and colitis. As few as five cases of congenital syphilis were reported among the nearly 4,000 infant patients.

Children One to Four Years

The diagnoses of about two-thirds of the children one to four years of age were in the groups of infective and parasitic diseases, diseases of the respiratory system, and traumatic conditions. The leading specific conditions for this age group, as shown in Table 49, were certain diseases of the upper respiratory tract. Included here was the common cold, usually a mild infection, which kept many of these patients in the hospital for only a very short time. Most of them presumably had been admitted with symptoms that seemed to threaten more serious diseases.

Traumatic conditions accounted for 922, or 15 per cent, of the children of this age group. As many as 234 had fractures; among them were 143 boys. Fractures of the upper extremity were most frequent, accounting for 101 patients. One out of five children with traumatic conditions had concussion of brain; twice as many boys as girls had this condition.

Children Five to Fourteen Years

For children from 5 to 14 years the largest diagnostic group is traumatic conditions; it accounted for 29 per cent of the white

and 25 per cent of the nonwhite children in this age group. Among the specific conditions shown in Table 49, fractures of the upper extremity accounted for 8 per cent and concussion of brain for 5 per cent of these child patients. Seven per cent were hospitalized for tonsillectomy.

Mental, psychoneurotic, and personality disorders, which were almost negligible in the two lower age groups, begin to be numerically significant in this age group. Slightly over 5 per cent of both white and nonwhite children of this age were in this diagnostic group, over a third of them with schizophrenic disorders.

Chapter XIII

HOSPITALIZATION OF AGED PERSONS

NEARLY A SIXTH OF ALL PATIENTS DISCHARGED from the municipal hospitals during the study period were 65 years of age or older. In view of their number and of the present interest in the problems of planning for and providing various kinds of service for the aged, a separate analysis of the hospital morbidity data for these patients seems worthwhile. The term "aged" refers to persons in this age group. In some instances, the group is subdivided into persons of 65 to 74 years and of 75 years and over.

In this analysis of aged patients a few socioeconomic features that are characteristic of New York City need to be kept in mind, particularly that it is common to live in multiple dwellings, that apartments are usually small, and that many are overcrowded. When families lived in single family dwellings, they were often units of three- or even four-generation households. In such living arrangements aged family members could expect needed attendance when they were incapacitated by chronic illness or physical decline. But modern living patterns are different. The two-generation household, especially in a city apartment of limited space, tends to exclude the aged family members. Small apartments of their own, moreover, may not provide adequate living arrangements for older persons when incapacitating chronic illness makes household tasks difficult and living alone undesirable. Admission to institutions, mostly of domiciliary type but also including hospitals, is therefore needed by relatively large proportions of the aged who live in an urban setting like New York.

Increasing Proportion of Aged Population

It is estimated that in 1952 the population of New York included 620,000 persons who were 65 years of age and over. The Census of 1950 enumerated 605,235 aged persons, or 8 per cent of the total population. The aged were only 6 per cent of the total in 1940, and only 4 per cent in 1930. Thus, within the span of 20 years the number of aged persons in New York has increased by more than 340,000 and their proportion in the total population has doubled.

The aged population of the city in 1950 showed the following characteristics with respect to age, sex, and color. Both the proportions male and nonwhite among the aged were smaller than the corresponding proportions in the total population. Of the total population males constituted 48.4 per cent and nonwhite persons, 9.8 per cent.

Age	Number	Per cent male	Per cent nonwhite
Total	605,235	45.5	4.7
65 to 74 years	444,997	46.8	4.9
75 to 84 years	139,005	42.7	3.9
85 years and over	21,233	36.7	5.0

Hospitals and Other Facilities

The aged require various types of institutional service when physical and mental capacities are declining, ranging from mere domiciliary service to full hospital care at times of acute illness or when terminal care is needed. The groups requiring various kinds of service between these two extremes are of increasing importance. These are aged persons who are too well for continued care in a general hospital, or even a chronic disease hospital, but who are too infirm or incapacitated to be in their own home or in an institution that has no medical program.

The rapid increase of the aged population in New York, although long foreseen by population experts, was not early accom-

panied by adequate community action, notwithstanding frequent warnings by public health authorities. The amount and variety of need for medical, nursing, and attendant care for the aged has been recognized only relatively recently. The admission of aged persons with chronic diseases to general hospitals and their care there for extended periods frequently resulted from the deficiency of more appropriate accommodations.

Municipal hospitals serve aged sick people just as they serve sick persons of any other age. But debility and infirmity due to old age are not in themselves adequate reasons for hospital care. Voluntary and proprietary hospitals as a rule have been more successful than municipal hospitals in limiting their services to the acutely sick among the aged, partly because their clientele has less difficulty in adjusting their own home arrangements or in securing appropriate custodial accommodation when needed. Since federal old-age insurance is not yet universal and is generally insufficient to provide for the expense of hospitalization, tax-supported hospitals admit a higher proportion of the aged sick on the basis of indigency than of other age groups.

As stated in Chapter 3, the Department of Hospitals in 1952 operated in addition to the hospitals two large homes for dependent aged. These institutions with a total capacity of 2,700 beds, in which domiciliary rather than active hospital programs are conducted, were not covered by this study. Admission to these homes is primarily by referral from the municipal hospitals, which transfer to them indigent persons no longer in need of full hospital care. On the other hand, residents of these homes are sent to a municipal hospital whenever it becomes necessary.

The proportion of aged persons in the total patient load of the individual municipal hospitals was found in this study to vary materially. Among the 14 general hospitals, it ranged from 5 to more than 25 per cent. For the total group of hospitals it was 16 per cent. In 1933 the Hospital Discharge Study found that less than 6 per cent of all patients discharged from the municipal hospitals were 65 years of age and older. The difference is explained by a variety of reasons. Probably the most significant is the large increase in the number of aged people in the population. But

modern therapeutic and rehabilitation measures are increasingly extended to aged people and hospital service is therefore increased. Many of the aged patients with chronic diseases require repeated short hospital stays rather than a single extended stay.

Demographic Analysis

The total number of aged patients studied was 19,676. Well over a third, 37 per cent, were 75 years of age and over. Only 45 per cent were women, which is the same as the proportion of women among all patients when obstetrical patients are excluded. The 8,840 aged female patients represent a ratio of 27 patients per 1,000 women in this age group in the city's population, whereas the 10,836 aged male patients represent a ratio of 39 patients per 1,000 aged men in the total population. The difference between these rates confirms the view commonly held that need for care in municipal hospitals is substantially greater among aged men than among aged women.

Only 11 per cent of the aged patients were nonwhite as compared with 35 per cent of patients of all ages; and only 5 per cent of all nonwhite patients were aged as compared with 22 per cent of the white patients. Although these proportions for the nonwhite patients are strikingly small, they are readily explained by the small proportion of aged nonwhite persons in the population of the city. In relation to population, the aged nonwhite patients in municipal hospitals are in excess of the aged white patients. Thus, based on the population figures of 1950, the semi-annual rates of hospitalization in the municipal hospitals in 1952 were for nonwhite persons 65 to 74 years of age 73 per 1,000, and for those 75 years and over 98 per 1,000. The corresponding rates for aged white persons were 26 per 1,000 for ages 65 to 74 years, and 43 per 1,000 for ages 75 and over.

Diagnoses

Aged patients are hospitalized for a wide variety of diseases. In Chapter 4 some conditions were noted as tending to be specific for old age. Table 50 includes these and also other diagnoses that, either because of their frequency or their seriousness, are

TABLE 50. PATIENTS 65 YEARS AND OVER, NUMBER, PERCENTAGE OF PATIENTS WITH SAME DIAGNOSIS, PERCENTAGE 75 YEARS AND OVER, AND PERCENTAGE OF DEATHS, BY DIAGNOSIS[a]

Diagnosis and SL code number	Number	Per cent of all patients with same diagnosis	Per cent 75 years and over	Per cent of deaths
Total	19,676	16.2	37.1	24.9
Senility, 181	292	93.3	75.0	11.3
General arteriosclerosis, 98	485	81.9	53.0	34.4
Senile psychosis, psychosis with cerebral arteriosclerosis, 66–67	1,773	81.4	49.6	10.8
Hyperplasia of prostate, 141	536	69.6	40.1	13.1
Other arteriosclerotic and degenerative heart disease, 95	2,505	67.6	42.5	31.5
Cataract, 84	176	58.1	37.5	2.3
Vascular lesions affecting central nervous system, 74–75	1,321	54.9	38.3	57.5
Hypertensive disease, 97	1,193	46.2	33.8	24.4
Coronary artery disease, 94	517	43.9	32.3	60.2
Other diseases of lung and pleural cavity, 114	110	41.5	25.5	21.8
Malignant neoplasms, 30–45	2,027	40.3	34.6	44.9
Diabetes mellitus, 59	536	36.1	25.0	19.6
Neoplasm of unspecified nature, all sites, 55	82	32.3	42.7	28.0
Fracture of lower extremity, 189	785	31.6	46.8	26.2
Other forms of arthritis, 167	216	30.1	34.3	7.4
Cholelithiasis, cholecystitis, 131–132	241	29.7	34.4	10.8
Other diseases of heart, 96	102	29.5	25.5	52.0
Varicose veins of lower extremities, 99	178	29.5	27.0	3.9
Hernia, intestinal obstruction, 121–122	459	25.0	31.4	13.3
Other diseases of intestines and peritoneum, 129	107	24.9	36.4	10.3
Fracture of trunk, 186–187	71	24.0	45.1	8.5
Other diseases of circulatory system, 101	154	22.5	34.4	21.4
Other diseases of urinary system, 140	161	20.9	26.1	8.7
Pneumonia, 105–107	445	20.1	46.5	31.2
Stomach, duodenal, gastrojejunal ulcer, 116–117	201	19.5	19.9	16.9
All other diagnoses	5,003	5.6	29.5	12.1

[a] Diagnoses are those having frequencies of 200 or more patients, of whom at least 20 per cent were 65 years of age or over.

particularly significant in the hospital morbidity of the aged. The diagnostic groups are arranged in this table in descending order of the proportions of aged patients. Included in the table are all Summary List diagnoses for which at least 200 patients were reported, of whom at least a fifth were 65 years of age and over. These diagnoses accounted for 75 per cent of the patients of that age.

Aged persons were very frequent among the patients with chronic diseases. Their proportion was high especially for the vague generic diagnosis senility, and also for conditions often referred to as degenerative, such as arteriosclerotic conditions, hyperplasia of prostate, cataract, and vascular lesions affecting the central nervous system. The aged also constituted more than 40 per cent of the patients with malignant neoplasms, hypertensive disease, and coronary artery disease.

Certain diseases of the circulatory system and malignant neoplasms are known as leading causes of death among the aged. They accounted in 1952 for 57 and 18 per cent, respectively, of all deaths among the aged in New York City. As causes of hospitalization in the municipal hospitals, they ranked high, accounting in this study for 27 and 10 per cent of the patients 65 years and over.

Surgical Interventions

In recent years, parallel with progress in anesthesia and in prevention of infection, surgery has become much more common in the treatment of aged patients. Increasingly, people in their seventies and even in their eighties ask for surgery to have eye-

TABLE 51. PATIENTS 65 YEARS AND OVER, PERCENTAGE WITH SURGICAL INTERVENTION, FOR SELECTED DIAGNOSES

Diagnosis and SL code number	Per cent with surgical intervention
Cataract, 84	85.2
Hyperplasia of prostate, 141	65.5
Hernia without obstruction, 121	56.0
Intestinal obstruction with or without hernia, 122	45.5
Cholelithiasis and cholecystitis, 131–132	42.3
Malignant neoplasms of selected sites, 31, 33, 36–38, 40	36.3
Stomach, duodenal, gastrojejunal ulcer, 116–117	29.9

sight restored, to be freed from painful gallstone colics, to have ruptures repaired, and for other interventions which are not of

life-saving importance but contribute to a more comfortable old age.

The proportions of the aged patients in this study having operations for selected conditions are shown in Table 51. Hospitalization of cataract patients, it is safe to assume, occurs in most instances for the very purpose of an operation. The fact that 85 per cent of the aged cataract patients who were hospitalized were operated on, therefore, may not be surprising. But when conditions may be treated either with or without surgical intervention, such as cholelithiasis and cholecystitis, it appears definitely noteworthy that 42 per cent of the aged patients had operations.

Duration and Outcome of Hospital Stay

It has often been assumed that old age slows down the healing and recuperative processes. Extended duration has therefore been an expected characteristic of the hospital care of the aged. Table 52 shows for selected diagnoses the data on length of stay of the aged as compared with younger patients. The diagnoses are listed here in order of the number of aged patients. The figures do indeed show relatively long hospital stays for the aged.

For very long stays the difference between the two groups of patients is not very great. Of all the aged patients, 2.5 per cent stayed six months or longer, as compared with 1.9 per cent of all the younger patients. But 22 per cent of the aged stayed from one to six months as compared with only 10 per cent of the younger group. There is a large difference between the two groups in the proportion of short stays, more than half of the younger patients staying less than seven days as compared with 29 per cent of the aged patients.

When the figures are compared for individual diagnoses in this table, however, there is little difference in the distribution by length of stay of the aged and other patients. In general, the diseases that bring aged persons to the hospital are long-stay conditions. Persons under 65 who have the same conditions are not very much younger and they need about the same time in the hospital. Exceptions are pneumonia and diabetes mellitus, for

TABLE 52. NUMBER AND DISTRIBUTION BY LENGTH OF STAY OF AGED AND OF YOUNGER PATIENTS, FOR SELECTED DIAGNOSES

Diagnosis and SL code number	Number of patients	Percentage distribution by length of stay						
		Under 7 days	7 to 30 days	31 to 60 days	61 to 90 days	91 to 180 days	181 to 365 days	366 days and over
Total								
Aged	19,676	28.9	47.0	13.4	4.3	3.9	1.3	1.2
Other	102,276	50.9	37.3	6.1	2.0	1.8	1.1	0.8
Other arteriosclerotic and degenerative heart disease, 95								
Aged	2,505	32.7	46.9	12.0	3.5	3.0	1.0	0.9
Other	1,201	35.5	49.5	8.6	2.3	2.5	0.6	1.0
Malignant neoplasms, 30–45								
Aged	2,027	20.9	43.2	20.1	7.7	6.0	1.4	0.7
Other	3,008	20.0	44.2	19.8	8.5	5.8	1.4	0.3
Senile psychosis, psychosis with cerebral arteriosclerosis, 66–67								
Aged	1,773	13.2	77.5	6.4	1.7	0.8	0.3	0.1
Other	405	12.4	80.1	5.7	0.7	0.5	0.3	0.3
Vascular lesions affecting central nervous system, 74–75								
Aged	1,321	40.8	36.3	9.9	4.5	4.4	1.1	3.0
Other	1,084	40.4	34.8	10.7	4.8	5.2	1.8	2.3
Hypertensive disease, 97								
Aged	1,193	32.0	47.7	12.3	2.8	2.9	0.9	1.4
Other	1,387	34.3	50.8	9.4	1.9	2.2	0.4	1.0
Diabetes mellitus, 59								
Aged	536	22.9	45.1	15.4	6.5	6.0	1.5	2.6
Other	950	26.4	52.3	10.3	5.2	3.6	1.3	0.9
Hyperplasia of prostate, 141								
Aged	536	12.5	38.8	32.1	10.5	5.2	0.7	0.2
Other	234	17.1	53.4	21.4	5.5	2.6	–	–

Coronary artery disease, 94								
Aged	517	48.4	33.4	13.7	2.5	0.8	0.8	0.4
Other	662	42.4	38.4	16.5	1.5	1.1	0.1	–
General arteriosclerosis, 98								
Aged	485	23.0	38.3	14.8	7.8	7.8	2.7	5.6
Other	107	26.4	33.9	17.0	3.8	11.3	5.7	1.9
Hernia, intestinal obstruction, 121–122								
Aged	459	25.2	58.1	10.4	3.0	2.0	0.4	0.9
Other	1,379	19.5	72.9	5.6	1.0	0.7	0.3	–
Pneumonia, 105–107								
Aged	445	24.4	58.8	10.5	1.6	2.9	0.7	1.1
Other	1,767	30.1	59.0	7.7	1.5	1.5	0.1	0.1
Senility, 181								
Aged	292	15.4	77.1	5.5	1.7	0.3	–	–
Other	21	23.8	57.1	19.1	–	–	–	–
Cholelithiasis and cholecystitis, 131–132								
Aged	241	14.5	51.9	27.0	5.0	0.8	0.4	0.4
Other	571	24.5	60.6	12.6	1.4	0.9	–	–
Other forms of arthritis, 167								
Aged	216	17.6	52.8	11.6	4.6	5.5	2.8	5.1
Other	501	21.5	48.9	11.6	4.6	5.4	4.0	4.0
Stomach, duodenal, gastrojejunal ulcer, 116–117								
Aged	201	16.9	54.7	21.9	4.0	1.5	0.5	0.5
Other	831	23.0	62.3	12.2	1.6	0.8	0.1	–
Cataract, 84								
Aged	176	9.1	65.3	15.9	4.6	3.4	0.6	1.1
Other	127	15.7	63.0	15.7	4.8	–	–	0.8
Other diseases of urinary system, 140								
Aged	161	16.2	57.1	16.8	3.7	6.2	–	–
Other	609	28.2	59.1	8.4	2.8	1.0	0.5	–
Other diseases of circulatory system, 101								
Aged	154	24.0	50.6	18.2	3.9	0.7	1.9	0.7
Other	531	29.2	53.1	11.1	2.4	2.3	1.1	0.8

which the proportions of aged remaining in the hospital 61 days or more are considerably larger than those for younger age groups.

Multiplicity of conditions is characteristic of morbidity in old age. A second, or even a third, disease often complicates the aged patient's illness. Combinations of an arteriosclerotic with a diabetic or with a prostatic condition, for example, are frequent. But long-term care, needed by many aged persons with chronic diseases, as said before, does not necessarily imply long-stay hospitalization. Many aged patients, even with combinations of chronic diseases, stayed in the hospital for only short durations. Their care may have been continued under the home-care program following discharge from the hospital ward. Nearly 800 aged patients, most of them with cardiac conditions, were transferred from the ward to home care during the study period. More than half of these patients had been in the hospital for less than a month.

Seventy-five per cent of all aged patients, as shown in Table 50, were discharged alive. Mortality is low, as is to be expected, among those aged who are hospitalized not in an acute emergency but for purposes of rehabilitative surgery, such as cataract operations or herniotomy. High percentages of hospital deaths are limited to such serious conditions as malignant neoplasms of certain sites, vascular lesions affecting the central nervous system, coronary artery disease, and other heart disease.

Chapter XIV

RECOMMENDATIONS FOR HOSPITAL MORBIDITY REPORTING IN NEW YORK CITY

THE PROJECT DESCRIBED in the preceding chapters was undertaken to test the practicability of hospital morbidity reporting and to appraise the significance of information obtained through such a plan. The authors believe that the experiment has proved that the scheme employed is practicable and that the resulting data are useful for various purposes. These conclusions lead to the recommendation that a current hospital morbidity reporting system be established in New York City.

Specific recommendations for the operation of a regular reporting system are presented in this chapter. They follow in principle the practices of the pilot project; a few modifications are suggested in the light of the experience gained in the project. The system recommended, with minor adjustments, would be applicable in other communities.

Scope of the Reporting System

To serve its purposes fully in the areas of community planning for medical care and for public health programs, hospital morbidity reporting should produce data representative of the patients discharged from all the hospitals in the community which serve the resident population, irrespective of types of service or control. This is admittedly a complex undertaking in New York City where some 170 hospitals under municipal, voluntary, and proprietary auspices provide hospital care for as many as 900,000 patients a year. A gradual process, therefore, seems advisable for the development of such a reporting system. Consequently, it is

recommended that in its initial phase the system be limited to the hospitals under municipal auspices.

Conduct of a reporting scheme in the municipal hospitals would be facilitated by the fact that these hospitals operate under common central control. Moreover, most of them now have an established routine of reporting data on discharged patients to a central unit of the Department of Hospitals.

The system limited to the municipal hospitals should be started as soon as possible. After its stabilization, it should be extended to cover the voluntary and proprietary hospitals in the city. The identification of an institution as a hospital should follow the standards of the Hospital Council of Greater New York.

Sampling of Discharges

In any statistical program that involves quantities of reports as large as the suggested system of hospital morbidity reporting, the alternatives of sampling and complete coverage need careful consideration.

It is recommended that in the scheme covering the municipal hospitals, at least in the early period of operation, reports on *all* discharges be collected, processed, and analyzed. This recommendation is made for various reasons. The most important is that the Department of Hospitals, where policy, procedures, and standards for a sizable number of institutions are coordinated centrally, should have appropriate data for the individual institutions to permit evaluation of present, and planning of future, services. To be meaningful for these purposes, the data have to be specific. The tabulations must, for instance, present details of length of stay of patients with given diagnosis and of given age. Use of broad diagnostic categories would defeat the purpose. Even in large hospitals, therefore, comparatively small numbers will be involved for many of the distributions.

In a routine procedure, sampling of the reports would have to be based upon a design that could be administered simply. Such a sample does not appear likely to produce data with an acceptably small degree of sampling error. Moreover, in small hospitals even complete coverage may not provide, within a year, fre-

quencies of adequate size to demonstrate significant variations; observations over longer periods may be required.

When plans are made for the reporting system to cover all hospitals in the city, the problem of sampling the reports from voluntary and proprietary hospitals will have to be restudied. Complete coverage of municipal hospitals would still be desired for administrative purposes. No final recommendation on this score is made here, because the decision should depend upon the principal uses to be made of the information produced. If overall information, as needed for community planning of medical care and public health programs, is to be the dominant concern of the extended reporting system, sampling is indicated. On the other hand, if the participating hospitals desire separate tabulations representative of their own services, which would be of much value in administration and planning for individual hospitals, then complete coverage of all patients is recommended.

Preparation of Reports

Each hospital should prepare, for submission to a central collecting agency, reports on all its discharged patients. These reports, containing data extracted from the medical charts of the patients, should be prepared by the record-room staff promptly after the patients are discharged from the hospital.

Report Form. It is recommended that a multiple report form be used on which the data for each patient can be entered on a single line. This form, or "code sheet," can have 20 lines on each side and both sides of the sheet can be used. Printed column headings guide the entry of the data. Hospitals may find it useful to start a separate code sheet for each major service at the beginning of each month.

The items to be reported should be kept at a minimum. It is recommended that they be limited to the following: hospital identification, patient identification (by case number only), sex, color, and age (on admission), diagnosis, length of stay, condition on discharge, source of admission, discharge category, and information on previous hospitalization during the current year.

All nonnumerical items should be reported in code. The experience of the pilot project has demonstrated that record-room staffs are able to prepare coded reports efficiently. The processing of reports prepared in code and presented on a multiple report form has proved economical of time and expense.

