MEASURING HEALTH NEEDS IN AN URBAN DISTRICT

by DOROTHY G. WIEHL

III. ILLNESS AND THE EXTENT OF MEDICAL CARE[1]

PROMOTION of the health of the poor and less privileged residents of a district is dependent on adequate facilities for the treatment of illness and physical conditions requiring medical care as much as on a well-functioning public health program. The educational and preventive services of the latter cannot be fully effective unless the medical care needed is readily available. Although the house-to-house survey of families in the Mott Haven Health District of New York City was conducted primarily to reveal their status with respect to the preventive health services being provided, the visit to the families gave an opportunity to determine also the prevalence of serious illness; the extent to which these illnesses had received medical care; and what had been the source of any medical care received. Failure to obtain medical attention for illness is not necessarily due to lack of clinic and hospital facilities but results also from ignorance of need; indifference arising from improper understanding of its importance; attitudes toward the use of public or charity services; overcrowding in the clinics with its resultant delays, long waiting, and impersonal attention to the individual which discourages revisits and continued medical attention. The present study does not provide information concerning the reasons for not securing medical care, but indicates only for a series of illnesses the extent to which some medical advice had been secured, through private, charity, or public facilities.

[1] From the Milbank Memorial Fund. This is the third in a series of papers reporting on a survey of 1,049 families in the Mott Haven district, the Bronx, New York City, which was made in 1932 before a district health organization was established there. The first and second papers describing the survey and reporting on the public health services rendered were published in the January and April issues of the *Quarterly*, 1936, xiv, No. 1, pp. 23-36, and No. 2, pp. 144-162.

MEDICAL FACILITIES

Within the Mott Haven district[2] there is one general city hospital (425 beds) and one general private hospital (154 beds), both of which maintain a large out-patient department for nearly every type of medical care; and a private general hospital (450 beds) with no out-patient department. There is also a city hospital for infectious diseases and tuberculosis; a private tuberculosis hospital; and a small hospital for eye, ear, nose, and throat treatment. All, except the infectious disease hospital, are located in the central part of the district and are easily accessible to the most populous sections.

Many other hospitals outside the district boundaries are comparatively short distances from the district. One large general city hospital is only a few blocks from the northern boundary and many hospitals in the upper end of Manhattan can be reached quickly by one of the rapid transit lines.

DESCRIPTION OF DATA

The 1,049 families in the survey were all visited once by the same investigator some time between June and December, 1932. A complete roster of the family with sex and age of each member, and a record of the approximate income of the family and of the rental paid during the preceding twelve months was obtained.[3] The data on illness utilized in this report are based on the informant's statement concerning illnesses in the family during the previous twelve months and the medical and nursing care received. For medical care, a record was taken as to whether it had been obtained from a private physician, a hospital clinic, or other agency, and also as to whether the patient had been in a hospital during the past year either as a private patient or ward patient. In the case of ward

[2] The Mott Haven Health District had a population of 232,000 in 1930, according to the Federal Census.

[3] The Mott Haven district is one of the low-rental neighborhoods of New York City and the 1930 Census showed only 28 per cent of the families paying $50 or more for monthly rental. The survey sample was found to be reasonably typical of the 75 to 85 per cent of families in the district who paid less than $50 for rent in 1932. (*See* first article in this series.)

patients, no information was obtained concerning payment for hospital services. No data were obtained concerning the number of visits to clinic or physician or number of days in the hospital.

Before presenting some of the results of this phase of the survey, it is important to consider the limitations of the data. The remembered illnesses for a period as long as a year are admittedly an incomplete record. The completeness with which cases are reported may be expected to vary for different types of illnesses; for example, most of the prolonged and serious illnesses and the chronic conditions, if they have caused some disability during the year will be recalled; and, it is believed that the children's communicable diseases are remembered fairly accurately. On the other hand, many minor illnesses, such as colds and digestive upsets, are forgotten and the chance of their being remembered depends on how long before the enumerator's visit the illness occurred.[4]

The significance of the record of illnesses, therefore, is not as an indication of the actual prevalence or incidence of illness in the district, although for some causes, especially chronic conditions, the reported incidence gives some interesting indications as to the health of the group surveyed. The data concerning the medical attention given to various types of illness and the extent to which the population of the district depended upon free and part-pay medical services give a factual basis for some appraisal of the problem of medical service. It is essentially a study of conditions within the district and only limited comparisons can be made with those revealed by surveys in other areas.

4 In a discussion of morbidity statistics, Sydenstricker wrote: "Experience has shown that the completeness of a record of illness depends upon at least three important conditions. One is its severity and nature; the second is the length of the period for which the informant is asked to report; the third is the subjectivity of the record itself. Nearly every adult will remember an illness due to typhoid fever incident upon himself or in his family if it took place within the preceding ten or twenty years; few will recall a brief illness due to a common cold unless it occurred within a very short period immediately preceding the date of inquiry. Illnesses of a minor kind are observed and remembered when incident upon the informant himself with a greater degree of completeness than when incident upon others, even in the same family." Sydenstricker, Edgar: Statistics of Morbidity. The Milbank Memorial Fund *Quarterly Bulletin,* April, 1932, x, No. 2, p. 107.

ILLNESS REPORTED

Of the 1,049 families in the survey, 595, or 56.7 per cent, reported one or more illnesses during the year; approximately one-half (283 families) reported only one illness; and 45 families, or 7.6 per cent of those with some illness, reported 5 to 13 cases. The number of individuals for whom an illness was reported was 1,049, or 22.6 per cent of the 4,649 persons in the survey. These individuals were sick an average of 1.2 times during the year and the number of illnesses[5] reported for each individual was:

Number of Illnesses Reported for One Year	*Number of Persons*	*Per Cent Sick Specified Times*
1	898	85.6
2	120	11.4
3	28	2.7
4	2	.2
5	1	.1

The 1,235 illnesses reported give a total annual case rate of 269.6 per 1,000 persons.[6] The incompleteness of these reports as an indication of the total amount of illness during the year is suggested by a comparison with the reported incidence obtained by repeated visits to families at short intervals of time during a year. In the Hagerstown survey,[7] an annual incidence of 1,080 illnesses per

5 A continuous period of sickness was counted as one illness in most cases, regardless of the number of diagnoses or symptoms mentioned. The dates of onset and termination were not definite for many acute illnesses and when sickness from unrelated conditions was reported, each condition was counted an illness even though no interval of time between their occurrence was indicated. Thus, a case of measles and whooping cough in the same child and overlapping in time would be counted as two illnesses; but a case of whooping cough and pneumonia was counted as a single illness. For chronic conditions which were not continuously disabling but which were given as the cause of some illness during the year, no definite record of separate attacks or periods of disability was obtained and the chronic condition is counted as one illness; acute conditions occurring in persons suffering some chronic ailment were counted as illnesses as well as the chronic condition. In case of illness with more than one diagnosis, the *primary* cause to which the illness was allocated was that designated by the MANUAL OF JOINT CAUSES OF DEATH, Bureau of the Census, 1925.

6 The rate is based on 4,588 person years. Most of the population included was reported on for the entire year, but an adjustment for months of life under observation was made for infants.

7 Sydenstricker, Edgar: A Study of Illness in a General Population Group. *Public Health Reports,* United States Public Health Service, September 24, 1926. Reprint 1113, p. 12.