Diagnoses. It is recommended that the description of a patient's diseases be limited to the main diagnosis, which is defined as the final diagnostic statement of the condition for which the patient was admitted to the hospital. Additional diagnoses need not be reported. Moreover, experience in the pilot project indicates that even information as to whether or not additional diagnoses were recorded is not sufficiently significant to warrant inclusion.

The main diagnoses should be reported in the 4-digit codes of the International Statistical Classification. Since these codes are part of the listing of each diagnostic term in the fourth edition of the Standard Nomenclature, reporting of the diagnoses in ISC codes should not involve major difficulties in hospitals which use the Standard Nomenclature for their own recording and processing purposes.

Patients and Discharges. Hospital morbidity reporting must cover all patients discharged after inpatient care, including those who die in the hospital. For such terms as "inpatient," "admission," and "discharge," the definitions of the American Hospital Association should be used. Accordingly, infants born in the hospital and discharged from the newborn nursery are excluded.

Transfers from wards to organized home-care services affiliated with the hospital must be reported as discharges, but the report should indicate the continuation of the hospital care on the home-care program.

Preparation of reports on each discharge from inpatient care results inevitably in duplication of reports on some patients, and may also involve duplicated reporting of the same episode of disease. Unduplicated data on patients and on diseases might be desirable, but the measures necessary to distinguish the two would complicate the procedures to an extent which might jeopardize the practicability and effectiveness of the whole system.

It can be recommended as practicable, however, that each report indicate whether, within the same year, the patient had been discharged with the same diagnosis from the hospital involved. Patients who reached the reporting hospital by transfer from another hospital in the city could be described similarly. Such information will contribute toward estimating the true numbers of individual patients and the true incidence of specific diseases among the hospital population.

Collection and Processing of Reports

The month should be the basic reporting period. The reports on all patients discharged from a hospital during this interval should be forwarded to the central collecting agency within three weeks after the end of the month. Exceptions should be limited to the rare cases where legal implications may delay a report; such cases should be included with the reports of an ensuing reporting period.

A summary statement should be transmitted routinely with the code sheets. This statement should specify the number of patients reported, as well as the number of discharges during the month as evidenced by the hospital's administrative records. Any discrepancy between these two figures should be accounted for. Events which may have a bearing on the number of patients discharged during the reporting period or on their diagnostic characteristics (such as outbreak of endemic diseases in the local community, quarantine of a service, or the closing, opening, or conversion of units in the hospital) should also be mentioned in this statement, since such knowledge may be needed for interpretation of the data.

Promptly upon their receipt, the central collecting agency should review the reports forwarded by each hospital for completeness and manifest errors. The reports should be given serial numbers which facilitate control and permit checking back on individual patients when necessary.

Complete review of all reports for accuracy is not feasible. Occasional spot or regular sample checks will have to serve as

safeguards for accuracy. When weak spots are found in the reports of a given hospital, follow-up measures should be taken immediately. The field staff of the collecting agency should be prepared to advise and assist when problems arise in specific hospitals.

Tabulations

In view of the volume of the reports, mechanical tabulating procedures are mandatory. Use of the data for analytical purposes requires specifications for three items, namely, age, length of hospital stay, and diagnosis.

The age classification adopted for the pilot project is recommended without change: under 1 year, 1 to 4 years, 5 to 14, 15 to 24, 25 to 34, 35 to 44, 45 to 54, 55 to 64, 65 to 74, and 75 years and over.

Some modification of the length-of-stay classes used in the pilot project seems indicated. The following categories are recommended: single days of stay through 14 days, weekly intervals for third and fourth weeks, approximate monthly intervals for the second and third months. For the more extended hospital stays the following classes appear adequate: 91 to 135 days, 136 to 180 days, 181 to 365 days, 366 to 730 days, and 731 days and over.

The tabulation of diagnoses in ISC categories, even in 3-digit terms, is too detailed for many purposes. Following the procedure of the pilot project, it is recommended that in addition to the ISC categories, a summarized list of diagnoses be used. The availability of two sets of diagnoses of different degrees of detail will permit the preparation of some reports in the fewer terms of a condensed list and of other reports in the greater detail of the ISC.

The authors' Summary List, used in this pilot project, is an inclusive condensation of the ISC codes. However, some revision of this list is indicated. The revision should be based primarily on the frequency of diagnoses as found in the pilot project and for some particular diagnoses, regardless of frequency, on public health and medical care interests.

Scope and Periodicity. Two basic tabulations are recommended as a minimum, each to be made separately for discharges alive and

for deaths: (1) discharges by diagnosis and by age, sex, and color of patients; and (2) discharges by diagnosis and by age of patient and length of hospital stay.

Aggregate tabulations of this character should be prepared for quarterly and for annual periods. The annual tabulations should provide the detail of ISC diagnoses, whereas summarized diagnoses will suffice for those on a quarterly basis.

Both basic tabulations should, moreover, be prepared for each participating hospital. Annual periods would be adequate for these hospital tables and summarized diagnoses should be used. Condensed classes for age and for length of stay may also be appropriate in view of the smaller number of cases that will be involved.

Tabulations should be available not later than six weeks after the end of the period covered, half of this time being allowed the hospitals for submission of their reports of the last month of the period.

In addition to the tabulations of the original data, the annual morbidity report should include percentage distributions and pertinent rates. Ranges, averages, and comparisons with previous reporting periods should highlight the significance of the findings. An interpretive text and an analysis of the data in terms of their meaning for community problems should be part of the annual publication.

Costs for Current Municipal Hospital Reporting

The operation of a hospital morbidity reporting system for the municipal hospitals requires additional appropriations for expenses connected with the preparation of the reports in the hospitals (field costs) and with their processing and analysis (central costs). The following estimates are based on prevailing salary schedules, many of which are low and, therefore, in need of adjustment.

Field Costs. As stated before, preparation of coded summary reports has been an established procedure in many, but not in all, of the municipal hospitals. Present budget allowances permit the

preparation of the reports on approximately 75 per cent of all discharges. But in some hospitals the volume of work has increased so much that the reports can only be prepared with serious delay and often with personal sacrifice on the part of the workers. Approximately $15,000 annually would be required to increase the staff in several of the record rooms so that prompt preparation of discharge reports from all the municipal hospitals can be expected. This estimate is based on the experience that a trained worker can average 15 discharge reports per hour.

Central Costs. Collection and analysis of morbidity and medical care data of the municipal hospitals are entrusted to the Medical Statistics and Records Service of the Department of Hospitals. Budget allotments have not been provided to process and analyze in detail the data currently received. Only studies of selected topics of limited scale have been possible.

It is recommended that annual budgets include for the Medical Statistics and Records Service the additional funds necessary to fulfill the functions of the central collecting agency of a current morbidity reporting program for the municipal hospitals. These functions include general direction of the reporting scheme, supervision of the field work, collection, review, and processing of the reports, analysis of the data, and publication of the findings.

The additional funds needed yearly by the Medical Statistics and Records Service for performance of these functions are estimated at $48,125, consisting of $32,000 for salaries to additional staff members of this unit and $16,125 for services rendered by a tabulating service agency.

The salary item would cover the salaries of the following staff members: a senior statistician and an experienced medical-record librarian to be in immediate charge of the statistical and field work respectively, three clerks, one experienced stenographer, and two typists experienced in statistical typing.

It is recommended that, at least during the initial period, both the punching and tabulating operations be performed by a service agency on a contract basis. The immediate provision of staff, equipment, and physical facilities for these operations within the Department of Hospitals might present problems.

The cost of punching a total of 250,000, 25-column cards during a year is estimated as $7,125. This estimate, in which periodic submission of coded reports is assumed, includes verification, gang-punching of summarized diagnostic codes, and the supply of cards. The cost of tabulations for the quarterly and annual reports of the aggregate data and for the annual reports for each hospital is estimated as $9,000 yearly.

The budget estimate presented above is based on the assumptions that the number of discharges per year will continue at close to 250,000; that the reports will be of the limited content suggested before; that tabulations of the specified scope will be prepared by a service agency; and, finally, that the costs of general office supplies and of publication of findings can be arranged within the general budget allotment of the Department of Hospitals. For the first year of operation, the budget would have to include about $3,000 in addition for purchase of furniture, files, two typewriters, and a calculator.

The Citywide Reporting System

It is recommended that, simultaneously with the initiation of a reporting system for the municipal hospitals, planning be undertaken for a citywide reporting system. Extension of the program to cover all hospitals requires additional considerations mainly concerning content of the report form, costs, and the sponsorship of the reporting system. Although the experience to be gained through regular reporting by the municipal hospitals will have bearing on the final arrangements for a citywide system, some tentative recommendations seem appropriate now.

Report Form. The addition of several items to the report form should be considered; most important among them, the address of the patient. When data on the entire hospital population are available, tabulations by relatively small geographic areas (in New York City, the established health areas) will be important for purposes of public health administration. Due provision for protection of the confidentiality of the reports will have to be made when addresses are included, even though the names of patients are omitted.

Tabulations by small geographic areas may be needed only at relatively long intervals, perhaps each five years; other special tabulations should be planned for the interim years. Such a tabulation plan would tend to reduce tabulating costs and still provide a large variety of data for program guidance. Obviously, it would be desirable to report supplementary data such as addresses of patients only in the years for which their tabulation is planned.

Among other items which should be considered for inclusion on the report form of a citywide system are the patient's pay status and information as to whether the patient was under private physician's or general service care.

Estimates of Costs. For individual voluntary and proprietary hospitals, the cost of supplying current reports on discharged patients to a central collecting agency will be determined primarily by the number of patients involved. It will, moreover, be influenced by such factors as the condition of their records (completeness, legibility, and arrangement with regard to ease of abstracting) and by the experience of the record-room staff.

It is assumed from the experience in the municipal hospitals that an average of 15 reports can be prepared per hour. Assuming further that, after proper training, a clerk, at the rate of $2,800 per year, would prepare the reports, the cost would be about $107 for each 1,000. In other words, a hospital having 6,000 discharges a year would need to budget $650 for this purpose.

In evaluating this expense, it should be considered that the code sheets may also serve other purposes and thus spare the hospital the preparation of several separate tallies. Counts of various items needed for administrative purposes can easily be obtained from these sheets, including the number of transfers to other hospitals or to home care, of 48-hour deaths, of discharges from given services, and of discharges against medical advice.

The expense for the central collecting and processing agency will increase with the larger volume of reports and also with the expansion of the reporting form. If conditions remain basically the same, an approximate total of 650,000 reports a year would be received from voluntary and proprietary hospitals, assuming

complete coverage. The additional central agency costs, if all discharges are reported, are estimated at $87,000 a year, including $40,000 for punching and tabulating and $47,000 for all phases of the central office function. Added to the central office costs for the reporting by the municipal hospitals, this gives a total of $135,000 yearly for the central costs of the comprehensive citywide hospital morbidity reporting system.

Sponsorship of Citywide Reporting System

It is recommended that the future reporting system covering all hospitals in the city be operated under the auspices of the Department of Hospitals. The Department's experience in conducting a reporting system for the hospitals under its own control, as well as its concern about the total provision of hospital care in the city, suggests such an arrangement. Moreover, it seems more practical to expand an operating unit than to organize a new one.

Such recommendation does not imply, however, that the expenses of a citywide system need be fully met by the budget of this municipal department. A cooperative plan for financing the central functions of this community project might be proper. The Department of Health, for instance, which has special interest in the geographic distribution of specified diseases, might finance the cost of producing this kind of information. Membership and coordinating agencies in the hospital field might underwrite part of the general expense.

It is finally recommended that at an early date there be appointed, jointly by the Commissioners of Hospitals and Health, a commission to explore the problems involved in establishing a citywide hospital morbidity reporting system and to promote its realization. This commission should include, in addition to delegates of the two departments, representatives of the leading agencies and organizations concerned with medical care and public health problems, and individuals who are experts in these areas.

APPENDICES

Appendix A

OTHER EXPERIENCE IN HOSPITAL MORBIDITY REPORTING

No attempt has been made here to present an annotated bibliography of hospital morbidity reporting. This review is restricted to a few steps on the road toward current hospital morbidity reporting.

Previous Experiments in New York City

The idea of using diagnostic data on hospitalized patients as the source for morbidity intelligence has been active in New York City for more than 40 years. In 1913 Dr. Charles F. Bolduan, who was Assistant to the General Medical Officer of the Department of Health, proposed a scheme of collecting data routinely for this purpose.[1] At that time no standard nomenclature of diseases was available. To overcome the obstacle of varied diagnostic terminology, Bolduan suggested that "discharge certificates" be collected as were death certificates and that the summarization of the diagnoses similarly be part of the central processing of the certificates. Mechanical devices for tabulating were lacking at the time, but in spite of the magnitude of the tabulating task Bolduan considered the value of the information ascertainable worth the effort and expense. Though received with much interest, Bolduan's plans were not followed up by action.

In 1923 the Hospital Information Bureau of New York revived the idea of hospital morbidity statistics. Under the direction of E. H. Lewinski-Corwin, discharge data were collected from six

[1] Bolduan, Charles F., "Hospital Morbidity Statistics: A Practicable Method Making Them Uniform and Preparing Them for Analytic Study," *New York Medical Journal*, vol. 97, March 29, 1913, p. 643.

hospitals in the city.[1] On the basis of this experience, the utilization of diagnostic data of hospitalized patients was considered practical and worthwhile.

The most comprehensive hospital morbidity study undertaken in this country is the Hospital Discharge Study[2] made by the Research Bureau of the Welfare Council of New York City with the assistance of the Work Projects Administration.

The study covered all patients discharged during the year 1933 from most of the municipal and voluntary hospitals in the city, a total of 576,623. The data collected included medical diagnoses (main and additional), age, sex, race, nativity, religion, and residence of patients (including street address for New York City residents), length of hospital stay, condition on discharge, accommodation, and pay status.

WPA workers transcribed the data from the patients' records in the hospitals. Although the study was not made as a test of the hospitals' ability to report such data currently, it proved that in all hospitals the needed data are available to a high degree of completeness and are arranged in a way which lends itself easily to collection. No uniform nomenclature was used in the hospitals in 1933. But in processing the data use was made of the second edition of the Standard Nomenclature.[3] For purpose of analysis, a summary list was prepared.[4]

In the two-volume publication on the study, the data were presented and discussed in aggregate, for groups of hospitals, for individual hospitals, and for specific diseases. A third volume outlining methods and procedures for current hospital morbidity reporting was not published, since the war emergency made the promotion of such a plan inopportune. However, the interest of

[1] Lewinski-Corwin, E. H., "Medical Statistics of Hospitals," *Journal of American Medical Association*, vol. 83, 1924, p. 634; Lewinski-Corwin, E. H., and A. Eleanore Conover, "Incidence of Disease Among Hospital Patients with Reference to Occupation," *Journal of Industrial Hygiene*, vol. 8, 1926, p. 270.

[2] Deardorff, Neva R., and Marta Fraenkel, *Hospital Discharge Study:* vol. 1, *Hospitals and Hospital Patients in New York City;* vol. 2, *Hospitalized Illness in New York City*. Welfare Council of New York City, 1942 and 1943.

[3] Logie, H. B., editor, *Standard Classified Nomenclature of Disease*. Commonwealth Fund, New York, 1935.

[4] *A Classified List of Diagnoses for Hospital Morbidity Reporting*. Research Bureau, Welfare Council of New York City, 1939.

the medical care and public health groups in New York City and elsewhere remained unabated.

Experience in Great Britain and Canada

Two communitywide surveys on hospital morbidity covering inpatients and outpatients were conducted by the Health and Sickness Records Bureau of the Nuffield Provincial Hospitals Trust in Sterlingshire and Ayrshire.[1] In order to establish the volume and type of illness for which people need hospital care, hospitalizations outside the patients' own community were covered as well as those within it. Repeated episodes of hospital care during the study period were identified as such by means of a central card index.

The Sterlingshire study covered a full year starting October 1, 1946, while the Ayrshire study was for the calendar year 1948. The analyses for both projects cover rates for specified disease categories; distribution of the patients by age and sex, by age and length of stay, by diagnosis and social class, by diagnosis and age, by diagnosis and condition on discharge, by source of admission, and by discharge category.

The Health Survey of Ontario, Canada, considered information on hospitalized illness as so significant a part of the total health picture that a pilot study was conducted covering all patients discharged during the year 1947 from all hospitals of a specified segment of the province. Among other tabulations, this study produced figures for various diagnostic groups by sex and age of patient and by length of stay. The information obtained is described as "of fundamental value in hospital planning."[2]

Saskatchewan, Canada, presents an experience in current hospital morbidity reporting. The Hospital Services Plan has since 1947 collected and processed data on all hospitalizations of its beneficiaries. Since the plan covers more than 90 per cent of the

[1] *Hospital and Community:* vol. 1, *Hospital Treated Sickness Amongst the People of Sterlingshire;* vol. 2, *Hospital Treated Sickness Amongst the People of Ayrshire.* Health and Sickness Records Bureau, Nuffield Provincial Hospitals Trust, Glasgow, 1948 and 1949.

[2] *Report of the Ontario Health Survey Committee,* vol. 1. Chapter 12, Morbidity Survey. Ministry of Health, Province of Ontario, Canada, 1950.

population of this province, the data are significant for the population. The available tabulations, showing such information as hospitalization rates, average days of care, length of stay of patients, broad diagnostic distributions, surgical operation rates, and discharge rates by age and sex, offer an opportunity for studying trends.[1]

A large-scale hospital morbidity survey on a nationwide level has for the past few years been under way in Great Britain; it is conducted by the General Register Office in close cooperation with the National Ministry of Health. Thus far two major publications are available concerning patients discharged during 1949. The first of these publications, which appeared in 1951,[2] covers nearly 150,000 patients discharged during the first six months of 1949 from selected hospitals. Part of the available data were then published to demonstrate the type of information obtainable from a reporting scheme and to provide a medium for constructive criticism.

The second report, which appeared in 1954,[3] covers all patients discharged during the year 1949 from the participating hospitals, approximately 340,000 patients.

The 4-digit terms of the International Statistical Classification are used for the classification of diagnoses. The published tables show patients with specified diagnoses by age and by sex, by civil status, by social class, by admission category (direct admission or transfer from other hospital), and by discharge category (home, transfer to other hospital or death). Other tables show for each diagnosis the mean number of bed-days, the percentage of deaths, and the proportion of the total discharges and the proportion of the total bed-days. A special table gives for each traumatic condition of a specified nature the external cause of the injury.

[1] *Annual Report of the Saskatchewan Hospital Services Plan, 1951*. Dept. of Public Health, Province of Saskatchewan, Regina, 1952.

[2] Mackay, Donald, *Hospital Morbidity Statistics:* A Preliminary Study of In-patient Discharges. General Register Office, His Majesty's Stationery Office, London, 1951.

[3] *Supplement on Hospital In-patient Statistics:* The Registrar General's Statistical Review of England and Wales for the Year 1949. Her Majesty's Stationery Office, London, 1954.

Recently, this investigation has been followed by an extended inquiry covering additional hospitals, but on a sample basis. A report is prepared, at the time of discharge, for each tenth patient admitted during 1953; long-stay patients will be included in the study when discharged during 1954. Extension of the inquiry to all hospitals in England and Wales seems unlikely in the immediate future. A decision on such extension will await analysis of the results of the 1953 sample and of the effectiveness of the sampling techniques used.

California Study

To test the validity of household survey statistics, the California Morbidity Research Project, for which field operation started in 1951, included an analysis of reports on hospital discharges in San Jose County.[1] Diagnostic information given by the respondent was found valid when compared with the diagnostic statements on the hospital record of the same illness.[2] It is expected that comparisons eventually will be made of diagnostic arrays for the hospital discharges with those for the household survey material. Such comparisons will show the degree to which hospital-treated illness was indicative of morbidity in the general population of San Jose County at that particular time. Usefulness of hospital morbidity data will be increased substantially if such relationships are tested from time to time and under various patterns of community organization of hospital facilities.

[1] Weissman, Arthur, "California Morbidity Research Project," *American Journal of Public Health*, vol. 42, June, 1952, p. 711.

[2] Belloc, Nedra B., "Validation of Morbidity Survey Data by Comparison with Hospital Records," *Journal of the American Statistical Association*, vol. 49, December, 1954, p. 832.

Appendix B

METHODOLOGY FOR PROCESSING DIAGNOSTIC DATA

As described in chapter 2, diagnoses were reported for this study in codes of the third edition of the Standard Nomenclature and tabulations were prepared in codes of the International Statistical Classification and of the authors' Summary List. The translation from the original to the final codes required rather complicated processes. A description seems necessary, because the methods used have a bearing on the resulting data.

Number of Digits of Nomenclature Codes

Because the purpose of the tabulations was to summarize the diagnostic data, utilization of the fine topographic and etiologic details made available by the Nomenclature codes was unnecessary. Determination, therefore, had to be made of the minimum number of digits in the Nomenclature codes required to allocate them to appropriate ISC categories.

Each Standard Nomenclature code consists of two parts: a topographic part which describes the organ or region affected, and an etiologic part which specifies the affecting agent or otherwise indicates the cause. In general, six digits, three in each part, are sufficient to describe a disease. But for more detail, either part of the code may be expanded by addition of one or more digits. Simple numerical extensions of either part, or of both parts, of the code can be processed readily. The Nomenclature also provides for decimal subdivisions of either part of the code. Their processing may present true difficulty, especially since there is not a fixed place for the decimal. It would have involved unwarranted expense to provide on the punch card the number of columns necessary to accommodate all possible variations in these codes.

Analysis of early project reports indicated that Nomenclature diagnoses could be summarized adequately in ISC terms if they were reduced to a maximum of seven digits, three in the topographic part, and four in the etiologic part, the first three plus the first following a decimal point. The limitation was applied by the punch operators. The hospitals recorded the number of digits required to express fully the diagnostic statement; the punch operators were instructed to omit digits in accordance with these restrictions.

Topographic Part of Code. As a rule digits in this part beyond the third, without a decimal, serve only to delimit further the site. For classification in ISC terms such detail is rarely necessary. Moreover, were it retained, the process of summarization would be impeded to no purpose and the punching of the excess digits would be wasteful. In this study it was found that only two important Nomenclature diagnoses require such detail, namely, cerebral spastic infantile paralysis and paralysis agitans. It did not seem justifiable to punch an additional digit on all cards in order to identify these two diagnoses specifically. The ISC codes for both conditions may therefore include cases with related diagnoses.

Etiologic Part of Code. Digits in this part beyond the third, without a decimal, may distinguish infectious diseases according to specific etiologic agents. Diseases requiring such differentiation are rare in New York City, and the differentiation was therefore deemed unnecessary.

For conditions due to intoxication, omission of the fourth or higher digits indicating in full detail the poisonous agent involved seemed of minor consequence for the purpose of this project.