1,000 was reported and in the extensive surveys of illness made by the research staff of the Committee on the Costs of Medical Care an annual case rate of 850 per 1,000 was reported.[8]

The reported sickness rate was found to be only slightly lower than that reported from a survey made in Winchester, Massachusetts, one of the towns which comprise metropolitan Boston, in which the same technique was followed; that is, on a single visit, the informant was asked to report illnesses occurring within the past year. In the Winchester survey,[9] the reported morbidity was 407 per 1,000 persons and when this rate is adjusted to the age distribution of the population observed in the Mott Haven district, the rate is 376 compared with an annual rate of 270 reported for Mott Haven. However, as the Winchester survey was made in the spring and the elapsed time was relatively short between the visit and winter months when respiratory illnesses are frequent, the rate for minor respiratory illness was more than twice as high as in the Mott Haven survey, although the rate for pneumonia was somewhat higher in Mott Haven. If the excess in the minor respiratory rate in Winchester is deducted from the total, an adjusted rate of 292 per 1,000 is obtained. Thus, with the seasonal difference removed, the two surveys yielded essentially the same results.

Causes of Illness. An analysis of the frequency of certain specific illnesses of a more serious nature and of chronic ailments in the population reveals some interesting indications as to the health of the group surveyed.[10] The illness rates for a few selected diseases are shown in Table 1, and some comparisons made with the findings of the extensive periodic surveys reported on by Collins and

[8] Collins, Selwyn D.: Causes of Illness in 9,000 Families Based on Nation-wide Periodic Canvasses, 1928-1931. *Public Health Reports,* United States Public Health Service, March 24, 1933, 48, No. 12, pp. 283-308. Data are for rural communities and cities of all sizes in eighteen states.

[9] Lombard, Herbert L.: A Sickness Survey of Winchester, Massachusetts. *American Journal of Public Health,* September, 1928, xviii, No. 9, pp. 1089-1097.

[10] All tabulations of illness from specific causes relate only to the population surveyed which had been resident one year or longer in Mott Haven district.

those in the Winchester report. In the Mott Haven survey and the Winchester study, the diagnosis reported by the patient was not verified by a physician, but in the periodic surveys a physician had checked the diagnosis for about one-half of the illnesses. Lower rates in both Mott Haven and Winchester for illnesses for which medical diagnosis is necessary might be the result of the patient's lack of knowledge concerning the real cause.

Pneumonia, cancer, rheumatism, and nervous breakdowns or general nervousness were reported as of about equal prevalence in Mott Haven and in the average experience for the eighteen states in the periodic surveys. Tuberculosis, appendicitis, and liver and gall bladder conditions were only from 52 to 68 per cent as frequent in Mott Haven as in the general survey. It seems very probable that

Table 1. Annual illness rates for selected diseases. Rates reported for a twelve-month period by families in the Mott Haven district visited once only, June-December, 1932, compared with rates obtained by same method in Winchester, Massachusetts, and those obtained by periodic canvasses during a twelve-month period in eighteen different states.

Cause of Illness	Annual Case Rate per 1,000[1]			Ratio of Rates in Mott Haven to	
	Mott Haven	Winchester, Mass.	General Survey with Periodic Canvasses	Winchester	General Survey
Pneumonia	7.0	5.8	7.0	1.21	1.00
Tuberculosis (all forms)	2.3	1.2	3.4	1.92	.68
Cancer	1.4	1.3	1.4	1.08	1.00
Rheumatism	9.2	20.8	10.2	.44	.90
Diabetes	1.4	1.3	1.8	1.08	.78
Nervousness and nervous breakdown	8.5	a	8.7	a	.98
Heart diseases	9.9	13.1	7.4	.76	1.34
Varicose veins	2.5	a	1.2	a	2.08
High blood pressure and arteriosclerosis	5.4	5.4	3.4	1.00	1.59
Appendicitis	4.5	a	8.4	a	.54
Hernia and intestinal obstruction	3.4	a	2.6	a	1.31
Liver and gall bladder conditions	3.4	a	6.5	a	.52
Number of person years	3,549	9,746	38,544		

[a]Not reported on for comparable diagnoses.

[1]The age distribution of persons in the General Survey was very similar to that in Mott Haven but in Winchester the percentage of persons 45 years of age and older was much higher than in Mott Haven (about 27 per cent compared with 16.2).

the low rates from these conditions reflect a neglect of medical attention for ill health and symptoms associated with them more than an unusually low incidence of the diseases.[11] Both heart diseases and high blood pressure, including arteriosclerosis, were reported as more prevalent in Mott Haven than in the general survey population.

The comparative rates shown in Table 1 for selected diseases provide rather strong evidence that the reporting of serious illnesses and chronic conditions was nearly complete in the Mott Haven study, although the minor and acute illnesses represent only a small percentage of the total illnesses of this type.

EXTENT OF MEDICAL CARE

Some type of medical attention was reported for 852, or 69 per cent, of the illnesses. The type of care is shown in Table 2. Forty per cent of all illnesses and 58 per cent of those with care had been attended by a private physician. Among the cases seen at some time by a private physician, 13 per cent also had free or part-pay care at a clinic or as a ward patient in a hospital. The total number of hospitalized cases was 224, or 18 per cent of all illnesses reported and 26

Table 2. Medical care reported for the 1,235 cases of illness in families surveyed in Mott Haven district, June-December, 1932.

Type of Medical Care Received	Per Cent of Illnesses with Specified Care	Per Cent of Attended Cases with Specified Type of Care	Number of Cases Attended
Any Medical Care	69.0	100.0	852
Private physician only[1]	34.7	50.2	428
Private physician and clinic[2]	5.3	7.7	66
Free and part-pay service only	29.0	42.0	358
Hospital	18.1	26.3	224
Private patient	2.8	4.1	35
Ward patient	15.3	22.2	189

[1]Includes all private patients in a hospital.
[2]Includes free and part-pay service, either in-patient or out-patient.

[11] The annual death rate from tuberculosis in the Mott Haven district was 70 per 100,000 population in the three-year period 1929-1931, compared with 71.5 in the Registration Area of the United States in 1930.

per cent of the cases which had any care. Only 15.6 per cent of the hospital cases, or about 1 out of 6, were private patients.

Comparison with Other Surveys. The proportion of cases with any medical care was somewhat smaller in Mott Haven than in Winchester in 1927 where a physician had attended 78 per cent of all illnesses reported; and the difference would be greater if an adjustment were made for the relatively high percentage of minor respiratory illnesses in the Winchester total. The extent of medical care in Mott Haven was quite similar to that reported for low-income families in the periodic surveys of the Committee on the Costs of Medical Care[12] for which the percentage of illnesses attended was 66.5 in families with less than $1,200, 75 in families with $1,200 to $2,000, and 80.4 for families with $2,000 to $3,000. However, since the proportion of serious and disabling illness was much higher in the Mott Haven study, the general indication is that medical care was obtained for fewer illnesses of this type in Mott Haven in 1932 than would be expected from the average experience in eighteen states in 1928-1931.

Groups of wage-earners in seven cities which were surveyed in the spring of 1933 by the United States Public Health Service in cooperation with the Milbank Memorial Fund comprised a population very similar in character to that in the Mott Haven study. Medical care was obtained for only 52 per cent of the cases of sickness reported for a three-month period in these families;[13] but physicians had attended 67 per cent of the disabling illnesses which are

[12] Falk, I. S.; Klem, Margaret C.; and Sinai, Nathan: Incidence of Illness and Costs of Medical Care among Family Groups. Publication of the Committee on the Costs of Medical Care, No. 26. Chicago, Illinois, The University of Chicago Press, 1933, page 282.

[13] Perrott, G. St. J.: Sydenstricker, Edgar; and Collins, Selwyn D.: Medical Care during the Depression. The Milbank Memorial Fund *Quarterly*, April, 1934, xii, No. 2, pp. 269-284. Although the records of illness in the two surveys are not strictly comparable, both have a higher percentage of chronic and long duration illnesses than is typical of annual rates based on periodic canvasses. On the other hand, because of the season in which the survey in the seven cities was made, the illnesses from respiratory conditions probably comprise a larger percentage of the total cases than in the Mott Haven survey. The total illness rate for three months in the seven cities was 237 and the disabling illness rate was 141 compared with the annual rate of 270 in Mott Haven.

more nearly comparable to the cases remembered in the Mott Haven study.