A fourth digit without decimal is used by the Nomenclature to distinguish among the histologic types of neoplasms. In general, all specific forms of a given histologic type are either benign or malignant.[1] Since the behavior of a tumor, that is, whether it is

[1] There are a few exceptions; for example, the fourth digit distinguishes between benign and malignant giant cell tumors, embryomas and melanomas, and the different behavior of "unclassified" tumors. However, it was deemed preferable in this study to include all such neoplasms with malignant growths. The resulting inflation of the number of malignant neoplasms is probably slight.

benign or malignant, rather than its histologic type is the leading principle in the establishment of the codes in the ISC, the fourth digit could be disregarded also in this category of diseases.

Investigation of the Nomenclature codes with decimals in the etiologic part showed that their assignment to ISC categories would often be significantly affected by the digit following the decimal point. It was therefore decided that the first digit following a decimal point would be used.

After limitation of the number of digits, the Nomenclature codes consisted of either six or seven digits. A 7-digit field on the punch card was, therefore, provided. When no decimal digit appeared in the etiologic part of the code, a "y" was punched to fill out the field. When used as the final digit, "y" indicates a "suspected" diagnosis. Its general use in this position seemed to constitute a minimum loss of information.

Translation from Nomenclature to ISC and SL Codes

In order to use the diagnostic information supplied in terms of Nomenclature codes for tabulation in terms of ISC and SL codes, the relationships between the codes had to be established. When diagnoses are available in verbal terms, the determination of the proper ISC code is a relatively simple matter of searching an index. But when, as in this project, the diagnoses are available only in Nomenclature codes, the determination of the proper ISC code is not so direct an operation.

An appendix to the fourth edition of the Nomenclature shows which Nomenclature codes are included in each ISC diagnostic category. However, many Nomenclature codes were changed in the transition from the third to the fourth edition. It was, therefore, not possible to make direct use of the list of code inclusions provided by the appendix of the fourth edition. The lack of a list of the major Nomenclature codes in numerical order with corresponding diagnostic statements, or with the corresponding ISC categories, was a severe handicap. It became necessary to establish such a list.

After cards with the complete data, including the 7-digit Nomenclature codes, had been punched for all patients, one card

was picked out for each distinct Nomenclature code which had appeared in the reports. These cards were reproduced on mark-sense stock which has the advantage of allowing codes to be entered by means of a special pencil for subsequent automatic punching of the data so entered. After the relationship between the Nomenclature, ISC, and SL codes for each diagnosis had been determined, the latter two codes were entered on these mark-sense cards, which then served as a "master" deck for gang-punching these codes onto the detail cards.

In order to establish the relationship between the codes, the reproduced deck of cards served to prepare on the printing tabulator a list of the Nomenclature codes. This list was used to determine for each Nomenclature code: (a) the diagnostic statement,[1] (b) the appropriate ISC category, and (c) the corresponding SL category.[2]

In order to accomplish this, the code was first located in the third edition of the Nomenclature; the code and diagnostic term were then checked in the fourth edition. If there was agreement, the ISC code listed in the fourth edition could be assigned. Otherwise, the index of the fourth edition, or of the ISC, or sometimes both, had to be searched in order to determine the proper ISC code. This circuitous method was required since the many changes in the fourth edition prohibited direct use. The task was aided by the generous cooperation of Dr. Selwyn D. Collins and Mrs. Louise Bollo of the United States Public Health Service.

This correlating process may seem to be a straightforward task, requiring only patience. Considerable ingenuity and familiarity with details of pathology were needed, however. The Nomenclature is well indexed to locate the code for a specific disease, but as has been pointed out it does not include a numerical list of codes by which to determine the diagnostic term when only the code is known. In general, the codes are listed according to topography,

[1] This was necessary for two reasons: (1) in many cases in order to locate the ISC category in the first instance, and (2) to allow a ready independent check by the mortality cause coders of the Bureau of Records and Statistics of the Department of Health, who were unfamiliar with the Nomenclature.

[2] The reporting and tabulation of the 121,952 discharge reports involved the use of 6,906 different 7-digit Nomenclature codes, 955 ISC codes, and 195 of the 196 SL codes.

with subdivisions for each etiologic group. However, this practice is not consistently followed, so that search for items for which Nomenclature codes were not consistently listed required much time. Some of the diagnostic code numbers reported for this study were found in the Nomenclature only by chance, and a few could not be located at all. Whether they appeared in the Nomenclature not strictly according to the assigned topographic digits or whether codes were devised in the hospital when no suitable code for an unusual diagnostic statement was found, is a moot question. It was not practical to check with the reporting hospital to learn the original diagnostic statement; therefore, in such instances a diagnostic statement was constructed from the topographic and etiologic numerals given.

In the Nomenclature specific codes exist for sequelae of earlier diseases or injuries, combining the present manifestation with its underlying cause. But the ISC sometimes offers alternatives for classifying such combined diagnoses. The rule adopted in such instances was to select the ISC code which describes the need for the current hospital stay. This decision had to be made by a professional rather than a clerical worker. In cases of after-effect of a disease apparently no longer present, such as spinal curvature following poliomyelitis, the decision is not difficult. But when there are two related or apparently coexistent conditions, as in the case of thrombosis of the aorta due to arteriosclerosis, an arbitrary selection may be necessary. In the two instances just cited, the cases would be assigned to curvature of the spine, 745, and to arterial embolism and thrombosis, 454, on the assumption that these conditions were the reasons for the admission to the hospital. Such decisions are in keeping with the definition of the discharge diagnosis, that is, the final diagnostic statement of the condition for which the patient was admitted to the hospital.

Appendix C

LIST OF AVAILABLE MACHINE TABULATIONS

THE DATA REPORTED BY THE HOSPITALS and transferred to punch cards have been listed in the discussion of methodology in Chapter 2. Condensations of some of the machine tabulations may be found in Appendix D; tables derived from these tabulations and from other machine runs appear throughout the text of this report. A summary description of all available tabular material is presented here.

If not otherwise indicated, the following categories were used in the tabulation of the specified items:

Age: under 1 year, 1 to 4 years, 10-year intervals through 74 years, 75 years and over.
Color: white, nonwhite.
Length of Stay: single days through 6, 7 to 13, 14 to 30, 31 to 60, 61 to 90, 91 and over.
Condition on Discharge: alive, dead.

Tabulations by Diagnosis

1. All patients by diagnosis (4-digit ISC categories) and by condition on discharge; each discharge category by sex and by color; each discharge-color category by age.

2. Same tabulation as in 1, by diagnosis (SL categories).

3. All patients by diagnosis (SL categories) and by sex; each sex group by color; each sex-color group by age.

4. All patients by diagnosis (4-digit ISC categories) and by condition on discharge; each discharge category subdivided into patients with one and those with more than one diagnosis; each subdivision by length of stay.

5. Same tabulation as in 4, by diagnosis (SL categories).

6. All patients by diagnosis (SL categories) and by age (six age groups, consolidating all patients under 35 years); each age group by length of stay (under 7 days, 7 to 30, 31 to 60, 61 to 90, 91 to 180, 181 to 365, 366 and over).

7. Patients with 3-digit ISC diagnoses accounting for 500 or more discharges by diagnosis and by sex; each sex group by color; each sex-color group by age.

8. Patients discharged after more than 90 days by diagnosis (4-digit ISC categories) and by condition on discharge; each discharge category by length of stay (91 to 135 days, 136 to 180, 181 to 365, 366 to 730, 731 and over).

9. Patients with selected conditions[1] who underwent surgery: (a) by diagnosis and by sex; (b) by diagnosis and by condition on discharge, each discharge category by post-surgical length of stay (single days to 13, 14 to 20, 21 to 27, 28 and over); (c) by diagnosis and by age (nine age groups, combining patients under five years).

10. Patients with selected conditions[2] and of specified age (under 1 year, 1 to 44, 45 to 64, 65 to 74, 75 and over) by month of discharge (May, July, October, and aggregate of June, August, and September); each month by length of stay (under 2 days, 2 to 6, 7 to 13, 14 to 30, 31 and over).

11. Patients with specified conditions[3] discharged from general

[1] The selected conditions are: tuberculosis of respiratory system; malignant neoplasms of stomach, of rectum, of breast, of cervix, of other parts of the uterus, and of male genital organs; benign neoplasms of uterus; thyrotoxicosis; other diseases of the thyroid; cataract; varicose veins; hemorrhoids; hypertrophied tonsils and adenoids; stomach ulcer, duodenal and gastrojejunal ulcer; appendicitis; hernia; anal fissure and fistula; abscess of anal and rectal regions; cholecystitis; cholelithiasis; hyperplasia of prostate; ectopic pregnancy; abortion; and delivery—separated into those with and those without obstetrical complication. For tuberculosis of respiratory system and for deliveries, the operative procedures are specified.

[2] The selected conditions are: tuberculosis of the respiratory system; acute poliomyelitis; measles; malignant neoplasms of buccal cavity and digestive system, of the respiratory system, and of the breast; asthma; diabetes mellitus; cerebral hemorrhage, embolism, and thrombosis; acute rheumatic fever and heart disease; coronary artery disease; other heart disease—except hypertensive; hypertensive disease; lobar pneumonia; hypertrophy of tonsils and adenoids; gastro-enteritis and colitis; and nephritis.

[3] The specified conditions are: tuberculosis of respiratory system; all malignant neoplasms; all benign neoplasms; diabetes mellitus; arteriosclerosis, hypertension, and heart disease (excluding rheumatic heart disease); ulcer of stomach, duodenum, and gastrojejunum; appendicitis; hernia; abortion; delivery without complication; fractures; other trauma; all other conditions.

hospitals by length of stay (under 2 days, 2 to 6, 7 to 30, 31 to 90, 91 and over) cross-tabulated with condition on discharge. This tabulation is available for each general hospital.

Tabulations Without Diagnoses

12. All patients by specified hospital and by condition on discharge; each discharge category by sex and by color; each discharge-color category by age.

13. All patients by source of admission (home, home care, another municipal hospital, hospital other than municipal) and by discharge category (discharged alive: to home care, to other municipal hospital, to hospital other than municipal, all other; died in hospital); each discharge category by length of stay (under 2 days, 2 to 6, 7 to 30, 31 to 90, 91 days and over). For each source of admission, condition on discharge of the patients is also shown in five categories (improved; left against medical advice; other alive; dead, hospital autopsy; dead, other); length of stay is tabulated only for those who left against medical advice. Separate tabulations by type of hospital (general, psychiatric, cancer, communicable disease, tuberculosis, chronic disease).

14. Patients transferred to home care by age (under 45 years, 45 to 54, 55 to 64, 65 to 74, 75 and over) and by length of hospital stay (under 2 days, 2 to 6, 7 to 13, 14 to 30, 31 to 90, 91 to 180, 181 and over).

Appendix D

TABLES

TABLE 53. SUMMARY LIST OF DIAGNOSES (SL)

Authors' Abridgment of the International Statistical Classification (ISC)

SL code number and diagnosis[a]	ISC code number
I. INFECTIVE AND PARASITIC DISEASES	
1. Tuberculosis, respiratory system	001–08,Y03.1
2. Tuberculosis, meninges and central nervous system	010
3. Tuberculosis, bones and joints, active or unspecified	012
4. Tuberculosis, lymphatic system	015
5. Tuberculosis, genito-urinary system	016
6. Tuberculosis, other sites	011,013–14,017–19
7. Congenital syphilis	020
8. Early syphilis	021
9. Syphilis of central nervous system	024–26
10. Gonococcal infection	030–35
11. Other syphilis and venereal diseases	022–23,027–29,036–39
12. Salmonella infections, except typhoid fever	041–42
13. Dysentery, all forms	045–48
14. Scarlet fever	050
15. Streptococcal sore throat	051
16. Erysipelas	052
17. Diphtheria	055
18. Whooping cough	056
19. Meningococcal infections	057
20. Acute poliomyelitis	080
21. Acute infectious encephalitis	082
22. Late effects of 20 and 21	081,083
23. Measles	085
24. Rubella	086
25. Chickenpox	087
26. Mumps	089
27. Infectious hepatitis	092
28. Infectious mononucleosis	093
29. Other bacterial, spirochetal, viral, rickettsial, and parasitic diseases	040,043–44,049,053–54, 058–64,070–74,084,088, 090–91,094–96,100–08, 110–17,120–38
II. NEOPLASMS	
30. Malignant neoplasm, buccal cavity and pharynx	140–48
31. Malignant neoplasm, stomach	151

32.	Malignant neoplasm, intestines, except rectum	152–53
33.	Malignant neoplasm, rectum	154
34.	Malignant neoplasm, other organs of digestive system	150,155–59
35.	Malignant neoplasm, respiratory system	160–65
36.	Malignant neoplasm, breast	170
37.	Malignant neoplasm, cervix uteri	171
38.	Malignant neoplasm, other and unspecified parts of uterus	172–74
39.	Malignant neoplasm, other female genital organs	175–76
40.	Malignant neoplasm, male genital organs	177–79
41.	Malignant neoplasm, urinary organs	180–81
42.	Malignant neoplasm, brain and other parts of nervous system	193
43.	Malignant neoplasm, bone and connective tissue	196–97
44.	Malignant neoplasm, other and unspecified sites	190–92,194–95,198–99
45.	Neoplasm, lymphatic and hematopoietic tissues	200–05
46.	Benign neoplasm, digestive system	210–11
47.	Benign neoplasm, respiratory system	212
48.	Benign neoplasm, breast	213
49.	Benign neoplasm, uterus	214–15
50.	Benign neoplasm, other female genital organs	216–17
51.	Benign neoplasm, male genital organs	218
52.	Benign neoplasm, skin	220–22
53.	Benign neoplasm, brain and other parts of nervous system	223
54.	Benign neoplasm, other sites	219,224–29
55.	Neoplasm of unspecified nature, all sites	230–39
	III. ALLERGIC, ENDOCRINE SYSTEM, METABOLIC, AND NUTRITIONAL DISEASES	
56.	Asthma	241
57.	Thyrotoxicosis with or without goitre	252
58.	Other diseases of thyroid gland	250–51,253–54
59.	Diabetes mellitus	260
60.	Avitaminoses and other deficiency states	280–86
61.	Other allergic, endocrine, and metabolic conditions	240,242–45,270–77,287–89
	IV. DISEASES OF THE BLOOD AND BLOOD-FORMING ORGANS	
62.	Pernicious and other hyperchromic anemias	290
63.	Other diseases of blood and blood-forming organs	291–99
	V. MENTAL, PSYCHONEUROTIC, AND PERSONALITY DISORDERS	
64.	Schizophrenic disorders	300
65.	Involutional melancholia	302
66.	Senile psychosis	304
67.	Psychosis with cerebral arteriosclerosis	306
68.	Alcoholic psychosis	307
69.	Other and unspecified psychoses	301,303,305,308–09
70.	Psychoneurotic disorders	310–18
71.	Pathological personality	320
72.	Alcoholism	322
73.	Other nonpsychotic psychiatric conditions	321,323–28[b]
	VI. DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS	
74.	Cerebral hemorrhage, embolism, and thrombosis	331–32
75.	Other vascular lesions affecting central nervous system	330,333–34

TABLE 53. SUMMARY LIST OF DIAGNOSES (SL) (*Continued*)

Authors' Abridgment of the International Statistical Classification (ISC)

SL code number and diagnosis[a]	ISC code number
76. Nonmeningococcal meningitis	340
77. Multiple sclerosis	345
78. Epilepsy	353
79. Other diseases of central nervous system	341–44,350–52,354–57
80. Neuritis and neuralgia	360–66
81. Other diseases of nervous system	367–69
82. Nonspecific inflammatory diseases of eye	370–79
83. Strabismus	384
84. Cataract	385
85. Glaucoma	387
86. Other diseases and conditions of eye	380–83,386,388–89
87. Otitis media without mention of mastoiditis	391
88. Mastoiditis	392–93
89. Other diseases of auditory system	390,394–98
VII. DISEASES OF THE CIRCULATORY SYSTEM	
90. Acute rheumatic fever	400
91. Acute rheumatic heart disease	401
92. Chorea	402
93. Chronic rheumatic heart disease	410–16
94. Coronary artery disease	420.1
95. Other arteriosclerotic and degenerative heart disease	420–22 (except 420.1)
96. Other diseases of heart	430–34
97. Hypertensive disease	440–47
98. General arteriosclerosis	450
99. Varicose veins of lower extremities	460
100. Hemorrhoids	461
101. Other diseases of circulatory system	451–56,462–68
VIII. DISEASES OF THE RESPIRATORY SYSTEM	
102. Acute sinusitis	471
103. Acute tonsillitis	473
104. Influenza	480–83
105. Lobar pneumonia	490
106. Bronchopneumonia	491
107. Primary atypical and other pneumonia	492–93
108. Bronchitis	500–02
109. Hypertrophy of tonsils and adenoids	510
110. Other diseases of upper respiratory tract	470,472,474–75,511–17
111. Empyema and abscess of lung	518,521
112. Pleurisy	519
113. Bronchiectasis	526
114. Other diseases of lung and pleural cavity	520,522–25,527
IX. DISEASES OF THE DIGESTIVE SYSTEM	
115. Diseases of buccal cavity and esophagus	530–39
116. Ulcer of stomach	540
117. Ulcer of duodenum, gastrojejunal ulcer	541–42
118. Other diseases of stomach and duodenum	543–45
119. Acute appendicitis	550

120.	Other and unspecified appendicitis	551–53
121.	Hernia without obstruction	560
122.	Intestinal obstruction with or without hernia	561,570
123.	Gastro-enteritis, colitis	571,764
124.	Chronic enteritis and ulcerative colitis	572
125.	Anal fissure and fistula	574
126.	Abscess of anal and rectal regions	575
127.	Peritonitis	576
128.	Peritoneal adhesion	577
129.	Other diseases of intestines and peritoneum	573,578
130.	Cirrhosis of liver	581
131.	Cholelithiasis	584
132.	Cholecystitis without mention of calculi	585
133.	Other diseases of liver, gallbladder, and biliary ducts	580,582–83,588
134.	Diseases of pancreas	587

X. DISEASES OF THE GENITO-URINARY SYSTEM

135.	Acute nephritis	590
136.	Chronic, other and unspecified nephritis	591–94
137.	Infections of kidney	600
138.	Calculi of kidney and ureter	602
139.	Cystitis	605
140.	Other diseases of urinary system	601,603–04,606–09
141.	Hyperplasia of prostate	610
142.	Hydrocele	613
143.	Other diseases of male genital organs	611–12,614–17
144.	Diseases of breast	620–21
145.	Acute salpingitis, oophoritis	622
146.	Chronic and unspecified salpingitis, oophoritis	623–24
147.	Other diseases of ovary, tube, and parametrium	625–26
148.	Endometritis, metritis	630.1
149.	Other infective disease of uterus, vagina, and vulva	630.0,630.2
150.	Uterovaginal prolapse	631
151.	Malposition of uterus	632
152.	Other diseases of female genital organs	633–37

XI. DELIVERIES AND COMPLICATIONS OF PREGNANCY, CHILDBIRTH, AND THE PUERPERIUM

153.	Toxemia of pregnancy (not delivered)	642
154.	Ectopic pregnancy	645
155.	Other complications and conditions of pregnancy (not delivered)	640–41,643–44,646–49,Y06
156.	Abortion, spontaneous or unspecified	650.0,651.0,652.0
157.	Other abortion	650.1–50.3,651.1–51.3, 652.1–52.3
158.	Delivery without complication	660
159.	Postpartum admission without complication	Y07
160.	Delivery with obstetrical complications	670–78
162.	Puerperal conditions	680–89

XII. DISEASES OF THE SKIN AND CELLULAR TISSUE

163.	Boil, carbuncle	690
164.	Cellulitis of finger and toe	691
165.	Other diseases of skin and subcutaneous tissue	692–98,700–16

TABLE 53. SUMMARY LIST OF DIAGNOSES (SL) (*Continued*)

Authors' Abridgment of the International Statistical Classification (ISC)

XIII. DISEASES OF THE BONES AND ORGANS OF MOVEMENT	
166. Acute arthritis	720–21
167. Other forms of arthritis	722–25
168. Acute osteomyelitis, periostitis	730.0
169. Chronic and unspecified osteomyelitis, periostitis	730.1–30.3
170. Other conditions of musculoskeletal system	726–27,731–38,740–49
XIV. CONGENITAL MALFORMATIONS	
171. Congenital malformations of nervous system	750–53
172. Congenital malformations of circulatory system	754
173. Other congenital malformations	755–59
XV. CERTAIN CONDITIONS OF EARLY INFANCY	
174. Term birth, no birth complications	Y20
175. Premature birth, no birth complications	776,Y21
178. Full term infant (admitted after birth)	Y08
180. Other conditions of early infancy, except diarrhea	760–63,765–75
XVI. SYMPTOMS, SENILITY, AND ILL-DEFINED CONDITIONS	
181. Senility	794
183. Undetermined diagnoses and special examinations	780–93,795,Y00.4,Y05,Y09
XVII. ACCIDENTS, POISONINGS, AND VIOLENCE (NATURE OF INJURY)	
184. Fracture, skull	800–01,803–04
185. Fracture or dislocation, face bones	802,830
186. Fracture, vertebral column	805–06
187. Other fractures of trunk	807–09
188. Fracture, upper extremity	810–19
189. Fracture, lower extremity	820–29
190. Dislocation, upper extremity	831–34
191. Dislocation, lower extremity	835–39
192. Sprains, strains	840–48
193. Concussion of brain	852
194. Other head injury, except fracture	850–51,853–56
195. Internal injury of chest, abdomen, and pelvis	860–69
196. Laceration and open wound	870–88,890–98,900–08
197. Superficial injury	910–18,920–29
198. Effects of foreign body entering through orifice	930–36
199. Burns	940–49
200. Other traumatic conditions, except poisoning	950–59,980–99,Y04
203. Effects of poisons	960–79

[a] The Summary List first included several items pertaining to combinations of main and secondary diagnoses. They bore no reference to ISC codes and were later omitted. The number of categories here included is, therefore, 196, although the SL code numbers go to 203.

[b] Codes 327 and 328 were introduced by the Standard Nomenclature, 4th ed.

TABLE 54. INTERNATIONAL STATISTICAL CLASSIFICATION (ISC) DIAGNOSES ACCOUNTING FOR 25 OR MORE DISCHARGED PATIENTS[a]

ISC diagnosis and code number	Number of patients
I. INFECTIVE AND PARASITIC DISEASES	
Pulmonary tuberculosis, 002	4,896
Pleurisy specified as tuberculous, 003.0	59
Pleurisy with effusion without mention of cause, 003.1	57
Tuberculosis of meninges and central nervous system, 010	51
Tuberculosis of intestines, peritoneum, and mesenteric glands, 011	26
Active or unspecified tuberculosis of vertebral column, 012.0	48
Tuberculosis of lymphatic system, 015	86
Tuberculosis of genito-urinary system, 016	38
Acute miliary tuberculosis, unspecified, 019.1	28
Secondary syphilis, 021.2	29
Other cardiovascular syphilis, 023	87
Tabes dorsalis, 024	52
Other syphilis of central nervous system, 026.0[b]	59
Chronic brain syndrome due to syphilis, 026.6[b]	35
Acute or unspecified gonorrhea, 030	35
Lymphogranuloma venereum, 037	35
Other and unspecified venereal diseases, 039	28
Food poisoning, unspecified, 049.2	98
Scarlet fever, 050	159
Whooping cough without mention of pneumonia, 056.0	306
Meningococcal meningitis, 057.0	31
Acute poliomyelitis, unspecified, 080.3	596
Measles without mention of pneumonia, 085.0	880
Rubella, 086	88
Chickenpox, 087	616
Herpes zoster, 088	42
Mumps, 089	332
Infectious mononucleosis, 093	59
Dermatophytosis, 131	52
Moniliasis, 134.3	25
Scabies, 135	30
Sarcoid of Boeck, 138.0	32
Other infective and parasitic diseases, 138.1	49
II. NEOPLASMS	
Malignant neoplasm, tongue, 141	73
Malignant neoplasm, other parts of mouth and mouth unspecified, 144	48
Malignant neoplasm, oral mesopharynx, 145	44
Malignant neoplasm, esophagus, 150	153
Malignant neoplasm, stomach, 151	382
Malignant neoplasm, small intestine, including duodenum, 152	44
Malignant neoplasm, large intestine, except rectum, 153	297
Malignant neoplasm, rectum, 154	248
Malignant neoplasm, biliary passages and liver, 155	45
Malignant neoplasm, liver, secondary and unspecified, 156	64
Malignant neoplasm, pancreas, 157	100

TABLE 54. INTERNATIONAL STATISTICAL CLASSIFICATION (ISC) DIAGNOSES ACCOUNTING FOR 25 OR MORE DISCHARGED PATIENTS[a] (*Continued*)

ISC diagnosis and code number	Number of patients
Malignant neoplasm, larynx, 161	113
Malignant neoplasm, unspecified as to whether primary or secondary, lung and bronchus, 163	517
Malignant neoplasm, breast, 170	492
Malignant neoplasm, cervix uteri, 171	447
Malignant neoplasm, uterus, unspecified, 174[c]	96
Malignant neoplasm, ovary, Fallopian tube, and broad ligament, 175	116
Malignant neoplasm, other and unspecified female genital organs, 176	46
Malignant neoplasm, prostate, 177	239
Malignant neoplasm, kidney, 180	72
Malignant neoplasm, bladder and other urinary organs, 181	139
Malignant melanoma, skin, 190	37
Other malignant neoplasm, skin, 191	134
Malignant neoplasm, brain and other parts of nervous system, 193	56
Malignant neoplasm, thyroid gland, 194	38
Malignant neoplasm, bone, 196	35
Malignant neoplasm, unknown primary site with no indication of metastasis, 199.0[b]	102
Generalized malignant neoplasm, unknown primary site, 199.2[b]	89
Malignant neoplasm, unspecified primary site with known metastatic site, 199.5[b]	96
Lymphosarcoma, 200.1	112
Hodgkin's disease, 201	101
Multiple myeloma, 203	37
Lymphatic leukemia, 204.0	76
Myeloid leukemia, 204.1	111
Benign neoplasm, other parts of digestive system, 211	85
Benign neoplasm, respiratory system, 212	52
Benign neoplasm, breast, 213	133
Uterine fibromyoma, 214	875
Other benign neoplasm, uterus, 215	108
Benign neoplasm, ovary, 216	172
Benign neoplasm, other female genital organs, 217	53
Benign neoplasm, male genital organs, 218	91
Benign neoplasm, kidney and other urinary organs, 219	45
Pilonidal cyst, 221	99
Other benign neoplasm, skin, 222	86
Benign neoplasm, brain and other parts of nervous system, 223	38
Benign neoplasm, bone and cartilage, 225	49
Lipoma, 226	149
Hemangioma and lymphangioma, 228	56
Benign neoplasm, other and unspecified organs and tissues, 229	38
Neoplasm of unspecified nature, digestive organs, 230	79
Neoplasm of unspecified nature, respiratory organs, 231	32
Neoplasm of unspecified nature, brain and other parts of nervous system, 237	63
III. ALLERGIC, ENDOCRINE SYSTEM, METABOLIC, AND NUTRITIONAL DISEASES	
Asthma, 241	913
Urticaria, 243	51

Allergic eczema, 244	61
Simple goitre, 250	25
Nontoxic nodular goitre, 251	110
Toxic diffuse goitre, 252.0	84
Toxic nodular goitre, 252.1	28
Diabetes mellitus, 260	1,486
Ovarian dysfunction, 275	98
Malnutrition, unqualified, 286.5	114
Other and multiple deficiency states, 286.6	46
Obesity, not specified as of endocrine origin, 287	33
Gout, 288	34

IV. DISEASES OF THE BLOOD AND BLOOD-FORMING ORGANS

Pernicious anemia, 290	85
Iron deficiency anemias, 291	136
Other hemolytic anemias, 292.2	102
Aplastic anemia, 292.4	31
Sickle cell anemia, 292.6	165
Anemia of unspecified type, 293	74
Hemophilia, 295	29
Purpura and other hemorrhagic conditions, 296	34

V. MENTAL, PSYCHONEUROTIC, AND PERSONALITY DISORDERS

Schizophrenia, simple type, 300.0	53
Schizophrenia, hebephrenic type, 300.1	51
Schizophrenia, catatonic type, 300.2	203
Schizophrenia, paranoid type, 300.3	1,261
Schizophrenia, other and unspecified, 300.7	2,262
Manic and circular reactions, 301.0	43
Depressive reaction, 301.1	39
Involutional melancholia, 302	660
Paranoia and paranoid states, 303	82
Senile psychosis, 304	1,081
Psychosis with cerebral arteriosclerosis, 306	1,097
Alcoholic psychosis, 307	1,507
Psychosis resulting from epilepsy and other convulsive disorders, 308.1	104
Acute brain syndrome, associated with trauma, 308.2[b]	36
Acute brain syndrome, associated with disturbance of circulation, 308.4[b]	37
Chronic brain syndrome, associated with other causes, 308.9[b]	379
Other and unspecified psychoses, 309.1	523
Anxiety reaction without mention of somatic symptoms, 310	192
Hysterical reaction without mention of anxiety reaction, 311	184
Neurotic-depressive reaction, 314	686
Neurocirculatory asthenia, 315.0	52
Psychoneurotic disorders, mixed type, 318.4	292
Sexual deviation, 320.6	30
Pathological personality, other and unspecified, 320.7	573
Alcoholism, acute, 322.0	304
Alcoholism, chronic, 322.1	245
Alcoholism, unspecified, 322.2	2,389
Other drug addiction, 323	236
Primary childhood behavior disorders, 324	258
Mental deficiency, other and unspecified types, 325.5	255

TABLE 54. INTERNATIONAL STATISTICAL CLASSIFICATION (ISC) DIAGNOSES ACCOUNTING FOR 25 OR MORE DISCHARGED PATIENTS[a] (*Continued*)

ISC diagnosis and code number	Number of patients
VI. DISEASES OF THE NERVOUS SYSTEM AND SENSE ORGANS	
Subarachnoid hemorrhage, 330	111
Cerebral hemorrhage, 331	1,121
Cerebral embolism and thrombosis, 332	907
Other and ill-defined vascular lesions affecting central nervous system, 334	247
Meningitis, with no organism specified as cause, 340.3	68
Encephalitis, myelitis, and encephalomyelitis, except acute infectious, 343	70
Multiple sclerosis, 345	82
Paralysis agitans, 350	127
Cerebral spastic infantile paralysis, 351	35
Epilepsy, grand mal, 353.1	197
Epilepsy, other and unspecified, 353.3	349
Chronic brain syndrome due to epilepsy, 353.9[b]	42
Other diseases of brain, 355	189
Other and unspecified forms of neuralgia and neuritis, 366	45
Other diseases of peripheral nerves, except autonomic, 368	50
Conjunctivitis and ophthalmia, 370	26
Pterygium, 383	40
Strabismus, 384	84
Cataract, 385	303
Glaucoma, 387	113
Other diseases of eye, 388	33
Otitis externa, 390	31
Otitis media, acute, without mention of mastoiditis, 391.0	178
Otitis media, chronic, without mention of mastoiditis, 391.1	83
VII. DISEASES OF THE CIRCULATORY SYSTEM	
Rheumatic fever without mention of heart involvement, 400	317
Active rheumatic fever with other and multiple types of heart involvement, 401.3	378
Chorea without mention of heart involvement, 402.0	27
Other heart disease specified as rheumatic, 416	453
Arteriosclerotic heart disease, 420.0	3,699
Heart disease specified as involving coronary arteries, 420.1	1,179
Acute and subacute bacterial endocarditis, 430.0	25
Other disorders of heart rhythm, 433.1	66
Left ventricular failure, 434.2	98
Other and unspecified disease of heart, 434.3	125
Other and unspecified hypertensive heart disease, 443	2,229
Hypertension with arteriolar nephrosclerosis without mention of heart, 446	59
Other hypertensive disease without mention of heart, 447	279
General arteriosclerosis without mention of gangrene, 450.0	486

General arteriosclerosis with gangrene, 450.1	106
Thrombo-angiitis obliterans, 453.1	29
Arterial embolism and thrombosis, 454	29
Gangrene of unspecified cause, 455	72
Varicose veins of lower extremities, 460	604
Hemorrhoids, 461	458
Varicose veins of esophagus, 462.1	26
Phlebitis and thrombophlebitis of lower extremities, 463	125
Phlebitis and thrombophlebitis of other sites, 464	123
Pulmonary embolism and infarction, 465	50
Lymphadenitis, unqualified, 468.2	91

VIII. DISEASES OF THE RESPIRATORY SYSTEM

Acute nasopharyngitis, 470	823
Acute sinusitis, 471	38
Acute pharyngitis, other, 472.1	464
Acute tonsillitis, 473	825
Acute laryngitis and tracheitis, 474	274
Influenza with other respiratory manifestations, and influenza unqualified, 481	92
Lobar pneumonia, 490	728
Bronchopneumonia, 491	1,311
Primary atypical pneumonia, 492	172
Acute bronchitis, 500	222
Chronic bronchitis without mention of emphysema, 502.1	94
Hypertrophy of tonsils and adenoids, 510	1,074
Peritonsillar abscess, 511	90
Deflected nasal septum, 514	109
Nasal polyp, 515	38
Other diseases of upper respiratory tract, 517	58
Empyema, 518	30
Pleurisy without mention of effusion or tuberculosis, 519.0	47
Spontaneous pneumothorax, 520	36
Abscess of lung, 521	68
Pulmonary congestion and hypostasis, 522	36
Other chronic interstitial pneumonia, 525	55
Bronchiectasis, 526	135
Emphysema without mention of bronchitis, 527.1	87
Other diseases of lung and pleural cavity, 527.2	31

IX. DISEASES OF THE DIGESTIVE SYSTEM

Dental caries, unqualified, 530.0	45
Peridontal abscess, 531.1	52
Stomatitis, 536	36
Diseases of salivary glands, 537	40
Other diseases of buccal cavity, 538	47
Diseases of esophagus other than functional, 539.1	92
Ulcer of stomach without mention of perforation, 540.0	304
Ulcer of stomach with perforation, 540.1	53
Ulcer of duodenum without mention of perforation, 541.0	584
Ulcer of duodenum with perforation, 541.1	60
Gastrojejunal ulcer without mention of perforation, 542.0	29
Gastritis and duodenitis, 543	299

TABLE 54. INTERNATIONAL STATISTICAL CLASSIFICATION (ISC) DIAGNOSES ACCOUNTING FOR 25 OR MORE DISCHARGED PATIENTS[a] (*Continued*)

ISC diagnosis and code number	Number of patients
Other disorders of function of stomach, 544.2	59
Other diseases of stomach and duodenum, 545	67
Acute appendicitis without mention of peritonitis, 550.0	791
Acute appendicitis with peritonitis, 550.1	127
Other appendicitis, 552	80
Hernia, inguinal and femoral, without mention of obstruction, 560.0 and 560.1[d]	925
Hernia, umbilical, without mention of obstruction, 560.2	237
Hernia, ventral, without mention of obstruction, 560.3	208
Hernia, other specified site, without mention of obstruction, 560.4	59
Hernia, inguinal, with obstruction, 561.0	108
Impaction of intestine, 570.4	35
Other intestinal obstruction without mention of hernia, 570.5	203
Gastro-enteritis and colitis, except ulcerative, 571	814
Diverticulitis, 572.1	123
Ulcerative colitis, 572.2	59
Constipation, 573.0	51
Anal fissure and fistula, 574	153
Abscess of anal and rectal regions, 575	214
Peritonitis, 576	68
Peritoneal adhesion, 577	41
Other diseases of intestines and peritoneum, 578	345
Cirrhosis of liver with alcoholism, 581.1	800
Suppurative hepatitis and liver abscess, 582	186
Cholelithiasis, 584	278
Cholecystitis without mention of calculi, 585	534
Other diseases of gallbladder and biliary ducts, 586	46
Acute pancreatitis, 587.0	78
Chronic pancreatitis, 587.1	48
X. DISEASES OF THE GENITO-URINARY SYSTEM	
Acute nephritis, 590	88
Nephritis with edema, including nephrosis, 591	25
Chronic nephritis, 592	146
Pyelitis, pyelocystitis, and pyelonephritis, 600.0	505
Hydronephrosis, 601	52
Calculi of kidney and ureter, 602	269
Other diseases of kidney and ureter, 603	112
Calculi of other parts of urinary system, 604	38
Cystitis, 605	197
Other diseases of bladder, 606	325
Stricture of urethra, 608	153
Other diseases of urethra, 609	71
Hyperplasia of prostate, 610	770
Prostatitis, 611	46
Hydrocele, 613	26
Orchitis and epididymitis, 614	109
Redundant prepuce and phimosis, 615	618

Other diseases of male genital organs, 617	80
Chronic cystic disease of breast, 620	102
Acute mastitis not associated with lactation, 621.0	153
Hypertrophy of breast, 621.1	35
Acute salpingitis and oophoritis, 622	101
Chronic salpingitis and oophoritis, 623	94
Salpingitis and oophoritis, unqualified, 624	486
Other diseases of ovary and Fallopian tube, 625	90
Cervicitis, 630.0	189
Other infective diseases of uterus, 630.1	34
Vaginitis and vulvitis, 630.2	130
Uterovaginal prolapse, 631	47
Malposition of uterus, 632	52
Other diseases of uterus, 633	220
Disorders of menstruation, 634	412
Menopausal symptoms, 635	29
Other diseases of female genital organs, 637.1	282

XI. DELIVERIES AND COMPLICATIONS OF PREGNANCY, CHILDBIRTH, AND THE PUERPERIUM

Pre-eclampsia of pregnancy, 642.2	130
Hyperemesis gravidarum, 642.4	65
Other hemorrhage of pregnancy, 644	77
Ectopic pregnancy without mention of sepsis, 645.0	179
Threatened abortion, 648.0	612
Other complications arising from pregnancy, 648.3	940
Abortion without mention of sepsis or toxemia, spontaneous or unspecified, 650.0	3,598
Delivery without complication, 660	13,944
Delivery with retained placenta, unspecified type of delivery, 671.6[b]	139
Delivery with other complications, unspecified type of delivery, 678.6[b]	43
Mastitis and other disorders of lactation, 689	58

XII. DISEASES OF THE SKIN AND CELLULAR TISSUE

Boil and carbuncle of unspecified site, 690.8	64
Cellulitis, finger and toe, 691	104
Cellulitis and abscess, head and neck, 692.0	102
Cellulitis and abscess, trunk, 692.1	160
Cellulitis and abscess, upper arm and forearm, 692.2	152
Cellulitis and abscess, hand, except fingers, 692.3	36
Cellulitis and abscess, leg, 692.4	423
Cellulitis and abscess, foot, except toes, 692.5	188
Cellulitis and abscess, other, multiple, and unspecified sites, 692.6	221
Acute lymphadenitis, 694	148
Impetigo, 695	65
Other local infections of skin and subcutaneous tissue, 698	116
Seborrheic dermatitis, 700	42
Dermatitis due to drugs, 703.3	169
Dermatitis, unqualified, 703.7	30
Erythema multiforme, 705.1	33
Psoriasis, 706.0	33
Lichenification and lichen simplex chronicus, 708.3	89

TABLE 54. INTERNATIONAL STATISTICAL CLASSIFICATION (ISC) DIAGNOSES ACCOUNTING FOR 25 OR MORE DISCHARGED PATIENTS[a] (*Continued*)

ISC diagnosis and code number	Number of patients
Diseases of nail, 712	35
Other diseases of sebaceous glands, 714.2	125
Chronic ulcer of skin, 715	131
Other diseases of skin, 716	55
XIII. DISEASES OF THE BONES AND ORGANS OF MOVEMENT	
Acute arthritis due to pyogenic organisms, 720	108
Rheumatoid arthritis, 722.0	375
Osteo-arthritis, 723.0	293
Other specified forms of arthritis, 724	48
Other muscular rheumatism, fibrositis, and myalgia, 726.3	39
Acute osteomyelitis, 730.0	65
Chronic osteomyelitis, 730.1	81
Osteochondrosis, 732	43
Other diseases of bone, 733	92
Displacement of intervertebral disc, 735	112
Other diseases of joint, 738	82
Synovitis, bursitis, and tenosynovitis without mention of occupational origin, 741	217
Infective myositis and other inflammatory diseases of tendon and fascia, 743	59
Other diseases of muscle, tendon, and fascia, 744.2	33
Curvature of spine, 745	34
Clubfoot, 748	74
Other deformities of musculoskeletal system, 749	97
XIV. CONGENITAL MALFORMATIONS	
Congenital hydrocephalus, 752	35
Other congenital malformations of nervous system and sense organs, 753.1	57
Other and unspecified malformations of heart, 754.4	76
Cleft palate and harelip, 755	57
Other congenital malformations of digestive system, 756.2	46
Undescended testicle, 757.0	43
Polycystic disease of kidney, 757.1	26
Congenital malformations of external genital organs, 757.2	30
Other congenital malformations of genito-urinary system, 757.3	88
Other congenital malformations of bone and joint, 758.6	59
Congenital malformations of respiratory system, 759.0	34
Other and unspecified congenital malformations, 759.3	27
XV. CERTAIN DISEASES OF EARLY INFANCY	
Nutritional maladjustment without mention of prematurity, 772.0	62
Prematurity, unqualified, 776	932

XVI. SYMPTOMS, SENILITY, AND ILL-DEFINED CONDITIONS

Convulsions, 780.2	150
Jacksonian epilepsy, 780.3	26
Acute heart failure, undefined, 782.4	53
Epistaxis, 783.0	122
Abdominal pain, 785.5	139
Diarrhea, 785.6	216
Pyrexia of unknown origin, 788.8	97
Hematuria, 789.4	43
Observation for mental condition, 793.0	226
Observation for other specified condition, 793.1	414
Observation for unspecified condition, 793.2	639
Senility without mention of psychosis, 794.0[b]	60
Chronic brain syndrome due to senility, 794.9[b]	253
Other ill-defined and unknown conditions, 795.5	827

XVII. ACCIDENTS, POISONINGS, AND VIOLENCE (NATURE OF INJURY)

Fracture, vault of skull, 800	110
Fracture, face bones, 802	745
Multiple fractures involving skull or face with other bones, 804	29
Fracture and fracture dislocation, vertebral column, 805	160
Fracture, rib(s) and sternum, 807	121
Fracture, clavicle, 810	172
Fracture, humerus, 812	490
Fracture, radius and ulna, 813	1,097
Fracture, carpal bone(s), 814	36
Fracture, metacarpal bone(s), 815	318
Fracture, other and unspecified parts of femur, 821	1,006
Fracture, patella, 822	60
Fracture, tibia and fibula, 823	1,150
Fracture, one or more tarsal and metatarsal bones, 825	104
Other, multiple, and ill-defined fractures, lower limb, 827	147
Dislocation, shoulder, 831	139
Dislocation, elbow, 832	54
Other, multiple, and ill-defined dislocations, 839	41
Sprains and strains, elbow and forearm, 841	32
Sprains and strains, knee and leg, 844	56
Sprains and strains, ankle and foot, 845	122
Sprains and strains, other and unspecified parts of back, 847	68
Other and ill-defined sprains and strains, 848	104
Open wound, scalp, 850	811
Contusion and hematoma, scalp, 851	91
Concussion of brain, 852	1,914
Cerebral laceration and contusion, 853	66
Subarachnoid, subdural, and extradural hemorrhage following injury, 854	51
Head injury of other and unspecified nature, 856	230
Traumatic pneumothorax and hemothorax, 860	28
Injury to gastro-intestinal tract, 863	26
Injury to other and unspecified intra-abdominal organs, 868	30
Open wound, eye and orbit, 870	57
Open wound, ear, 872	32
Other and unspecified laceration, face, 873	249

TABLE 54. INTERNATIONAL STATISTICAL CLASSIFICATION (ISC) DIAGNOSES ACCOUNTING FOR 25 OR MORE DISCHARGED PATIENTS[a] (*Continued*)

ISC diagnosis and code number	Number of patients
Open wound, neck, 874	28
Open wound, chest, 875	263
Open wound, back, 876	34
Open wound, genital organs, including traumatic amputation, 878	47
Multiple and unspecified wounds, face, neck, and trunk, 879	211
Open wound, shoulder and upper arm, 880	35
Open wound, elbow and forearm, and wrist not involving tendons, 881	229
Open wound, wrist involving tendons, 882	34
Open wound, hand, except finger(s), 883	57
Open wound, finger(s), 884	122
Multiple and unspecified open wounds, one upper limb, 885	167
Traumatic amputation of other finger(s), 887	56
Open wound, hip and thigh, 890	44
Open wound, knee, leg except thigh, and ankle not involving tendons, 891	117
Open wound, foot, except toe(s), 893	46
Multiple open wounds, unspecified location, 908	81
Superficial injury, face and neck, 910	70
Superficial injury, hip, thigh, leg, and ankle, 916	35
Superficial injury, foot and toe(s), 917	34
Superficial injury, other, multiple, and unspecified sites, 918	42
Contusion, face and neck, except eye(s), 920	149
Contusion, eye and orbit, 921	67
Contusion, trunk, 922	230
Contusion, shoulder and upper arm, 923	76
Contusion, elbow, forearm, and wrist, 924	84
Contusion, hand(s), except fingers, 925	28
Contusion, hip, thigh, leg, and ankle, 927	247
Contusion, other, multiple, and unspecified sites, 929	237
Foreign body in digestive tract, 935	96
Burn confined to face, head, and neck, 941	65
Burn confined to trunk, 942	47
Burn confined to upper limb(s), except wrist and hand, 943	30
Burn confined to wrist(s) and hand(s), 944	26
Burn confined to lower limb(s), 945	34
Burn involving face, head, and neck, with trunk and limb(s), 948	31
Burn involving other and unspecified parts, 949	140
Injury to nerve(s) in upper arm, 952	38
Poisoning by corrosive aromatics, acids, and caustic alkalis, acute or unspecified, 964.0[b]	88
Late effects of poisoning by corrosive aromatics, acids, and caustic alkalis, 964.9[b]	43
Poisoning by lead and its compounds, 966	46
Poisoning by carbon monoxide, 968	50
Poisoning by other gases and vapors, 969	34
Poisoning by barbituric acid and derivatives, 971	171
Poisoning by other and unspecified substances, 979	152
Heat exhaustion, 981.3	193
Injury of other and unspecified nature, unspecified site, 996.9	28

Early complications of surgical procedures, 999.0	126
Late complications of other surgical procedures, 999.4	39

SUPPLEMENTARY CLASSIFICATIONS

Prenatal care, Y06	215
Postpartum observation, Y07	466
Healthy person accompanying sick relative, Y08	271
Other person without complaint or sickness, Y09	1,140
Single infant without mention of prematurity, Y20	157

[a] One or more of the total 121,952 patients were classified in 955 different ISC categories. This table includes 451 categories, accounting for 117,603 patients. Except in a few instances the spelling and punctuation of the ISC have been followed. Only one important change in terminology has been made: in code 776 the term "prematurity" has been substituted for "immaturity."