More directly comparable are the rates for hospital illness in these various surveys, since it seems reasonable to assume that practically all hospitalized illnesses were remembered for the Mott Haven population. The 224 cases give an annual hospital illness rate of 48 per 1,000 persons. This is only a little more than one-half the annual hospital rate for low-income families in cities over 100,000 population in the Committee on the Costs of Medical Care survey.[14]

Using the hospital case rate per 1,000 persons for three months in the seven large cities, an approximate annual rate of 72 per 1,000 persons was estimated.[15] The reported rate for Mott Haven was only two-thirds of this estimated rate. Both these data and that from the Committee on the Costs of Medical Care survey suggest that the amount of illness receiving hospital care was relatively low in the Mott Haven district.

Sources of Medical Care. When medical attention was obtained from other than private physicians, an inquiry was made as to what hospital or clinic provided care. As about 20 per cent of the families in the survey had lived in the Mott Haven district less than one year and some of the illnesses in these families had occurred in other parts of the City, the agency providing care is shown in Table 3 in the Mott Haven district.

There were forty-four different institutions or public agencies named by the informants as having given treatment for 259 illnesses; but only seven[16] had treated 10 or more illnesses and these

[14] *Op. cit.*, page 113. If the rates for hospitalized cases per 1,000 persons in families with incomes of under $1,200 and $1,200 to $2,000 are weighted according to the approximate proportions in the Mott Haven sample with these incomes, the average rate is about 83.

[15] The rate for cases hospitalized less than the entire three months during the late winter and early spring period of observation was assumed to equal 25 per cent of the year's rate, since, although this is a period of high sickness rates, monthly admissions to a large general hospital for a corresponding three-month period were found to equal 25 per cent of the year's total in two successive years.

[16] These seven hospitals included three general City hospitals in the Bronx, a private general hospital in the Mott Haven district, the Presbyterian Medical Center, Mt. Sinai Hospital, and the Hospital for Joint Diseases.

had cared for 190 cases or about three-fourths of the total. Nearly half of the institutions (20) had cared for only one case, these being usually special hospitals, such as tuberculosis sanatoria, maternity hospitals, and mental disease hospitals, or hospitals for special groups, such as veterans. Eleven patients had received treatment at two different institutions for the same illness, and one had been to three different institutions.

Only 51 per cent of the illnesses receiving free or part-pay care had had attention at any of the five hospitals or a Department of Health clinic within the Mott Haven district. Another 17 per cent had received treatment at one of the two general City hospitals in the Bronx Borough, outside the district. City institutions had cared for 150 illnesses, or 58 per cent of those having some type of free medical care from a known institution. This group also constituted 17 per cent of all reported illnesses and 24 per cent of those which had received any medical attention.

Nursing Care. Bedside care by a visiting nurse was provided by the Henry Street Nursing Service for twenty-two illnesses reported,

Table 3. Type and location of institutions which provided free or part-pay medical care for 259 illnesses reported by families residing one year or longer in Mott Haven district, 1931-1932.

Type and Location of Institution	Number of Cases Treated[1]	Per Cent of Cases Treated at Specified Institution[1]
Total cases with free or part-pay care	259	100.0
Total cared for in district institution	131	50.6
City hospitals	79	30.5
Private hospitals	45	17.4
Health Department clinic	7	2.7
Bronx, outside of district	46	17.8
City hospitals	44	17.0
Private hospital	2	.8
Other City hospitals	20	7.7
Other private hospitals	69	26.6
Federal institutions	5	1.9
State institutions	1	.4

[1]Cases treated by more than one agency or institution are counted for each institution; therefore, numbers treated in specified institutions do not total to the number of cases cared for.