[b] This category is not included in the ISC proper, but was introduced by the Standard Nomenclature, 4th ed.

[c] Separation of malignant neoplasm of corpus uteri is not possible because of lack of separate Standard Nomenclature code.

[d] Separation of the respective ISC diagnoses is not possible because of the particularity of the Standard Nomenclature codes. See Appendix B.

TABLE 55. DISCHARGED PATIENTS, BY SUMMARY

SL code number and diagnosis	Sex	Total [a]	White						
			Total	Under 1 year	1–4 years	5–14 years	15–24 years	25–34 years	35–44 years
Total	M & F	121,952	79,311	2,214	3,668	5,756	10,461	10,578	9,249
	M	56,234	40,305	1,298	2,151	3,586	3,264	3,649	4,514
	F	65,715	39,006	916	1,517	2,170	7,197	6,929	4,735
1. Tuberculosis, respiratory system	M	3,434	2,215	6	45	35	173	232	425
	F	1,594	891	5	37	42	225	240	157
2. Tuberculosis, meninges and central nervous system	M	29	8	1	4	–	1	1	–
	F	22	13	1	4	4	1	1	1
3. Tuberculosis, bones and joints, active or unspecified	M	47	20	–	3	–	3	3	3
	F	36	16	–	1	2	3	5	3
4. Tuberculosis, lymphatic system	M	42	21	–	4	5	5	1	5
	F	44	20	–	–	4	9	5	1
5. Tuberculosis, genito-urinary system	M	22	8	–	–	2	–	–	4
	F	16	10	–	–	–	–	3	4
6. Tuberculosis, other sites	M	46	24	2	5	2	1	1	5
	F	36	15	–	1	–	2	6	1
7. Congenital syphilis	M	6	3	1	–	1	1	–	–
	F	6	2	–	–	–	–	2	–
8. Early syphilis	M	19	9	–	–	–	1	2	3
	F	10	3	–	–	–	1	–	–
9. Syphilis of central nervous system	M	121	71	–	–	–	1	2	7
	F	49	20	–	–	–	–	1	1
10. Gonococcal infection	M	38	16	3	–	–	2	6	–
	F	27	9	–	–	2	5	–	1
11. Other syphilis and venereal diseases	M	130	48	–	–	1	2	1	6
	F	84	24	–	1	5	5	6	2
12. Salmonella infections, except typhoid fever	M	8	7	2	–	1	1	1	1
	F	5	3	2	–	–	1	–	–
13. Dysentery, all forms	M	11	7	–	2	3	–	1	–
	F	15	11	1	3	2	–	–	1
14. Scarlet fever	M	84	62	1	24	32	4	1	–
	F	75	64	1	14	47	1	–	–
15. Streptococcal sore throat	M	14	8	–	1	4	–	1	–
	F	8	3	–	2	–	1	–	–
16. Erysipelas	M	5	3	–	–	–	–	–	1
	F	4	4	–	–	–	–	–	2
17. Diphtheria	M	3	3	1	1	1	–	–	–
	F	5	2	–	–	–	1	1	–
18. Whooping cough	M	155	121	41	50	29	1	–	–
	F	151	107	35	42	30	–	–	–
19. Meningococcal infections	M	15	9	1	4	2	–	–	1
	F	16	14	1	2	6	2	1	1
20. Acute poliomyelitis	M	347	295	4	45	170	52	15	5
	F	249	217	1	50	90	49	24	3
21. Acute infectious encephalitis	M	14	9	2	1	2	3	–	1
	F	10	8	–	–	6	1	–	–
22. Late effects of 20 and 21	M	8	8	–	–	2	1	2	1
	F	4	3	–	–	1	–	–	1
23. Measles	M	484	344	37	226	73	3	4	1
	F	396	275	24	163	78	3	4	2

LIST DIAGNOSIS, SEX, COLOR, AND AGE

				Nonwhite										
45–54 years	55–64 years	65–74 years	75 years and over	Total	Under 1 year	1–4 years	5–14 years	15–24 years	25–34 years	35–44 years	45–54 years	55–64 years	65–74 years	75 years and over
9,549	10,366	10,785	6,685	42,229	1,772	2,457	2,579	9,547	11,790	6,245	3,546	2,081	1,571	641
5,816	6,324	6,293	3,410	15,669	1,011	1,531	1,580	1,520	2,989	2,710	1,979	1,213	854	282
3,733	4,042	4,492	3,275	26,560	761	926	999	8,027	8,801	3,535	1,567	868	717	359
597	441	200	61	1,204	12	42	31	130	297	315	247	85	44	1
85	46	40	14	699	4	26	20	196	261	120	39	14	16	3
—	—	1	—	20	2	8	4	1	2	3	—	—	—	—
—	—	1	—	9	1	5	—	3	—	—	—	—	—	—
4	2	2	—	27	—	—	3	8	5	9	2	—	—	—
1	—	—	1	20	—	1	5	3	6	1	3	—	1	—
—	1	—	—	21	—	1	7	7	2	3	1	—	—	—
—	—	1	—	24	—	—	2	5	11	4	1	—	1	—
—	—	2	—	14	—	—	1	2	2	2	3	2	2	—
1	1	1	—	6	—	—	—	3	2	1	—	—	—	—
4	3	1	—	22	—	2	3	2	5	2	7	—	1	—
2	2	—	1	20	—	1	1	5	2	3	5	2	1	—
—	—	—	—	3	2	1	—	—	—	—	—	—	—	—
—	—	—	—	4	1	1	1	1	—	—	—	—	—	—
1	2	—	—	10	—	—	1	3	4	—	2	—	—	—
1	—	1	—	7	—	—	—	2	1	2	1	1	—	—
15	32	11	3	50	—	—	—	3	5	8	18	9	7	—
4	8	5	1	29	—	—	—	—	5	11	10	2	1	—
2	1	1	1	22	—	—	—	7	3	9	1	1	1	—
1	—	—	—	18	1	—	5	9	1	2	—	—	—	—
7	20	8	3	82	—	—	2	11	18	15	22	10	3	1
4	—	1	—	60	—	—	2	7	16	13	12	3	5	2
—	—	1	—	1	—	—	1	—	—	—	—	—	—	—
—	—	—	—	2	—	—	—	—	—	2	—	—	—	—
1	—	—	—	4	—	1	1	1	—	1	—	—	—	—
—	1	2	1	3	—	3	—	—	—	—	—	—	—	—
—	—	—	—	22	—	8	14	—	—	—	—	—	—	—
—	1	—	—	11	—	2	6	3	—	—	—	—	—	—
—	2	—	—	6	—	2	—	1	1	2	—	—	—	—
—	—	—	—	5	—	3	1	—	1	—	—	—	—	—
—	—	1	1	2	—	—	—	—	1	1	—	—	—	—
—	—	1	1	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	3	—	1	1	—	1	—	—	—	—	—
—	—	—	—	34	15	15	4	—	—	—	—	—	—	—
—	—	—	—	43	18	19	6	—	—	—	—	—	—	—
—	1	—	—	6	1	1	1	1	1	—	1	—	—	—
—	1	—	—	2	—	1	1	—	—	—	—	—	—	—
4	—	—	—	52	—	18	31	1	2	—	—	—	—	—
—	—	—	—	32	—	5	21	3	3	—	—	—	—	—
—	—	—	—	5	—	2	2	—	1	—	—	—	—	—
1	—	—	—	2	—	—	2	—	—	—	—	—	—	—
—	2	—	—	—	—	—	—	—	—	—	—	—	—	—
1	—	—	—	1	—	1	—	—	—	—	—	—	—	—
—	—	—	—	139	10	101	25	1	2	—	—	—	—	—
1	—	—	—	120	13	84	19	2	1	1	—	—	—	—

TABLE 55. DISCHARGED PATIENTS, BY SUMMARY

SL code number and diagnosis	Sex	Total[a]	White						
			Total	Under 1 year	1–4 years	5–14 years	15–24 years	25–34 years	35–44 years
24. Rubella	M	44	38	6	11	12	6	3	–
	F	44	34	1	10	8	11	4	–
25. Chickenpox	M	336	245	42	86	61	27	19	6
	F	280	208	23	90	67	15	7	4
26. Mumps	M	209	152	1	21	51	39	27	7
	F	123	88	–	18	39	15	9	4
27. Infectious hepatitis	M	12	6	–	–	–	–	2	–
	F	10	3	–	–	1	–	2	–
28. Infectious mononucleosis	M	27	19	–	2	8	6	3	–
	F	32	22	–	2	4	7	7	–
29. Other bacterial, spirochetal, viral, rickettsial, and parasitic diseases	M	318	221	21	25	36	28	30	15
	F	245	166	13	21	24	17	19	19
30. Malignant neoplasm, buccal cavity and pharynx	M	178	154	–	–	–	1	4	4
	F	51	38	–	–	–	1	2	5
31. Malignant neoplasm, stomach	M	255	212	–	–	–	–	1	4
	F	128	94	–	–	–	–	1	1
32. Malignant neoplasm, intestines, except rectum	M	181	151	–	–	–	–	1	9
	F	163	138	–	–	–	–	–	9
33. Malignant neoplasm, rectum	M	150	135	–	–	–	–	1	3
	F	98	81	–	–	–	–	–	7
34. Malignant neoplasm, other organs of digestive system	M	248	192	–	–	–	–	–	6
	F	134	110	–	–	–	–	–	4
35. Malignant neoplasm, respiratory system	M	582	506	–	–	–	–	4	17
	F	85	73	–	–	–	–	2	9
36. Malignant neoplasm, breast	M	12	12	–	–	–	–	–	1
	F	480	389	–	–	–	1	15	67
37. Malignant neoplasm, cervix uteri	F	447	279	–	–	–	–	15	57
38. Malignant neoplasm, other and unspecified parts of uterus	F	97	70	–	–	–	–	–	7
39. Malignant neoplasm, other female genital organs	F	162	133	–	–	–	2	6	21
40. Malignant neoplasm, male genital organs	M	261	215	–	–	–	–	–	2
41. Malignant neoplasm, urinary organs	M	139	119	1	2	–	–	2	4
	F	72	60	–	1	–	–	–	1
42. Malignant neoplasm, brain and other parts of nervous system	M	30	29	–	–	4	3	–	9
	F	30	24	–	2	1	1	6	3
43. Malignant neoplasm, bone and connective tissue	M	35	31	–	–	–	1	6	3
	F	17	15	–	–	–	1	1	2
44. Malignant neoplasm, other and unspecified sites	M	284	249	–	–	–	3	5	14
	F	251	204	–	–	–	2	1	19
45. Neoplasm, lymphatic and hematopoietic tissues	M	267	224	–	4	13	14	23	22
	F	198	167	–	7	5	4	14	26
46. Benign neoplasm, digestive system	M	55	41	–	2	–	1	3	2
	F	48	34	–	1	–	–	2	4

LIST DIAGNOSIS, SEX, COLOR, AND AGE (*Continued*)

				Nonwhite										
45–54 years	55–64 years	65–74 years	75 years and over	Total	Under 1 year	1–4 years	5–14 years	15–24 years	25–34 years	35–44 years	45–54 years	55–64 years	65–74 years	75 years and over
–	–	–	–	6	2	4	–	–	–	–	–	–	–	–
–	–	–	–	10	3	2	5	–	–	–	–	–	–	–
–	–	1	3	91	16	52	17	4	2	–	–	–	–	–
1	1	–	–	72	8	30	26	4	3	1	–	–	–	–
6	–	–	–	57	–	28	15	4	8	1	1	–	–	–
1	1	1	–	35	2	18	8	2	1	3	1	–	–	–
–	1	1	2	6	1	–	1	1	2	–	–	1	–	–
–	–	–	–	7	1	–	–	3	1	1	–	–	1	–
–	–	–	–	8	–	2	2	3	1	–	–	–	–	–
–	1	–	1	10	–	2	2	5	–	1	–	–	–	–
24	19	13	10	96	6	6	24	18	13	13	6	6	4	–
15	14	15	9	79	5	10	9	10	16	15	9	5	–	–
20	60	40	25	22	–	–	–	1	1	2	8	8	2	–
6	7	13	4	13	–	–	1	1	3	1	3	3	1	–
27	55	80	45	42	–	–	–	–	–	3	6	12	15	6
9	25	32	26	33	–	–	–	–	4	2	3	12	7	5
10	41	54	36	30	–	–	–	–	3	1	11	8	6	1
24	35	42	28	25	–	–	–	–	2	1	5	5	9	3
15	36	52	28	14	–	–	–	–	–	1	5	5	3	–
12	24	20	18	17	–	–	–	–	–	–	1	8	6	2
27	54	69	36	56	–	–	–	–	1	8	17	13	14	3
18	25	38	25	24	–	–	–	–	–	10	5	3	5	1
111	209	137	28	75	–	–	–	–	–	8	21	27	17	2
15	16	20	11	12	–	–	–	–	–	4	1	1	6	–
1	3	3	4	–	–	–	–	–	–	–	–	–	–	–
87	96	78	45	90	–	–	–	–	5	22	24	12	20	7
94	68	36	9	168	–	–	–	1	30	42	50	17	23	5
13	20	16	14	27	–	–	–	1	–	4	5	7	10	–
32	33	28	11	29	–	–	–	1	3	13	10	2	–	–
14	54	80	65	46	–	–	–	–	–	2	6	8	19	11
15	30	39	26	20	–	–	2	–	–	1	3	2	10	2
3	13	22	20	12	–	–	–	–	1	2	2	2	1	4
5	4	4	–	1	–	–	–	–	–	–	–	–	1	–
4	5	2	–	6	1	–	–	1	–	–	2	1	1	–
2	2	12	5	3	–	–	–	–	–	–	1	–	2	–
5	5	1	–	2	–	–	–	2	–	–	–	–	–	–
36	66	72	53	35	–	–	–	–	2	6	9	9	7	2
33	54	50	45	47	–	1	–	–	2	9	14	10	10	1
38	46	46	18	43	–	–	2	1	6	2	9	15	8	–
22	33	34	22	31	–	1	1	4	6	6	6	5	2	–
7	10	11	5	14	–	–	2	4	–	4	1	2	1	–
8	5	8	6	14	–	1	2	–	–	5	1	2	2	1

TABLE 55. DISCHARGED PATIENTS, BY SUMMARY

SL code number and diagnosis	Sex	Total[a]	White						
			Total	Under 1 year	1–4 years	5–14 years	15–24 years	25–34 years	35–44 years
47. Benign neoplasm, respiratory system	M	29	20	–	–	–	1	1	6
	F	23	15	1	2	1	–	5	2
48. Benign neoplasm, breast	M	5	4	–	–	–	–	1	–
	F	128	71	–	–	–	12	18	22
49. Benign neoplasm, uterus	F	983	285	–	–	1	6	36	122
50. Benign neoplasm, other female genital organs	F	225	110	–	–	–	28	33	24
51. Benign neoplasm, male genital organs	M	91	70	–	3	4	6	12	11
52. Benign neoplasm, skin	M	101	80	1	3	7	33	14	7
	F	105	53	–	2	7	21	10	3
53. Benign neoplasm, brain and other parts of nervous system	M	17	15	1	–	2	3	1	1
	F	21	14	–	–	–	1	1	4
54. Benign neoplasm, other sites	M	158	116	6	6	5	5	7	11
	F	203	118	10	4	6	14	20	10
55. Neoplasm of unspecified nature, all sites	M	126	106	–	2	5	2	5	7
	F	128	84	2	3	3	4	4	8
56. Asthma	M	444	299	4	22	17	12	21	25
	F	469	298	–	15	17	36	42	49
57. Thyrotoxicosis with or without goitre	M	21	16	–	–	–	–	1	1
	F	91	51	–	–	–	4	14	4
58. Other diseases of thyroid gland	M	23	17	–	–	–	1	3	1
	F	144	83	–	–	2	4	6	20
59. Diabetes mellitus	M	552	417	–	4	8	12	29	20
	F	934	666	–	1	16	18	21	30
60. Avitaminoses and other deficiency states	M	109	84	7	11	6	1	1	4
	F	72	59	–	5	2	3	9	5
61. Other allergic, endocrine, and metabolic conditions	M	148	90	6	9	5	6	8	14
	F	250	126	3	16	7	14	19	32
62. Pernicious and other hyperchromic anemias	M	52	48	–	–	–	–	1	1
	F	41	39	–	–	2	1	–	4
63. Other diseases of blood and blood-forming organs	M	318	191	7	50	49	15	6	4
	F	293	155	5	15	32	15	23	11
64. Schizophrenic disorders	M	1,829	1,428	–	6	84	308	495	325
	F	2,001	1,513	–	–	20	296	476	397
65. Involutional melancholia	M	194	186	–	–	–	–	–	4
	F	466	424	–	–	–	–	–	53
66. Senile psychosis	M	377	343	–	–	–	–	1	–
	F	704	627	–	–	–	–	–	–
67. Psychosis with cerebral arteriosclerosis	M	621	545	–	–	–	–	–	1
	F	476	417	–	–	–	–	–	2
68. Alcoholic psychosis	M	1,229	791	–	–	–	10	105	245
	F	278	185	–	–	–	1	32	71
69. Other and unspecified psychoses	M	725	562	–	–	4	53	79	104
	F	582	459	–	–	4	39	60	112
70. Psychoneurotic disorders	M	572	475	–	–	9	91	122	109
	F	907	675	–	–	22	188	184	142
71. Pathological personality	M	459	337	–	–	–	140	91	64
	F	160	103	–	–	1	36	30	23

LIST DIAGNOSIS, SEX, COLOR, AND AGE (*Continued*)

				Nonwhite										
45–54 years	55–64 years	65–74 years	75 years and over	Total	Under 1 year	1–4 years	5–14 years	15–24 years	25–34 years	35–44 years	45–54 years	55–64 years	65–74 years	75 years and over
3	5	4	–	9	1	–	–	1	2	3	2	–	–	–
1	1	1	1	8	–	–	–	–	3	4	1	–	–	–
1	1	1	–	1	–	–	–	–	1	–	–	–	–	–
7	6	5	1	57	–	–	1	24	21	7	3	1	–	–
96	17	7	–	697	–	–	–	18	239	315	106	11	7	1
8	7	7	3	115	–	–	3	37	49	21	3	1	1	–
8	10	12	4	21	–	2	1	2	1	–	3	6	5	1
5	4	2	4	20	1	2	2	8	2	3	1	1	–	–
6	1	3	–	51	–	1	5	19	15	8	2	1	–	–
3	1	3	–	2	–	–	–	1	1	–	–	–	–	–
4	3	–	1	7	1	1	–	–	1	1	1	–	2	–
20	25	24	7	40	1	1	3	2	5	9	9	7	2	1
20	19	13	2	85	6	4	4	8	20	13	17	12	1	–
20	17	26	22	20	1	1	–	1	–	1	4	7	5	–
15	22	12	11	44	–	–	1	6	8	7	10	6	4	2
57	72	55	14	143	4	22	20	14	15	16	24	20	6	2
55	39	34	11	171	6	9	14	22	44	45	20	10	1	–
9	3	2	–	5	–	–	–	1	1	2	1	–	–	–
10	12	4	3	39	–	1	1	7	10	8	8	4	–	–
6	3	3	–	6	–	–	–	–	–	–	3	1	2	–
26	16	6	3	61	–	–	1	6	16	16	12	5	4	1
68	105	131	40	134	–	–	6	5	16	21	35	33	11	7
73	213	223	71	266	–	–	6	10	26	44	66	61	37	16
15	14	15	10	25	4	4	–	–	1	4	7	–	5	–
11	6	11	7	13	1	2	–	2	1	3	2	–	1	1
7	16	13	6	57	11	22	5	1	3	4	5	3	3	–
21	11	3	–	124	3	11	3	22	46	22	12	4	1	–
4	10	18	14	4	–	–	–	–	2	–	1	1	–	–
2	4	13	13	2	–	1	–	–	–	–	1	–	–	–
13	20	19	8	127	6	37	40	29	8	5	–	2	–	–
14	10	16	14	138	3	16	14	43	36	16	6	2	1	1
146	55	8	1	392	–	–	29	87	164	75	32	4	1	–
234	73	14	3	478	1	–	17	94	194	126	37	9	–	–
75	90	16	1	8	–	–	–	–	–	–	5	1	2	–
226	132	12	1	40	–	–	–	–	–	12	22	6	–	–
4	25	148	165	33	–	–	–	–	–	–	3	3	21	6
6	52	230	339	74	–	–	–	–	–	1	1	7	27	38
19	110	237	178	74	–	–	–	–	–	–	9	15	34	16
8	100	179	128	54	–	–	–	–	–	–	8	18	18	10
277	121	30	3	425	–	–	–	16	152	159	77	15	6	–
54	22	5	–	91	–	–	–	7	38	32	11	2	1	–
113	132	63	14	156	–	–	4	24	41	41	24	13	8	1
98	73	51	22	118	–	–	1	23	32	26	19	7	7	3
70	46	23	5	96	–	–	3	21	43	12	8	6	3	–
70	43	20	6	227	–	1	8	74	94	38	11	1	–	–
33	6	3	–	121	–	–	1	47	39	28	6	–	–	–
10	1	2	–	57	–	–	–	27	24	4	2	–	–	–

TABLE 55. DISCHARGED PATIENTS, BY SUMMARY

SL code number and diagnosis	Sex	Total[a]	White					
			Total	Under 1 year	1–4 years	5–14 years	15–24 years	25–34 years	35–44 years
72. Alcoholism	M	2,333	1,708	–	–	5	71	266	554
	F	627	429	–	–	1	19	104	164
73. Other nonpsychotic psychiatric conditions	M	549	332	10	17	105	121	36	16
	F	271	145	6	2	39	56	20	9
74. Cerebral hemorrhage, embolism, and thrombosis	M	1,075	898	–	–	–	3	2	24
	F	953	737	–	–	–	2	7	29
75. Other vascular lesions affecting central nervous system	M	197	139	–	–	1	2	4	4
	F	180	121	–	–	–	1	1	7
76. Nonmeningococcal meningitis	M	52	31	6	5	5	4	2	2
	F	47	24	2	6	4	4	3	3
77. Multiple sclerosis	M	34	33	–	–	1	1	4	12
	F	48	38	–	–	–	1	10	12
78. Epilepsy	M	391	219	–	9	16	37	31	46
	F	212	109	1	9	15	19	22	17
79. Other diseases of central nervous system	M	286	203	3	13	18	16	14	17
	F	233	164	7	18	10	14	15	27
80. Neuritis and neuralgia	M	58	50	1	1	–	1	5	9
	F	62	48	–	–	2	3	6	10
81. Other diseases of nervous system	M	36	29	–	1	8	3	2	3
	F	24	19	–	3	2	–	3	5
82. Nonspecific inflammatory diseases of eye	M	68	41	6	5	2	2	2	7
	F	58	42	3	1	4	6	6	5
83. Strabismus	M	51	44	–	8	22	6	2	1
	F	33	26	–	7	9	–	5	2
84. Cataract	M	149	124	–	1	1	2	1	5
	F	154	117	–	–	–	–	1	3
85. Glaucoma	M	50	35	–	–	2	–	–	–
	F	63	45	–	–	–	–	–	4
86. Other diseases and conditions of eye	M	93	66	1	2	6	7	2	11
	F	82	55	1	1	1	1	9	6
87. Otitis media without mention of mastoiditis	M	140	98	16	34	30	7	2	3
	F	122	88	8	23	32	11	4	6
88. Mastoiditis	M	19	15	–	1	5	1	3	2
	F	15	14	–	–	4	5	4	1
89. Other diseases of auditory system	M	37	29	1	–	7	4	4	3
	F	32	24	–	1	3	2	3	4
90. Acute rheumatic fever	M	176	131	–	5	79	23	11	8
	F	141	88	–	1	48	15	14	7
91. Acute rheumatic heart disease	M	173	141	–	1	12	14	33	29
	F	220	146	–	1	19	25	17	29
92. Chorea	M	11	11	–	–	8	2	–	–
	F	16	13	–	–	13	–	–	–
93. Chronic rheumatic heart disease	M	188	143	–	–	13	9	24	31
	F	290	210	–	–	15	32	25	48
94. Coronary artery disease	M	826	778	–	1	–	1	5	55
	F	353	327	–	–	–	–	1	15
95. Other arteriosclerotic and degenerative heart disease	M	2,189	1,919	–	1	–	–	–	30
	F	1,517	1,263	–	–	–	–	1	11

LIST DIAGNOSIS, SEX, COLOR, AND AGE (*Continued*)

				Nonwhite										
45–54 years	55–64 years	65–74 years	75 years and over	Total	Under 1 year	1–4 years	5–14 years	15–24 years	25–34 years	35–44 years	45–54 years	55–64 years	65–74 years	75 years and over
503	225	73	11	592	–	1	1	50	194	206	106	27	7	–
91	33	14	3	191	–	2	–	25	74	71	16	2	1	–
17	9	1	–	211	2	2	48	105	36	8	9	1	–	–
10	3	–	–	125	3	5	23	71	13	9	1	–	–	–
115	245	338	171	167	–	–	–	–	–	13	36	55	48	15
71	153	262	213	209	–	–	1	1	3	21	53	44	58	28
11	32	42	43	56	–	–	–	–	7	7	12	15	13	2
18	27	40	27	57	–	–	–	1	3	3	13	16	14	7
4	1	1	1	18	4	3	5	2	1	2	–	1	–	–
–	–	1	1	22	3	6	1	–	5	2	3	1	1	–
11	2	2	–	1	–	–	–	–	1	–	–	–	–	–
12	3	–	–	9	–	–	–	2	3	3	1	–	–	–
45	25	9	1	163	–	4	10	15	52	39	30	8	5	–
13	6	6	1	99	–	8	7	15	24	21	14	8	2	–
33	36	38	15	82	2	11	9	10	11	15	8	11	4	1
21	29	17	6	68	5	7	3	6	11	10	13	8	4	1
8	11	8	6	8	–	–	1	–	1	3	1	–	1	1
8	10	6	3	14	–	–	–	1	6	2	2	2	1	–
6	–	5	1	7	1	1	–	–	–	3	2	–	–	–
1	4	1	–	5	–	–	–	2	2	–	1	–	–	–
2	8	6	1	27	6	1	3	4	5	3	1	2	–	2
3	5	6	3	16	6	1	1	2	2	–	–	2	1	1
1	2	–	2	7	–	1	2	–	–	4	–	–	–	–
–	–	3	–	7	–	2	1	1	3	–	–	–	–	–
9	36	41	28	25	–	–	–	–	1	1	2	11	8	2
10	21	48	34	37	–	–	–	1	2	–	7	12	13	2
3	14	13	3	15	–	–	1	–	3	2	1	4	4	–
3	17	11	10	18	–	–	–	–	1	1	8	3	4	1
8	14	7	8	27	–	4	3	–	2	11	4	1	2	–
7	13	4	12	27	–	3	2	3	8	2	6	3	–	–
2	3	–	1	41	7	14	10	2	5	2	1	–	–	–
1	2	1	–	34	4	16	6	–	1	4	–	1	2	–
–	2	1	–	4	–	1	1	–	2	–	–	–	–	–
–	–	–	–	1	1	–	–	–	–	–	–	–	–	–
3	2	4	1	8	1	1	1	1	1	–	1	2	–	–
6	3	2	–	8	–	1	1	2	1	3	–	–	–	–
4	1	–	–	45	–	2	33	6	3	1	–	–	–	–
3	–	–	–	53	–	2	20	9	11	10	1	–	–	–
26	15	9	2	32	–	–	8	6	8	1	6	3	–	–
30	21	3	1	74	–	1	14	18	12	14	7	8	–	–
–	1	–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	3	–	–	2	1	–	–	–	–	–	–
34	24	7	1	44	–	–	8	7	7	7	10	5	–	–
46	27	14	3	80	–	–	8	19	15	18	9	9	2	–
158	244	218	96	44	–	–	–	–	1	7	17	13	4	2
32	87	125	67	26	–	–	–	–	2	5	5	9	3	2
148	433	784	523	265	–	–	–	2	1	4	51	84	81	42
66	243	495	447	250	–	–	–	–	2	10	42	63	81	52

TABLE 55. DISCHARGED PATIENTS, BY SUMMARY

SL code number and diagnosis	Sex	Total[a]	White						
			Total	Under 1 year	1–4 years	5–14 years	15–24 years	25–34 years	35–44 years
96. Other diseases of heart	M	211	173	–	1	3	6	9	19
	F	135	102	3	–	2	3	7	16
97. Hypertensive disease	M	1,138	801	–	–	–	4	5	34
	F	1,442	962	–	–	–	3	8	38
98. General arteriosclerosis	M	343	292	–	–	–	–	1	2
	F	249	210	–	–	–	–	–	2
99. Varicose veins of lower extremities	M	347	294	–	–	–	3	8	34
	F	257	218	–	–	–	7	19	28
100. Hemorrhoids	M	245	174	–	–	–	3	19	42
	F	213	131	–	–	–	13	21	34
101. Other diseases of circulatory system	M	367	272	7	14	14	11	10	43
	F	318	228	4	14	9	18	20	27
102. Acute sinusitis	M	19	9	1	–	1	4	2	1
	F	19	11	1	1	–	1	3	1
103. Acute tonsillitis	M	402	222	16	111	62	15	10	3
	F	423	220	11	83	45	31	26	10
104. Influenza	M	42	26	–	2	2	7	5	7
	F	57	24	–	2	2	8	6	2
105. Lobar pneumonia	M	480	229	14	11	17	13	23	21
	F	248	128	4	14	13	12	13	7
106. Bronchopneumonia	M	773	452	58	54	24	22	14	27
	F	538	345	30	64	30	16	10	18
107. Primary atypical and other pneumonia	M	116	71	1	5	3	11	8	11
	F	57	43	3	–	3	5	8	8
108. Bronchitis	M	206	138	21	18	8	7	4	10
	F	112	75	8	10	12	4	3	11
109. Hypertrophy of tonsils and adenoids	M	498	349	1	106	205	22	5	9
	F	576	372	1	73	201	63	25	7
110. Other diseases of upper respiratory tract	M	1,131	717	95	235	139	57	59	35
	F	777	476	65	151	89	54	38	30
111. Empyema and abscess of lung	M	78	50	1	–	3	2	3	5
	F	20	11	1	–	–	1	1	5
112. Pleurisy	M	32	22	–	–	–	3	1	3
	F	23	12	–	–	1	1	2	2
113. Bronchiectasis	M	89	76	–	–	1	1	4	6
	F	46	39	–	2	3	–	3	6
114. Other diseases of lung and pleural cavity	M	213	180	2	1	2	6	11	13
	F	52	42	1	–	1	2	2	5
115. Diseases of buccal cavity and esophagus	M	212	161	2	11	21	17	12	12
	F	146	86	1	11	18	8	15	5
116. Ulcer of stomach	M	285	213	–	–	–	3	19	34
	F	72	56	–	–	–	6	3	8
117. Ulcer of duodenum, gastrojejunal ulcer	M	546	424	–	–	1	12	57	65
	F	129	91	–	–	–	6	10	17
118. Other diseases of stomach and duodenum	M	262	161	3	8	6	13	18	24
	F	164	97	4	4	5	15	7	17
119. Acute appendicitis	M	525	359	–	14	112	87	49	38
	F	393	268	–	11	74	91	24	27
120. Other and unspecified appendicitis	M	28	19	–	1	3	6	5	1
	F	63	43	–	–	10	22	6	3

LIST DIAGNOSIS, SEX, COLOR, AND AGE (*Continued*)

				Nonwhite										
45–54 years	55–64 years	65–74 years	75 years and over	Total	Under 1 year	1–4 years	5–14 years	15–24 years	25–34 years	35–44 years	45–54 years	55–64 years	65–74 years	75 years and over
27	52	41	15	36	1	2	1	3	2	9	8	4	4	2
12	21	29	9	33	–	–	1	1	10	8	6	5	2	–
122	233	282	121	332	–	–	–	–	12	36	92	106	65	21
112	222	357	222	478	–	–	–	11	42	80	114	106	86	39
11	42	121	115	51	–	–	–	–	1	1	2	11	21	15
4	19	72	113	38	–	–	–	–	–	1	3	6	14	14
66	81	76	26	53	–	–	–	2	5	12	14	10	7	3
38	64	44	18	39	–	–	–	3	6	8	11	7	3	1
45	34	25	6	70	–	–	–	3	21	19	20	5	2	–
22	26	12	5	81	–	–	–	12	16	31	14	2	2	4
51	59	45	18	95	5	14	1	4	16	16	21	5	9	4
34	32	44	26	89	5	2	7	13	20	18	12	4	3	5
–	–	–	–	10	2	–	1	2	3	1	–	–	1	–
2	2	–	–	8	–	1	2	2	1	1	1	–	–	–
4	–	–	1	180	15	84	44	14	16	2	2	2	1	–
8	4	2	–	202	13	79	33	29	22	15	8	1	2	–
2	–	1	–	15	–	–	–	3	4	6	2	–	–	–
–	2	1	1	33	–	1	2	8	13	5	1	1	2	–
31	31	37	31	250	9	9	10	14	63	76	44	15	7	3
12	8	24	21	120	12	4	4	19	37	21	12	4	5	2
57	55	77	64	321	48	69	22	23	48	46	25	23	9	8
32	34	51	60	192	30	38	15	18	32	17	16	10	5	11
6	11	12	3	45	3	–	2	4	12	10	3	4	5	2
5	5	4	2	14	–	1	–	2	1	6	2	–	2	–
11	25	24	10	68	10	16	7	4	9	9	5	4	4	–
4	8	10	5	37	6	6	6	5	5	4	3	2	–	–
1	–	–	–	148	–	32	85	11	17	2	1	–	–	–
–	2	–	–	204	–	27	95	37	32	12	1	–	–	–
33	27	26	11	412	80	159	70	27	34	21	15	4	2	–
10	20	17	2	301	50	79	37	46	50	22	10	4	3	–
14	16	5	1	27	–	–	–	1	8	10	6	2	–	–
1	1	1	–	9	–	–	2	–	5	1	1	–	–	–
5	4	4	2	10	–	–	1	1	4	1	2	1	–	–
1	3	2	–	11	–	–	–	3	7	1	–	–	–	–
16	17	20	11	13	–	1	–	–	1	1	5	–	4	1
5	14	5	1	7	–	–	–	1	4	–	1	–	1	–
25	40	57	23	30	–	1	1	1	4	4	6	4	6	3
3	9	17	2	10	–	–	–	1	3	1	–	3	2	–
12	30	30	14	51	2	4	11	2	13	4	9	4	2	–
8	9	9	2	60	–	8	4	10	18	11	6	1	2	–
52	52	38	15	70	–	–	–	3	15	25	12	11	4	–
7	13	16	3	15	–	–	–	–	4	6	4	1	–	–
102	95	73	19	122	–	–	–	7	32	35	22	16	10	–
18	21	17	2	38	–	–	–	3	10	10	6	5	3	1
35	32	16	6	101	3	6	3	10	28	26	15	6	1	3
14	14	11	6	67	1	2	2	8	18	18	8	3	6	1
25	16	17	1	164	1	5	46	35	33	21	13	7	2	1
14	11	8	8	125	–	1	38	42	22	12	7	1	2	–
3	–	–	–	9	–	1	2	3	2	1	–	–	–	–
1	1	–	–	20	–	–	1	7	10	1	–	1	–	–

TABLE 55. DISCHARGED PATIENTS, BY SUMMARY

SL code number and diagnosis	Sex	Total[a]	White						
			Total	Under 1 year	1–4 years	5–14 years	15–24 years	25–34 years	35–44 years
121. Hernia without obstruction	M	1,061	715	16	35	64	40	34	60
	F	375	228	6	10	6	1	12	30
122. Intestinal obstruction with or without hernia	M	206	142	4	6	3	9	1	8
	F	196	125	–	2	4	2	12	12
123. Gastro-enteritis, colitis	M	430	282	58	27	46	35	31	23
	F	383	214	35	17	33	33	17	20
124. Chronic enteritis and ulcerative colitis	M	84	73	–	–	4	5	6	7
	F	113	88	–	–	2	4	9	8
125. Anal fissure and fistula	M	82	52	3	–	1	5	8	11
	F	71	26	–	–	–	4	7	7
126. Abscess of anal and rectal regions	M	118	80	–	4	1	6	9	15
	F	96	33	–	1	2	3	8	9
127. Peritonitis	M	23	17	–	1	–	–	1	1
	F	45	16	1	–	–	4	1	1
128. Peritoneal adhesion	M	10	7	–	–	–	–	2	1
	F	31	18	–	–	–	2	2	6
129. Other diseases of intestines and peritoneum	M	175	128	2	4	3	6	8	10
	F	254	186	4	3	4	12	12	38
130. Cirrhosis of liver	M	581	486	–	–	–	2	12	78
	F	240	182	–	–	–	2	12	33
131. Cholelithiasis	M	73	58	–	–	–	–	2	8
	F	205	171	–	–	–	9	31	35
132. Cholecystitis without mention of calculi	M	136	113	–	–	–	1	4	16
	F	398	292	–	–	–	11	25	51
133. Other diseases of liver, gallbladder, and biliary ducts	M	144	87	–	–	4	17	16	6
	F	104	58	1	1	4	3	10	10
134. Diseases of pancreas	M	91	41	–	–	–	2	9	10
	F	50	36	–	2	–	3	6	3
135. Acute nephritis	M	53	34	–	3	22	3	1	1
	F	35	27	–	4	10	5	2	1
136. Chronic, other, and unspecified nephritis	M	103	62	2	7	9	5	9	10
	F	70	40	1	–	5	5	9	3
137. Infections of kidney	M	101	67	1	1	5	2	9	10
	F	415	229	–	6	20	71	50	29
138. Calculi of kidney and ureter	M	181	164	–	1	–	12	48	37
	F	88	62	–	–	–	7	10	11
139. Cystitis	M	63	48	–	1	–	1	2	2
	F	134	91	–	2	3	15	11	17
140. Other diseases of urinary system	M	373	239	–	3	13	17	20	23
	F	397	281	–	3	5	13	32	81
141. Hyperplasia of prostate	M	770	677	–	–	–	–	–	7
142. Hydrocele	M	26	20	–	2	3	1	3	2
143. Other diseases of male genital organs	M	872	358	67	77	46	35	24	15
144. Diseases of breast	M	47	34	3	–	2	6	2	5
	F	249	135	5	1	3	27	49	24
145. Acute salpingitis, oophoritis	F	101	19	–	–	1	10	5	2

LIST DIAGNOSIS, SEX, COLOR, AND AGE (*Continued*)

				Nonwhite										
45–54 years	55–64 years	65–74 years	75 years and over	Total	Under 1 year	1–4 years	5–14 years	15–24 years	25–34 years	35–44 years	45–54 years	55–64 years	65–74 years	75 years and over
107	153	134	72	345	37	67	38	32	33	45	35	31	22	5
38	47	52	26	144	9	38	19	5	21	27	17	3	3	2
10	30	45	26	64	7	5	4	3	14	9	11	5	4	2
14	24	35	20	71	2	2	1	4	13	17	14	7	6	5
25	16	14	7	148	28	16	17	16	26	22	14	5	3	1
17	16	19	7	169	29	10	15	35	30	21	12	10	4	3
9	13	17	12	11	–	–	–	1	1	5	4	–	–	–
9	19	17	20	25	–	–	–	3	6	2	4	5	3	2
10	8	4	2	30	–	–	–	1	7	13	4	5	–	–
7	1	–	–	45	1	–	–	10	18	11	5	–	–	–
18	12	13	2	38	2	3	–	3	14	4	7	3	1	1
5	2	1	2	62	–	1	–	17	22	20	1	1	–	–
4	3	6	1	6	–	–	–	1	–	2	2	–	1	–
–	2	5	2	29	–	–	1	7	9	9	1	2	–	–
2	1	1	–	3	–	–	–	–	3	–	–	–	–	–
4	3	1	–	13	–	–	–	–	6	7	–	–	–	–
22	26	30	17	46	3	2	4	3	10	7	8	8	1	–
27	34	31	21	68	2	2	1	11	14	24	6	1	6	1
164	130	75	25	95	–	–	–	2	13	31	30	13	5	1
64	36	24	11	57	–	–	–	1	8	21	19	8	–	–
6	10	20	12	15	–	–	–	–	–	2	1	4	5	3
27	32	28	9	34	–	–	–	5	6	7	9	5	2	–
17	18	34	23	23	–	–	–	1	6	4	4	4	3	1
54	56	61	34	106	–	–	–	20	19	28	26	7	5	1
14	13	14	3	56	–	–	4	15	22	11	3	–	1	–
11	9	7	2	46	–	1	2	10	12	8	9	2	2	–
5	9	4	2	48	2	–	–	4	19	14	7	1	1	–
7	10	2	3	14	–	–	–	1	5	6	2	–	–	–
1	1	2	–	19	–	3	5	4	4	1	1	1	–	–
2	2	–	1	8	–	1	4	1	–	2	–	–	–	–
12	4	4	–	40	–	6	5	1	4	12	5	4	2	1
2	7	3	5	30	–	–	1	4	5	7	7	5	1	–
12	7	14	6	34	1	1	1	4	7	9	3	4	3	1
19	14	15	5	185	–	1	4	83	58	15	12	5	3	4
32	19	11	4	17	–	–	–	–	7	3	6	–	1	–
11	16	4	3	26	–	–	–	3	7	7	5	4	–	–
6	10	15	11	15	–	1	1	1	1	5	2	3	1	–
10	11	14	8	43	–	–	–	9	14	9	4	3	3	1
40	34	65	24	134	–	3	3	4	23	40	18	23	17	3
58	43	34	12	116	–	2	4	13	34	32	19	6	3	3
52	135	291	192	93	–	–	–	–	1	1	16	22	30	23
–	5	3	1	6	–	–	1	3	1	–	–	1	–	–
12	31	30	21	513	73	204	94	39	41	31	13	9	8	1
–	5	9	2	13	1	–	2	3	2	5	–	–	–	–
19	4	2	1	114	3	2	1	35	45	16	8	3	–	1
–	1	–	–	82	–	–	–	41	34	6	1	–	–	–

TABLE 55. DISCHARGED PATIENTS, BY SUMMARY

SL code number and diagnosis	Sex	Total[a]	White						
			Total	Under 1 year	1–4 years	5–14 years	15–24 years	25–34 years	35–44 years
146. Chronic and unspecified salpingitis, oophoritis	F	580	129	–	–	–	51	47	24
147. Other diseases of ovary, tube, and parametrium	F	120	61	–	1	4	21	17	11
148. Endometritis, metritis	F	34	12	–	–	–	2	3	4
149. Other infective disease of uterus, vagina, and vulva	F	319	158	–	2	2	33	51	32
150. Uterovaginal prolapse	F	47	38	–	–	–	–	4	9
151. Malposition of uterus	F	52	29	–	–	–	6	7	2
152. Other diseases of female genital organs	F	949	430	–	–	7	79	132	102
153. Toxemia of pregnancy (not delivered)	F	212	97	–	–	–	38	40	18
154. Ectopic pregnancy	F	179	57	–	–	–	13	28	16
155. Other complications and conditions of pregnancy (not delivered)	F	1,874	719	–	–	–	346	300	67
156. Abortion, spontaneous or unspecified	F	3,598	1,549	–	–	–	579	718	244
157. Other abortion	F	–	–	–	–	–	–	–	–
158. Delivery without complication	F	13,944	6,286	–	–	1	3,161	2,463	653
159. Postpartum admission without complication	F	466	212	–	–	–	103	91	17
160. Delivery with obstetrical complications	F	202	90	–	–	1	43	36	10
162. Puerperal conditions	F	77	39	–	–	–	25	13	1
163. Boil, carbuncle	M	92	70	4	6	9	5	7	7
	F	34	25	5	–	–	3	3	2
164. Cellulitis of finger and toe	M	59	39	–	1	7	8	9	5
	F	45	30	–	1	2	6	6	8
165. Other diseases of skin and subcutaneous tissue	M	1,532	1,057	44	96	134	84	81	121
	F	1,058	698	30	75	59	65	65	68
166. Acute arthritis	M	63	31	–	5	5	1	5	2
	F	45	25	1	1	4	5	3	4
167. Other forms of arthritis	M	306	226	–	1	8	11	14	17
	F	411	307	–	–	5	16	23	33
168. Acute osteomyelitis, periostitis	M	39	23	1	1	6	2	1	2
	F	26	17	–	2	1	2	2	–
169. Chronic and unspecified osteomyelitis, periostitis	M	72	52	1	2	4	1	2	7
	F	29	18	–	–	–	3	2	3
170. Other conditions of musculoskeletal system	M	513	379	7	18	76	45	43	46
	F	445	294	9	19	51	51	31	41
171. Congenital malformations of nervous system	M	72	57	26	16	11	3	1	–
	F	41	26	10	8	4	2	–	1
172. Congenital malformations of circulatory system	M	57	44	11	8	7	4	3	4
	F	69	46	21	6	8	4	3	2
173. Other congenital malformations	M	291	205	47	32	43	29	15	15
	F	201	141	27	26	22	18	7	15