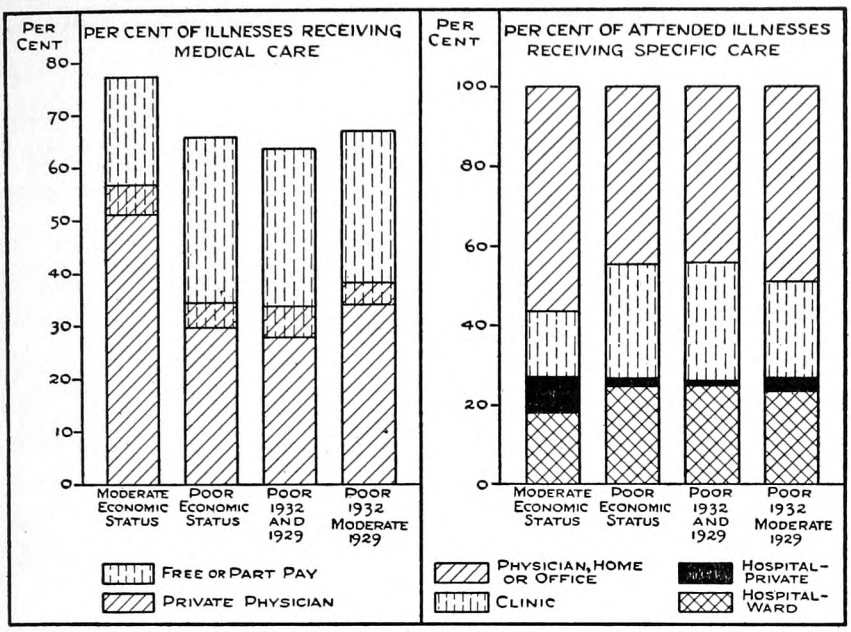

Fig. 1. Economic status and medical care. Percentages of reported illnesses attended by a private physician or by a clinic physician and, for classes with medial attendance, the percentages receiving different types of medical care according to economic status of families surveyed in Mott Haven district, 1932. (In classification by type of care, cases have been counted only once, the preference given being in the following order: ward patient in hospital, private patient in hospital, out-patient clinic care, private patient not hospitalized.)

or for 2.7 per cent of all cases, exclusive of confinements. In addition, nursing service to twenty-one maternity cases was reported, and, when these are included, the forty-three cases attended by Henry Street nurses are 4.8 per cent of all reported illness.

Only three families among the 801 which had been resident in Mott Haven district for one year or longer had employed a registered nurse to care for an illness at home. The three illnesses given private nursing care in the home are 0.4 per cent of the reported cases.

Economic Status and Medical Care. In families of moderate income (estimated annual income of $1,400 or more), 77 per cent of the cases of sickness had had some medical attention during the year compared with 66 per cent of illnesses in families of lower

Type of Medical Care	Per Cent of Illnesses Receiving Specified Medical Care for Different Income Groups				
	All Incomes[1]	Moderate Income 1932	Poor for 12 Months' Survey Period		
			Total[2]	Moderate Before	Poor Also in Previous Years
Any Medical Care	69.0	77.2	65.8	67.0	63.6
Private physician	40.0	56.8	34.4	38.0	33.5
Clinic, free or part-pay	34.3	26.1	36.1	33.0	35.8
Hospital cases	18.1	21.6	18.0	18.4	17.1
Private	2.8	7.9	1.4	2.3	1.0
Free or part-pay	15.3	13.7	16.6	16.1	16.1
Number of illnesses	1,235	241	837	342	316

[1]Includes families of unknown income.

[2]Includes families "poor" in survey year for which the income in previous years was unknown.