LIST DIAGNOSIS, SEX, COLOR, AND AGE (*Continued*)

				Nonwhite										
45–54 years	55–64 years	65–74 years	75 years and over	Total	Under 1 year	1–4 years	5–14 years	15–24 years	25–34 years	35–44 years	45–54 years	55–64 years	65–74 years	75 years and over
7	–	–	–	451	–	–	2	177	213	53	5	1	–	–
5	1	1	–	59	–	1	2	16	31	7	2	–	–	–
2	1	–	–	22	–	–	1	8	9	4	–	–	–	–
18	11	5	4	160	–	–	–	57	60	22	11	5	5	–
3	8	6	8	9	–	–	–	–	1	4	1	1	2	–
–	5	9	–	23	–	–	–	5	9	6	2	–	1	–
73	24	8	5	519	–	1	8	159	244	75	19	10	2	1
1	–	–	–	115	–	–	–	47	49	19	–	–	–	–
–	–	–	–	121	–	–	2	26	78	15	–	–	–	–
6	–	–	–	1,153	–	–	3	552	495	100	2	1	–	–
8	–	–	–	2,041	–	–	4	851	1,001	182	2	–	–	1
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
8	–	–	–	7,639	–	–	31	3,818	3,234	548	8	–	–	–
1	–	–	–	253	–	–	–	137	99	17	–	–	–	–
–	–	–	–	112	–	–	–	52	53	6	–	1	–	–
–	–	–	–	37	–	–	–	21	14	2	–	–	–	–
3	16	7	6	22	1	5	2	3	5	4	–	1	1	–
2	8	2	–	9	1	2	–	–	1	1	3	–	1	–
6	1	2	–	19	–	–	5	3	7	3	1	–	–	–
1	2	2	2	15	–	3	1	2	4	2	1	1	–	1
160	129	138	70	474	27	52	53	43	103	97	44	33	20	2
104	86	95	51	360	21	40	44	67	80	38	30	21	13	6
2	5	5	1	32	–	2	5	4	7	10	2	–	2	–
3	1	2	1	20	–	2	1	3	6	4	3	–	1	–
46	39	60	30	79	–	2	4	5	15	10	14	17	6	6
55	74	64	37	104	–	1	4	10	20	22	20	14	12	1
4	3	3	–	16	–	1	2	1	4	1	2	1	4	–
3	2	3	2	9	1	2	1	2	2	–	1	–	–	–
14	12	8	1	20	1	–	–	3	3	5	4	3	1	–
2	1	3	4	11	–	–	1	–	2	3	–	2	2	1
53	50	28	13	134	11	8	23	16	27	22	17	6	4	–
37	28	23	4	151	4	4	15	20	44	39	17	6	2	–
–	–	–	–	15	6	5	3	1	–	–	–	–	–	–
–	–	1	–	15	7	4	3	–	–	–	1	–	–	–
4	3	–	–	13	1	4	1	2	3	1	1	–	–	–
–	2	–	–	23	8	5	3	3	1	–	3	–	–	–
13	2	5	4	86	21	23	24	5	8	2	3	–	–	–
7	11	6	2	60	13	16	7	6	8	4	5	1	–	–

TABLE 55. DISCHARGED PATIENTS, BY SUMMARY

SL code number and diagnosis	Sex	Total[a]	White						
			Total	Under 1 year	1–4 years	5–15 years	15–24 years	25–34 years	35–44 years
174. Term birth, no birth complications	M	88	51	51	–	–	–	–	–
	F	69	46	46	–	–	–	–	–
175. Premature birth, no birth complications	M	475	212	212	–	–	–	–	–
	F	457	209	209	–	–	–	–	–
178. Full term infant (admitted after birth)	M	120	69	69	–	–	–	–	–
	F	151	79	79	–	–	–	–	–
180. Other conditions of early infancy, except diarrhea	M	78	53	44	8	1	–	–	–
	F	64	47	37	7	1	1	1	–
181. Senility	M	129	112	–	–	–	–	–	–
	F	184	170	–	–	–	–	–	–
183. Undetermined diagnoses and special examinations	M	2,149	1,443	104	69	124	166	180	181
	F	2,100	1,178	71	55	92	184	189	152
184. Fracture, skull	M	120	86	1	12	16	8	11	9
	F	42	30	2	7	9	3	–	2
185. Fracture or dislocation, face bones	M	561	395	2	14	27	49	46	69
	F	185	116	–	10	8	16	10	15
186. Fracture, vertebral column	M	94	72	–	–	2	6	10	13
	F	77	56	–	–	2	9	3	5
187. Other fractures of trunk	M	69	56	–	2	6	5	4	7
	F	56	44	–	–	–	1	1	4
188. Fracture, upper extremity	M	1,322	1,071	5	45	417	144	83	80
	F	820	648	1	27	153	26	19	39
189. Fracture, lower extremity	M	1,299	995	3	31	140	100	88	104
	F	1,186	969	3	13	70	31	35	66
190. Dislocation, upper extremity	M	151	115	–	1	19	32	16	13
	F	74	56	–	–	7	2	4	3
191. Dislocation, lower extremity	M	49	37	–	–	3	11	10	3
	F	40	25	–	–	3	5	7	2
192. Sprains, strains	M	223	153	–	4	19	26	30	30
	F	172	108	–	–	9	12	20	20
193. Concussion of brain	M	1,314	890	5	76	205	155	111	105
	F	600	363	3	30	57	64	30	43
194. Other head injury, except fracture	M	932	630	4	17	50	75	75	88
	F	326	211	1	15	18	13	18	29
195. Internal injury of chest, abdomen, and pelvis	M	107	63	–	3	6	10	7	9
	F	44	18	–	2	2	2	2	4
196. Laceration and open wound	M	1,503	821	1	27	126	181	172	113
	F	495	247	1	24	38	47	26	36
197. Superficial injury	M	800	522	7	18	107	70	61	79
	F	564	341	2	16	45	39	42	55
198. Effects of foreign body entering through orifice	M	79	48	6	16	8	3	4	3
	F	76	43	2	17	4	2	–	4
199. Burns	M	226	135	3	20	20	8	16	17
	F	174	109	2	22	11	10	15	16
200. Other traumatic conditions, except poisoning	M	481	291	9	7	20	42	24	33
	F	248	168	5	6	11	20	27	19
203. Effects of poisons	M	292	207	4	42	6	15	31	33
	F	381	259	2	25	7	55	37	45

[a] Total includes cases for which sex color, or age was not reported.

LIST DIAGNOSIS, SEX, COLOR, AND AGE (*Continued*)

				Nonwhite										
45–54 years	55–64 years	65–74 years	75 years and over	Total	Under 1 year	1–4 years	5–14 years	15–24 years	25–34 years	35–44 years	45–54 years	55–64 years	65–74 years	75 years and over
–	–	–	–	35	35	–	–	–	–	–	–	–	–	–
–	–	–	–	22	22	–	–	–	–	–	–	–	–	–
–	–	–	–	257	257	–	–	–	–	–	–	–	–	–
–	–	–	–	248	248	–	–	–	–	–	–	–	–	–
–	–	–	–	51	51	–	–	–	–	–	–	–	–	–
–	–	–	–	72	72	–	–	–	–	–	–	–	–	–
–	–	–	–	25	22	1	2	–	–	–	–	–	–	–
–	–	–	–	16	15	1	–	–	–	–	–	–	–	–
1	7	32	72	16	–	–	–	–	–	–	–	2	6	8
–	6	34	130	11	–	–	–	–	–	–	1	–	1	9
190	209	154	66	694	92	74	63	70	131	117	73	44	26	4
132	137	118	48	918	63	52	61	212	261	142	72	27	18	10
8	14	7	–	30	2	3	5	2	8	2	4	3	1	–
–	3	1	3	11	–	6	–	2	3	–	–	–	–	–
74	66	29	19	160	–	5	10	13	47	42	26	12	3	2
19	13	13	12	69	1	3	2	15	28	15	3	2	–	–
15	13	9	4	22	–	–	–	2	5	8	4	2	1	–
7	14	10	6	21	–	–	1	6	7	3	–	1	3	–
8	15	5	4	13	–	–	1	2	4	3	1	2	–	–
1	11	10	16	12	–	1	–	2	3	1	1	1	1	2
102	96	73	26	248	1	14	91	26	38	39	23	10	6	–
62	138	96	87	172	2	15	32	20	47	28	14	6	5	3
141	131	145	112	302	2	17	57	20	67	68	38	16	13	4
106	156	251	238	215	1	9	14	17	52	58	24	18	9	13
13	8	12	1	36	–	1	8	9	6	7	2	2	1	–
8	12	10	10	18	–	–	2	3	8	3	–	1	–	1
6	3	1	–	12	–	–	–	1	2	4	4	1	–	–
1	3	2	2	15	–	–	5	1	6	2	1	–	–	–
24	14	3	3	70	–	1	8	11	22	19	8	1	–	–
16	21	8	2	63	–	–	4	12	25	11	5	3	3	–
78	81	44	30	410	5	52	111	36	74	77	35	11	5	4
42	34	35	25	234	3	29	41	37	59	38	18	4	3	2
121	95	76	29	287	4	14	23	35	90	75	31	11	3	1
27	27	31	32	114	1	16	9	19	35	24	4	2	4	–
11	6	5	6	44	1	2	5	12	7	8	7	–	2	–
3	2	1	–	26	1	1	–	4	9	4	5	2	–	–
104	48	39	10	671	4	16	47	123	244	160	64	10	1	2
34	13	14	14	243	2	8	19	52	92	46	18	2	2	2
72	50	37	21	275	9	19	50	35	81	42	22	9	4	4
52	33	40	17	223	3	8	29	34	58	50	26	5	7	3
3	1	3	1	31	–	17	8	–	–	4	2	–	–	–
3	8	3	–	33	–	14	8	3	4	1	1	2	–	–
17	17	12	5	90	3	16	13	5	19	21	9	–	1	3
9	10	7	7	64	3	14	10	9	16	6	5	–	1	–
49	49	39	19	186	2	7	10	19	57	37	28	18	6	2
22	24	15	19	78	3	4	6	11	19	21	7	3	4	–
18	23	25	10	80	1	25	6	10	14	8	7	4	4	1
40	27	16	5	120	2	36	5	24	28	17	2	5	–	1

TABLE 56. DISCHARGED PATIENTS, BY SUMMARY LIST DIAGNOSIS,

SL code number and diagnosis	Total[a]	Alive							
		Total	Under 24 hours	24–47 hours	2 days	3 days	4 days	5 days	6 days
Total	121,952	112,132	8,784	5,598	5,158	7,620	8,850	9,433	7,915
1. Tuberculosis, respiratory system	5,028	4,544	72	36	55	43	30	35	40
2. Tuberculosis, meninges and central nervous system	51	27	–	–	–	–	–	–	3
3. Tuberculosis, bones and joints, active or unspecified	83	80	3	–	1	–	–	1	1
4. Tuberculosis, lymphatic system	86	86	2	–	–	2	–	1	3
5. Tuberculosis, genito-urinary system	38	36	–	–	1	1	4	1	1
6. Tuberculosis, other sites	82	68	–	–	1	3	1	1	2
7. Congenital syphilis	12	12	1	–	–	–	–	–	–
8. Early syphilis	29	29	1	–	–	1	–	1	4
9. Syphilis of central nervous system	170	159	9	2	3	1	2	3	3
10. Gonococcal infection	65	65	7	3	1	1	3	6	3
11. Other syphilis and venereal diseases	214	196	5	5	4	11	6	8	4
12. Salmonella infections, except typhoid fever	13	13	–	1	–	–	2	–	–
13. Dysentery, all forms	26	26	–	–	1	–	–	–	2
14. Scarlet fever	159	159	4	1	2	5	5	10	36
15. Streptococcal sore throat	22	21	–	2	–	3	3	2	3
16. Erysipelas	9	8	–	–	–	–	–	1	–
17. Diphtheria	8	7	3	–	–	–	–	–	–
18. Whooping cough	306	306	7	3	4	4	2	7	4
19. Meningococcal infections	31	26	–	–	–	–	–	–	–
20. Acute poliomyelitis	596	573	23	5	8	14	17	22	43
21. Acute infectious encephalitis	24	21	1	–	1	1	–	–	1
22. Late effects of 20 and 21	12	10	–	–	–	–	–	–	–
23. Measles	880	880	11	3	11	71	211	199	144
24. Rubella	88	88	3	–	11	21	17	14	11
25. Chickenpox	616	615	6	1	4	24	65	90	89
26. Mumps	332	331	11	1	5	7	25	36	51
27. Infectious hepatitis	22	21	–	–	1	–	1	–	–
28. Infectious mononucleosis	59	58	3	2	–	1	3	–	3
29. Other bacterial, spirochetal, viral, rickettsial, and parasitic diseases	563	546	44	36	27	34	36	19	26
30. Malignant neoplasm, buccal cavity and pharynx	229	167	4	5	5	1	2	6	4
31. Malignant neoplasm, stomach	383	173	3	8	3	4	2	4	7
32. Malignant neoplasm, intestines, except rectum	344	182	7	–	1	5	6	4	3
33. Malignant neoplasm, rectum	248	144	3	3	6	4	5	4	6
34. Malignant neoplasm, other organs of digestive system	382	156	4	3	3	6	6	5	9
35. Malignant neoplasm, respiratory system	667	380	12	14	15	7	11	12	9
36. Malignant neoplasm, breast	492	323	9	4	4	13	10	8	6
37. Malignant neoplasm, cervix uteri	447	369	8	9	8	11	16	10	13
38. Malignant neoplasm, other and unspecified parts of uterus	97	72	1	–	2	1	1	1	5
39. Malignant neoplasm, other female genital organs	162	108	–	4	4	2	3	2	4
40. Malignant neoplasm, male genital organs	261	180	2	3	1	2	5	–	6

CONDITION ON DISCHARGE, AND LENGTH OF STAY

						Dead											
7–13 days	14–30 days	31–60 days	61–90 days	91 days and over	Total	Under 24 hours	24–47 hours	2 days	3 days	4 days	5 days	6 days	7–13 days	14–30 days	31–60 days	61–90 days	91 days and over
5,254	18,992	7,866	2,450	4,212	9,775	1,882	664	327	488	380	355	315	1,471	1,629	981	419	864
296	735	746	485	1,971	482	26	19	15	14	8	17	10	48	63	48	29	185
1	1	4	4	14	24	–	2	2	1	–	–	1	3	5	3	4	3
8	11	16	8	31	3	–	–	–	–	–	–	–	–	1	–	1	1
11	25	17	6	19	–	–	–	–	–	–	–	–	–	–	–	–	–
4	7	9	2	6	2	–	–	–	–	–	–	–	1	1	–	–	–
8	11	18	4	19	14	–	–	–	–	–	–	3	–	5	2	1	3
1	6	3	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–
8	10	4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
33	48	33	7	15	11	1	–	–	–	–	–	–	–	2	3	–	5
23	9	9	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
59	55	33	2	4	18	2	3	1	–	–	1	1	2	1	4	–	3
1	5	3	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–
12	8	1	–	2	–	–	–	–	–	–	–	–	–	–	–	–	–
78	18	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
7	1	–	–	–	1	1	–	–	–	–	–	–	–	–	–	–	–
3	3	1	–	–	1	–	–	–	–	–	–	–	1	–	–	–	–
1	1	2	–	–	1	1	–	–	–	–	–	–	–	–	–	–	–
62	182	29	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–
6	15	4	–	1	5	4	1	–	–	–	–	–	–	–	–	–	–
267	144	15	2	13	23	8	3	1	1	1	3	1	4	–	1	–	–
7	7	2	1	–	3	–	–	–	1	–	–	–	–	2	–	–	–
4	2	3	–	1	2	–	–	–	–	–	–	–	–	–	–	–	2
194	25	7	2	2	–	–	–	–	–	–	–	–	–	–	–	–	–
8	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
308	27	–	–	1	1	1	–	–	–	–	–	–	–	–	–	–	–
167	24	4	–	–	1	–	–	–	–	1	–	–	–	–	–	–	–
6	8	4	–	1	1	–	–	–	–	–	–	–	–	1	–	–	–
29	15	2	–	–	1	–	–	–	1	–	–	–	–	–	–	–	–
121	120	49	9	25	17	4	3	1	–	–	1	2	3	2	–	1	–
40	54	27	10	9	62	6	4	–	3	2	–	2	11	11	11	4	8
41	54	35	8	4	210	27	7	4	7	1	10	5	28	60	37	14	10
26	50	56	6	18	162	8	6	4	4	4	1	5	23	43	33	19	12
18	33	35	11	16	104	7	3	1	4	1	4	2	21	18	22	10	11
22	40	38	10	10	226	11	12	8	9	3	4	5	22	62	49	26	15
68	90	84	39	19	287	22	12	3	8	7	11	5	46	67	64	27	15
71	101	61	17	19	169	15	7	2	4	1	3	4	23	44	24	14	28
87	107	62	27	11	78	2	1	1	3	1	2	2	13	19	14	9	11
12	25	18	4	2	25	2	1	–	1	–	–	–	3	6	6	3	3
20	35	17	7	10	54	1	1	1	1	1	2	1	9	8	14	6	9
27	42	45	21	26	81	1	1	1	2	1	4	4	13	23	11	2	18

TABLE 56. DISCHARGED PATIENTS, BY SUMMARY LIST DIAGNOSIS

SL code number and diagnosis	Total[a]	Alive							
		Total	Under 24 hours	24–47 hours	2 days	3 days	4 days	5 days	6 days
41. Malignant neoplasm, urinary organs	211	132	1	2	1	5	3	7	
42. Malignant neoplasm, brain and other parts of nervous system	60	32	–	1	–	1	1	1	
43. Malignant neoplasm, bone and connective tissue	52	35	2	–	2	–	1	1	
44. Malignant neoplasm, other and unspecified sites	535	321	12	15	10	14	12	14	
45. Neoplasm, lymphatic and hematopoietic tissues	465	284	11	4	8	12	7	4	
46. Benign neoplasm, digestive system	103	97	4	9	7	–	5	3	
47. Benign neoplasm, respiratory system	52	49	2	8	2	1	1	1	
48. Benign neoplasm, breast	133	133	3	18	20	13	18	13	
49. Benign neoplasm, uterus	983	979	15	19	18	52	40	39	2
50. Benign neoplasm, other female genital organs	225	221	5	7	6	11	13	11	1
51. Benign neoplasm, male genital organs	91	91	2	2	1	3	4	1	
52. Benign neoplasm, skin	206	206	19	16	17	16	16	11	
53. Benign neoplasm, brain and other parts of nervous system	38	32	–	1	–	–	1	1	
54. Benign neoplasm, other sites	361	357	31	16	20	35	21	23	1
55. Neoplasm of unspecified nature, all sites	254	192	8	7	15	18	5	6	
56. Asthma	913	895	61	57	44	82	78	66	6
57. Thyrotoxicosis with or without goitre	112	111	1	4	2	1	4	–	
58. Other diseases of thyroid gland	167	166	1	1	1	3	6	10	
59. Diabetes mellitus	1,486	1,302	47	29	28	36	50	55	5
60. Avitaminoses and other deficiency states	181	159	5	5	8	5	2	8	
61. Other allergic, endocrine, and metabolic conditions	398	387	22	12	17	34	32	38	2
62. Pernicious and other hyperchromic anemias	93	89	–	2	–	2	3	1	
63. Other diseases of blood and blood-forming organs	611	595	106	24	19	25	40	25	3
64. Schizophrenic disorders	3,830	3,818	21	36	40	75	82	81	9
65. Involutional melancholia	660	654	6	6	10	16	17	15	1
66. Senile psychosis	1,081	979	21	13	4	10	24	16	2
67. Psychosis with cerebral arteriosclerosis	1,097	978	11	19	11	17	11	17	3
68. Alcoholic psychosis	1,507	1,460	17	29	58	126	117	145	11
69. Other and unspecified psychoses	1,307	1,189	66	56	57	69	56	40	3
70. Psychoneurotic disorders	1,479	1,462	124	99	132	132	145	127	8
71. Pathological personality	619	619	5	19	12	14	15	26	
72. Alcoholism	2,960	2,937	313	262	303	408	335	258	19
73. Other nonpsychotic psychiatric conditions	820	809	33	12	24	36	18	22	2
74. Cerebral hemorrhage, embolism, and thrombosis	2,028	938	31	17	19	24	27	25	3
75. Other vascular lesions affecting central nervous system	377	235	14	9	7	12	10	11	
76. Nonmeningococcal meningitis	99	76	2	1	–	2	–	1	
77. Multiple sclerosis	82	63	–	–	1	5	1	–	

CONDITION ON DISCHARGE, AND LENGTH OF STAY (*Continued*)

					Dead											
7–13 days	14–30 days	31–60 days	61–90 days	91 days and over	Total	Under 24 hours	24–47 hours	2 days	3 days	4 days	5 days	6 days	7–13 days	14–30 days	31–60 days	61–90 days	91 days and over
15	33	30	21	10	79	4	2	1	3	4	–	–	8	17	17	11	12
3	11	9	4	1	28	3	1	–	2	2	1	–	2	6	4	1	6
2	11	10	3	–	17	–	–	–	1	2	–	–	5	4	2	1	2
55	97	49	23	14	214	16	12	3	7	6	5	7	40	54	34	14	16
51	89	49	23	18	180	5	2	6	3	7	7	4	23	42	38	16	27
26	24	10	1	3	6	–	–	–	–	–	–	–	1	1	3	1	–
14	8	5	1	3	3	–	–	–	–	–	–	–	–	2	–	–	1
31	9	1	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–
317	398	51	4	2	3	–	–	–	–	–	–	–	3	–	–	–	–
89	61	7	–	1	4	–	–	–	1	–	1	–	–	2	–	–	–
31	35	6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
58	35	6	2	1	–	–	–	–	–	–	–	–	–	–	–	–	–
9	5	3	2	8	6	–	–	–	–	–	–	1	1	1	2	–	1
87	78	21	4	7	3	–	–	–	–	–	–	–	–	–	1	1	1
53	44	18	6	8	62	8	1	–	5	3	2	2	11	16	8	5	1
269	131	31	3	6	18	3	3	1	2	–	–	–	4	3	1	1	–
20	27	37	9	4	1	–	–	–	–	–	1	–	–	–	–	–	–
36	63	33	4	1	1	–	–	–	–	–	–	–	1	–	–	–	–
318	362	162	75	87	182	23	17	3	6	12	9	6	21	35	19	9	22
39	44	25	5	6	22	4	2	1	–	1	–	2	6	2	1	–	3
94	70	30	7	7	11	2	–	–	1	–	–	–	1	2	1	1	3
11	28	23	6	12	3	–	1	–	–	–	–	–	–	1	1	–	–
117	134	46	13	14	15	1	2	–	–	1	1	1	–	2	4	1	2
1,769	1,331	224	44	22	12	1	–	1	–	1	–	–	6	2	–	1	–
312	224	27	2	2	6	–	–	–	–	1	–	–	3	2	–	–	–
480	305	57	10	10	102	2	7	2	4	4	4	7	37	23	6	3	3
408	356	66	20	12	118	2	1	1	6	5	2	4	50	39	7	1	–
487	306	44	9	3	46	8	4	2	7	4	2	–	8	5	4	1	1
314	354	107	23	16	118	11	6	6	7	3	3	4	37	26	11	2	2
340	204	52	10	8	15	1	1	3	–	1	–	1	2	3	2	–	1
129	317	65	4	2	–	–	–	–	–	–	–	–	–	–	–	–	–
556	240	63	4	2	22	8	3	3	–	2	1	1	2	–	1	1	–
158	276	153	25	25	11	4	1	1	1	–	1	–	–	1	–	–	2
166	225	167	72	133	1,090	239	101	52	91	68	52	43	193	133	40	21	57
40	65	32	16	12	142	46	7	6	12	2	8	5	17	18	8	2	11
16	36	10	1	4	23	5	1	2	3	1	1	1	5	3	–	–	1
8	18	13	7	10	18	1	–	–	–	2	–	–	–	1	–	1	13

TABLE 56. DISCHARGED PATIENTS, BY SUMMARY LIST DIAGNOSIS

SL code number and diagnosis	Total[a]	Alive						
		Total	Under 24 hours	24–47 hours	2 days	3 days	4 days	5 days	6 days
78. Epilepsy	603	583	91	48	44	40	45	34	2
79. Other diseases of central nervous system	519	445	29	20	10	22	27	23	2
80. Neuritis and neuralgia	120	118	7	1	5	10	9	5	
81. Other diseases of nervous system	60	59	1	3	2	2	3	4	
82. Nonspecific inflammatory diseases of eye	126	125	5	4	3	3	7	12	1
83. Strabismus	84	84	3	2	6	4	11	7	1
84. Cataract	303	298	7	8	3	4	5	6	
85. Glaucoma	113	113	1	10	2	2	6	1	
86. Other diseases and conditions of eye	175	171	6	8	9	13	12	8	
87. Otitis media without mention of mastoiditis	262	262	5	5	12	20	9	23	2
88. Mastoiditis	34	33	–	1	–	–	2	–	
89. Other diseases of auditory system	69	69	2	1	1	4	6	3	
90. Acute rheumatic fever	317	311	5	2	7	3	4	8	
91. Acute rheumatic heart disease	393	303	10	3	7	7	9	5	
92. Chorea	27	27	1	–	–	–	–	1	
93. Chronic rheumatic heart disease	478	443	13	9	18	18	23	28	2
94. Coronary artery disease	1,179	643	43	11	21	22	15	19	1
95. Other arteriosclerotic and degenerative heart disease	3,706	2,697	75	81	67	108	132	126	13
96. Other diseases of heart	346	243	15	8	10	8	13	11	1
97. Hypertensive disease	2,580	2,031	76	47	62	109	109	102	9
98. General arteriosclerosis	592	401	12	8	9	15	10	5	1
99. Varicose veins of lower extremities	604	596	28	17	18	21	32	32	2
100. Hemorrhoids	458	457	17	18	16	29	42	38	3
101. Other diseases of circulatory system	685	611	13	15	15	28	29	26	2
102. Acute sinusitis	38	38	3	1	2	4	3	2	
103. Acute tonsillitis	825	825	25	33	48	113	116	127	7
104. Influenza	99	99	8	3	4	13	16	11	
105. Lobar pneumonia	728	639	3	6	10	18	22	30	4
106. Bronchopneumonia	1,311	1,101	11	7	14	43	43	62	9
107. Primary atypical and other pneumonia	173	161	3	3	3	6	6	11	1
108. Bronchitis	318	314	7	10	13	17	24	23	2
109. Hypertrophy of tonsils and adenoids	1,074	1,074	50	522	286	62	54	33	2
110. Other diseases of upper respiratory tract	1,908	1,898	106	82	163	210	215	199	18
111. Empyema and abscess of lung	98	93	1	2	2	–	1	–	
112. Pleurisy	55	54	2	2	1	5	5	–	
113. Bronchiectasis	135	128	3	4	2	5	1	5	
114. Other diseases of lung and pleural cavity	265	213	3	1	1	5	7	8	1
115. Diseases of buccal cavity and esophagus	358	351	20	53	32	16	28	33	2
116. Ulcer of stomach	357	321	10	8	8	12	10	6	1
117. Ulcer of duodenum, gastrojejunal ulcer	675	636	9	9	12	21	23	29	1
118. Other diseases of stomach and duodenum	426	422	54	25	31	39	40	21	2

CONDITION ON DISCHARGE, AND LENGTH OF STAY (*Continued*)

						Dead											
7–13 days	14–30 days	31–60 days	61–90 days	91 days and over	Total	Under 24 hours	24–47 hours	2 days	3 days	4 days	5 days	6 days	7–13 days	14–30 days	31–60 days	61–90 days	91 days and over
144	79	20	5	6	20	7	2	–	1	3	–	–	3	1	1	1	1
83	99	51	17	41	73	5	5	1	2	4	2	1	7	7	10	2	27
28	33	8	3	6	2	1	–	–	–	–	–	–	–	1	–	–	–
16	11	7	3	5	1	–	–	–	–	–	–	–	–	–	–	1	–
44	28	6	2	1	1	–	–	–	–	–	–	–	–	–	1	–	–
24	12	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–
49	145	46	14	8	5	–	–	–	–	–	–	–	–	1	2	–	2
44	27	12	–	6	–	–	–	–	–	–	–	–	–	–	–	–	–
51	35	12	3	8	3	–	–	1	1	–	1	–	–	–	–	–	–
81	61	17	4	2	–	–	–	–	–	–	–	–	–	–	–	–	–
8	16	3	1	–	1	–	–	–	–	–	–	–	1	–	–	–	–
28	14	4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
42	77	81	53	22	5	–	–	1	1	–	–	–	3	–	–	–	–
71	76	63	23	20	89	16	11	1	3	2	3	3	13	13	11	5	8
4	6	5	6	3	–	–	–	–	–	–	–	–	–	–	–	–	–
139	81	62	12	17	35	10	2	1	1	2	–	–	10	4	2	2	1
84	229	163	17	9	536	236	43	30	26	26	14	15	66	48	17	6	9
728	727	325	92	102	1,009	229	75	33	51	41	42	51	156	158	78	24	71
54	64	38	8	3	103	47	5	5	5	2	4	3	8	12	6	3	3
566	531	226	40	71	549	107	46	18	31	20	21	17	82	95	52	19	41
75	83	64	30	71	191	23	8	6	5	10	7	3	31	33	26	12	27
133	151	88	20	27	7	–	–	–	1	–	–	–	2	2	1	–	1
187	63	14	1	1	1	1	–	–	–	–	–	–	–	–	–	–	–
172	162	78	18	26	74	16	6	3	4	4	2	2	12	14	9	1	1
13	8	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–
227	52	6	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
23	13	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
225	191	68	12	14	89	24	14	5	8	7	3	2	12	9	4	–	1
453	261	78	12	23	209	39	26	10	18	8	9	11	37	29	10	5	7
47	37	23	4	6	12	2	–	2	1	1	1	1	1	3	–	–	–
120	59	11	4	2	3	1	–	–	–	–	–	–	1	–	–	1	–
40	6	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
541	160	30	1	10	9	8	–	–	–	–	–	–	1	–	–	–	–
8	13	26	19	21	5	2	–	–	–	1	–	–	1	–	1	–	–
17	9	4	4	1	1	–	–	–	–	–	–	–	1	–	–	–	–
26	36	22	6	12	7	1	–	–	–	1	–	–	2	1	1	–	1
54	72	28	10	14	52	26	5	1	1	3	–	2	5	5	2	–	2
81	46	11	6	4	6	–	–	–	–	–	1	–	2	–	1	1	1
93	104	46	8	4	36	6	5	1	1	1	5	–	7	6	3	–	1
191	216	92	13	7	39	4	5	2	5	2	3	2	2	9	4	–	1
87	85	17	2	1	4	1	1	–	–	–	–	–	–	2	–	–	–

TABLE 56. DISCHARGED PATIENTS, BY SUMMARY LIST DIAGNOSIS

SL code number and diagnosis	Total[a]	Alive							
		Total	Under 24 hours	24–47 hours	2 days	3 days	4 days	5 days	6 days
119. Acute appendicitis	918	909	25	20	15	14	23	50	12
120. Other and unspecified appendicitis	91	90	3	4	7	6	5	5	
121. Hernia without obstruction	1,436	1,400	43	41	31	31	29	35	3
122. Intestinal obstruction with or without hernia	402	343	12	10	10	14	17	12	1
123. Gastro-enteritis, colitis	814	810	96	70	89	77	76	57	5
124. Chronic enteritis and ulcerative colitis	197	184	4	4	3	3	–	7	
125. Anal fissure and fistula	153	153	5	4	9	9	10	14	1
126. Abscess of anal and rectal regions	214	212	6	10	15	31	27	29	1
127. Peritonitis	68	54	–	–	1	3	2	1	
128. Peritoneal adhesion	41	41	1	1	1	5	–	–	
129. Other diseases of intestines and peritoneum	429	410	22	23	20	31	17	14	1
130. Cirrhosis of liver	821	611	21	23	31	28	21	17	2
131. Cholelithiasis	278	264	7	3	4	1	4	4	
132. Cholecystitis without mention of calculi	534	512	22	11	9	27	24	22	2
133. Other diseases of liver, gallbladder, and biliary ducts	248	239	6	3	9	4	3	8	
134. Diseases of pancreas	141	131	5	3	8	12	8	7	
135. Acute nephritis	88	81	1	3	1	2	–	2	
136. Chronic, other, and unspecified nephritis	173	120	3	4	2	2	4	9	
137. Infections of kidney	516	482	9	15	22	31	56	51	4
138. Calculi of kidney and ureter	269	265	17	19	17	23	13	11	1
139. Cystitis	197	191	6	8	12	9	7	18	1
140. Other diseases of urinary system	770	742	22	42	33	31	25	20	1
141. Hyperplasia of prostate	770	691	14	9	10	13	19	8	1
142. Hydrocele	26	26	1	–	–	–	1	1	
143. Other diseases of male genital organs	872	867	54	113	176	142	71	26	4
144. Diseases of breast	296	295	13	24	27	26	32	28	2
145. Acute salpingitis, oophoritis	101	101	4	–	4	13	11	8	
146. Chronic and unspecified salpingitis, oophoritis	580	580	31	18	27	51	36	44	4
147. Other diseases of ovary, tube, and parametrium	120	120	5	3	2	11	5	7	
148. Endometritis, metritis	34	33	1	3	2	5	4	2	
149. Other infective disease of uterus, vagina, and vulva	319	318	27	23	25	40	28	31	2
150. Uterovaginal prolapse	47	46	–	1	2	1	–	–	
151. Malposition of uterus	52	52	2	1	6	3	4	4	
152. Other diseases of female genital organs	949	947	59	107	53	134	91	94	6
153. Toxemia of pregnancy (not delivered)	212	211	14	10	16	30	23	34	2
154. Ectopic pregnancy	179	178	–	2	1	–	–	1	1
155. Other complications and conditions of pregnancy (not delivered)	1,874	1,873	467	323	216	222	162	132	8
156. Abortion, spontaneous or unspecified	3,598	3,593	144	466	327	655	585	438	32
157. Other abortion	–	–	–	–	–	–	–	–	
158. Delivery without complication	13,944	13,939	20	82	288	1,267	2,880	3,969	2,97
159. Postpartum admission without complications	466	466	9	9	31	83	125	127	7

CONDITION ON DISCHARGE, AND LENGTH OF STAY (*Continued*)

					Dead												
7–13 days	14–30 days	31–60 days	61–90 days	91 days and over	Total	Under 24 hours	24–47 hours	2 days	3 days	4 days	5 days	6 days	7–13 days	14–30 days	31–60 days	61–90 days	91 days and over
508	107	18	2	–	9	2	1	–	1	3	–	–	–	1	1	–	–
39	13	3	–	–	1	–	–	–	–	–	–	–	–	1	–	–	–
561	458	97	18	17	36	1	5	1	–	1	2	2	4	8	4	4	4
147	77	23	4	6	59	15	7	4	4	2	3	3	11	6	1	2	1
198	75	8	3	2	4	–	1	–	–	–	–	–	1	2	–	–	–
47	52	37	10	9	13	–	–	–	1	–	1	1	3	3	1	–	3
51	38	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
52	22	1	4	–	1	–	–	–	–	–	–	–	–	–	1	–	–
17	16	5	3	4	14	4	3	–	–	–	1	–	4	1	–	1	–
14	6	8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
113	121	31	3	3	19	3	1	–	–	1	2	–	1	3	6	1	1
119	164	95	24	41	210	26	11	3	20	9	7	7	31	38	29	13	16
53	101	72	7	4	14	–	–	–	1	1	–	1	3	6	2	–	–
137	159	60	13	5	22	–	2	1	1	1	1	1	5	7	3	–	–
38	90	57	9	4	9	–	–	–	–	–	–	–	4	2	3	–	–
31	29	16	4	1	10	1	1	2	–	2	–	–	1	2	–	1	–
11	22	32	3	1	7	1	–	–	–	1	–	–	2	1	1	–	1
23	36	23	7	2	53	3	3	2	3	2	2	4	9	14	8	1	2
158	70	17	7	3	34	2	4	1	1	1	4	–	7	8	5	1	–
67	50	23	4	4	4	–	–	–	1	–	–	–	–	2	–	1	–
69	34	12	4	–	6	1	–	–	–	–	1	–	1	2	–	1	–
194	245	74	21	17	28	2	3	–	–	1	–	1	7	6	4	2	2
72	226	208	65	32	79	3	4	3	1	2	2	4	9	26	14	4	7
15	8	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
153	57	26	4	2	5	1	–	–	2	–	–	–	–	1	1	–	–
70	41	7	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–
32	18	4	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–
177	118	26	6	1	–	–	–	–	–	–	–	–	–	–	–	–	–
51	28	3	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–
11	4	–	–	–	1	1	–	–	–	–	–	–	–	–	–	–	–
83	31	5	2	1	1	–	–	–	–	–	–	–	–	1	–	–	–
9	26	6	1	–	1	–	–	–	–	1	–	–	–	–	–	–	–
15	15	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–
248	74	14	4	–	2	–	–	–	–	–	–	1	1	–	–	–	–
51	10	–	1	–	1	1	–	–	–	–	–	–	–	–	–	–	–
133	23	4	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–
230	35	4	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–
573	64	7	2	3	3	–	1	–	–	1	–	–	1	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
2,085	315	48	7	6	5	3	–	–	–	–	–	1	–	1	–	–	–
10	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

TABLE 56. DISCHARGED PATIENTS, BY SUMMARY LIST DIAGNOSIS

SL code number and diagnosis	Total[a]	Alive							
		Total	Under 24 hours	24–47 hours	2 days	3 days	4 days	5 days	6 days
160. Delivery with obstetrical complications	202	201	8	26	19	33	32	18	1
162. Puerperal conditions	77	76	2	4	2	11	10	15	1
163. Boil, carbuncle	126	122	9	4	10	15	13	10	1
164. Cellulitis of finger and toe	104	104	10	6	12	15	8	11	
165. Other diseases of skin and subcutaneous tissue	2,592	2,544	95	76	117	199	203	191	17
166. Acute arthritis	108	108	1	2	2	5	6	7	
167. Other forms of arthritis	717	687	16	11	20	17	24	29	2
168. Acute osteomyelitis, periostitis	65	63	1	2	2	2	–	2	
169. Chronic and unspecified osteomyelitis, periostitis	101	100	–	1	2	2	2	3	
170. Other conditions of musculoskeletal system	958	947	73	51	46	80	48	56	4
171. Congenital malformations of nervous system	113	93	4	3	6	5	6	6	
172. Congenital malformations of circulatory system	126	89	1	1	2	8	2	3	
173. Other congenital malformations	492	468	10	12	19	21	20	22	1
174. Term birth, no birth complications	157	157	1	–	–	2	5	14	1
175. Premature birth, no birth complications	932	675	5	–	1	6	4	4	
178. Full term infant (admitted after birth)	271	270	4	2	9	36	64	79	4
180. Other conditions of early infancy, except diarrhea	142	133	1	3	2	3	9	8	
181. Senility	313	279	7	7	3	8	5	5	
183. Undetermined diagnoses and special examinations	4,249	4,102	1,553	297	257	264	195	173	15
184. Fracture, skull	162	140	7	7	2	9	10	2	
185. Fracture or dislocation, face bones	746	680	77	51	38	55	45	55	4
186. Fracture of vertebral column	171	163	12	3	6	6	6	5	
187. Other fractures of trunk	125	115	5	2	2	4	3	6	
188. Fracture, upper extremity	2,142	2,119	903	201	127	129	87	67	6
189. Fracture, lower extremity	2,485	2,246	340	119	74	101	80	63	5
190. Dislocation, upper extremity	225	224	84	22	20	15	14	10	
191. Dislocation, lower extremity	89	88	18	9	6	6	7	6	
192. Sprains, strains	395	394	113	45	20	28	16	14	2
193. Concussion of brain	1,914	1,879	324	260	178	194	191	113	10
194. Other head injury, except fracture	1,258	1,188	468	173	103	106	70	48	3
195. Internal injury of chest, abdomen, and pelvis	151	135	3	6	6	6	8	5	
196. Laceration and open wound	1,998	1,971	518	200	146	180	126	111	9
197. Superficial injury	1,364	1,356	475	212	103	122	88	70	5
198. Effects of foreign body entering through orifice	155	149	23	16	22	27	9	9	
199. Burns	400	366	31	15	15	16	20	12	
200. Other traumatic conditions, except poisoning	729	660	117	52	40	52	46	42	2
203. Effects of poisons	673	624	190	90	61	42	25	29	2

[a] Total includes cases for which length of stay or condition on discharge was not reported.

CONDITION ON DISCHARGE, AND LENGTH OF STAY (*Continued*)

					Dead											
7–13 days	14–30 days	31–60 days	61–90 days	91 days and over	Total	Under 24 hours	24–47 hours	2 days	3 days	4 days	5 days	6 days	7–13 days	14–30 days	31–60 days	61–90 days	91 days and over
36	11	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–
13	5	–	–	–	1	–	–	–	–	–	–	–	1	–	–	–	–
22	17	9	1	2	4	–	–	1	1	–	–	–	–	–	2	–	–
22	10	3	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–
662	478	207	59	80	47	5	1	–	4	2	4	1	4	10	7	6	3
23	22	21	4	8	–	–	–	–	–	–	–	–	–	–	–	–	–
181	173	80	33	74	30	–	–	–	–	–	–	–	2	3	3	–	22
16	15	9	6	5	2	–	–	–	–	–	–	–	–	–	1	1	–
16	27	22	7	12	1	–	–	–	–	–	–	–	–	–	–	–	1
220	182	73	30	43	10	–	–	–	–	–	1	–	1	4	2	–	2
15	20	11	4	12	20	1	1	–	–	1	–	–	–	1	3	6	7
16	27	16	3	6	37	8	3	2	2	1	2	2	6	4	3	2	2
127	136	46	16	20	23	1	3	–	–	–	–	1	2	7	2	4	3
36	40	22	5	19	–	–	–	–	–	–	–	–	–	–	–	–	–
51	276	255	52	17	256	164	35	7	9	9	9	2	12	7	2	–	–
16	8	3	1	–	1	1	–	–	–	–	–	–	–	–	–	–	–
27	43	20	5	6	9	1	2	2	–	–	–	–	3	–	–	1	–
106	109	15	5	1	34	–	1	1	1	1	–	3	13	9	5	–	–
625	437	98	22	23	144	77	11	8	5	7	6	3	10	11	2	3	1
35	50	6	1	3	22	9	2	2	1	2	1	–	2	2	1	–	–
159	112	33	4	6	66	33	8	5	6	1	5	1	4	2	–	–	1
30	34	32	10	11	8	–	–	1	1	1	1	–	2	1	1	–	–
10	37	33	8	3	10	2	1	1	1	–	–	–	–	4	1	–	–
236	187	80	21	21	22	3	1	2	1	2	1	–	4	–	3	2	3
266	351	340	187	270	237	13	4	4	7	9	8	6	38	52	46	10	40
22	17	10	4	3	1	–	–	–	–	–	–	–	–	–	–	–	1
10	10	1	6	3	1	–	–	–	–	–	–	–	–	1	–	–	–
75	48	9	2	2	1	–	–	–	–	–	–	–	–	1	–	–	–
361	114	25	6	4	34	13	2	1	3	2	–	2	6	3	2	–	–
111	53	18	2	2	69	21	7	4	4	4	2	3	12	9	1	–	2
47	27	14	4	1	16	8	–	–	–	–	–	–	5	2	–	1	–
368	167	41	10	7	26	15	2	1	4	1	2	–	–	1	–	–	–
142	62	21	1	2	7	2	–	1	–	1	–	–	1	1	1	–	–
18	12	3	1	2	6	3	–	–	–	–	1	–	1	–	–	–	1
73	72	43	34	27	34	11	2	–	3	2	–	1	4	6	2	3	–
112	89	55	8	25	69	37	5	3	5	1	2	6	3	2	3	–	2
90	46	18	4	4	49	25	6	4	2	2	2	3	3	1	1	–	–

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References to names of diseases mentioned in tables of the report are not indexed.