Table 4. Medical attendance according to family income for illnesses reported in 1,049 families surveyed in Mott Haven district, June-December, 1932.

incomes. The ratio of the percentage of illnesses attended in the moderate group to that for the poor group is 117. This is almost identical with the proportionate difference between the high-income families and the poor in the survey of wage-earners' families in seven large cities for which the percentages of illnesses attended were 58 and 50 in the upper income group and lowest, respectively.[17]

The type of medical care received showed a greater variation according to the income of the family than the total percentages of illnesses which were attended by a physician. In Figure 1 and Table 4, the medical attention and type of care are shown for several income groups. In families of moderate income, a private or family physician attended 57 per cent of the cases of illness compared with 34 per cent in poor families; in other words about one in two cases in families of moderate income and about one in three cases in the "poor" families had seen a private physician. Some free or part-pay care was obtained for 26 per cent of illnesses in families of moderate income, and for 36 per cent in poor families. The hospital rate was

[17] *Op. cit.*, page 8. The families in the seven cities were classified on a per capita basis, and families with $425 per capita or more have been taken as approximately comparable with those in Mott Haven with an annual income of $1,400 or more.

20 per cent higher in moderate income families than in poor families; but the proportion of cases seen by a physician which were hospitalized was about equal in the two income groups (Table 5). There is reasonable evidence, therefore, that the higher rate for medical attendance in the moderate income families was not due to seeking care for a larger number of minor illnesses.

The families classified as "poor" were subdivided into two groups, those having been in the same income class for several years and those whose income had dropped to less than $1,400 since 1929. It will be noted in Table 4, that the families which had recently become "poor" received a little more medical attention than the "chronic poor" and that they had care from their private physician more often and attended the hospital clinics less frequently. The differences in medical care are slight, however, for the two groups of "poor" families and both had less medical attention than the moderate income group.

Table 5. Distribution according to type of care of illnesses with medical attention in families of different incomes surveyed in Mott Haven district, June-December, 1932.

Type of Medical Care	All Incomes[1]	Income Groups			
		Moderate	Total Poor[2]	Poor 1932 and Earlier	Poor 1932 Previously Moderate
Total Cases with Medical Care	100.0	100.0	100.0	100.0	100.0
Free or part-pay care, total	49.8	33.9	54.8	56.2	49.3
Out-patient	27.6	16.1	29.6	30.8	25.3
In hospital	22.2	17.8	25.2	25.4	24.0
Private physician cases only	50.2	66.1	45.2	43.8	50.7
At home	46.1	55.9	43.0	42.3	47.2
In hospital	4.1	10.2	2.2	1.5	3.5
Both private and clinic care[3]	7.8	7.6	7.0	9.0	6.1
Out-patient	5.2	5.4	4.5	6.5	4.4
In hospital	2.6	2.2	2.5	2.5	1.7
Number of cases with any care	852	186	551	201	229

[1]Includes illnesses in families of unknown income.

[2]Includes illnesses in families classified as "poor" in 1932 but with unknown income in earlier years.

[3]These per cents are included in totals for clinic cases, out-patient and in hospital.

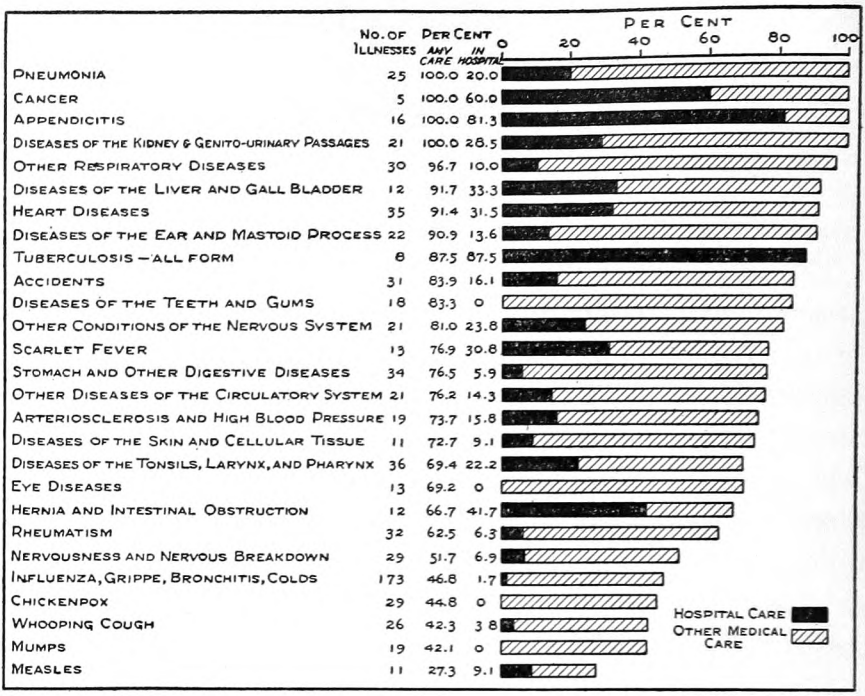

Fig. 2. Illness from specific causes and medical attendance. Per cent of illnesses from a selected list of causes for which some medical care and hospital care one day or longer was reported by families in the Mott Haven district surveyed in 1932.

Cause of Illness and Medical Attendance. Of greater significance in considering medical attendance is to take illness resulting from specific diseases. Just which cases or what types of illness ought to be cared for by a physician is a question about which opinions may differ and no evaluation of this will be attempted. The data are presented for twenty-seven categories in Figure 2, which shows the per cent of the cases of each type for which one or more visits to a physician or clinic were made and the per cent which was hospitalized for one day or longer during the year. These twenty-seven categories include 87 per cent of the total number of cases, exclusive of confinements.

Many of the conditions for which the rate of medical attendance was from 90 to 100 per cent could not have been specifically classified by the informant had the patient not had medical care. In

Cause of Illness	Per Cent of Illnesses Attended		Number of Illnesses Reported	
	Mott Haven	C.C.M.C.	Mott Haven	C.C.M.C.
Minor respiratory diseases[1]	49.0	64.4	202	11,444
Accidents	83.9	90.0	31	2,869
Measles	27.3	65.3	11	926
Whooping cough	42.3	72.0	26	737
Diseases of the ear and mastoid process	90.9	93.5	22	723
Diseases of the kidney, bladder, and annexa	100.0	95.8	12	518
Diseases of the heart and arteries	85.2	95.3	54	443
Rheumatism	62.5	87.9	32	397
Appendicitis	100.0	97.8	16	325
Pneumonia	100.0	100.0	25	268
Diseases of the liver and gallbladder[2]	91.7	91.8	12	208
Hernia and intestinal obstruction	66.7	90.1	12	101
Cancer	100.0	97.9	5	48

[1]A few cases of sinusitis and chronic bronchitis are included in Mott Haven data, but not in Committee on the Costs of Medical Care.

[2]Diseases of liver not included in Committee on the Costs of Medical Care data.

Table 6. Medical attendance for illness from specific causes in low-income families resident one year or longer in Mott Haven district compared with the average experience for families of all incomes in eighteen different states canvassed for the Committee on the Costs of Medical Care.

other words, there may well have been other cases of cancer, appendicitis, gall bladder diseases, etc., which were included under more general classifications or ill-defined causes because there had been no medical care. Only about one-half of the persons suffering from nervousness or nervous breakdown had seen a physician during the year, and less than half of the respiratory illnesses reported as influenza, grippe, bronchitis, colds and coughs, and of the communicable diseases of childhood, except scarlet fever, had been attended.

For a few specific causes and groups of causes, it is possible to compare the medical care in Mott Haven with that reported for the average experience of the population in the Committee on the Costs of Medical Care survey.[18] The comparative percentages are in Table 6. The medical attendance rate for minor respiratory illnesses, for rheumatism, hernia and intestinal obstruction, and for measles and whooping cough was definitely lower in Mott Haven,

[18] *Op. cit.*, page 71.

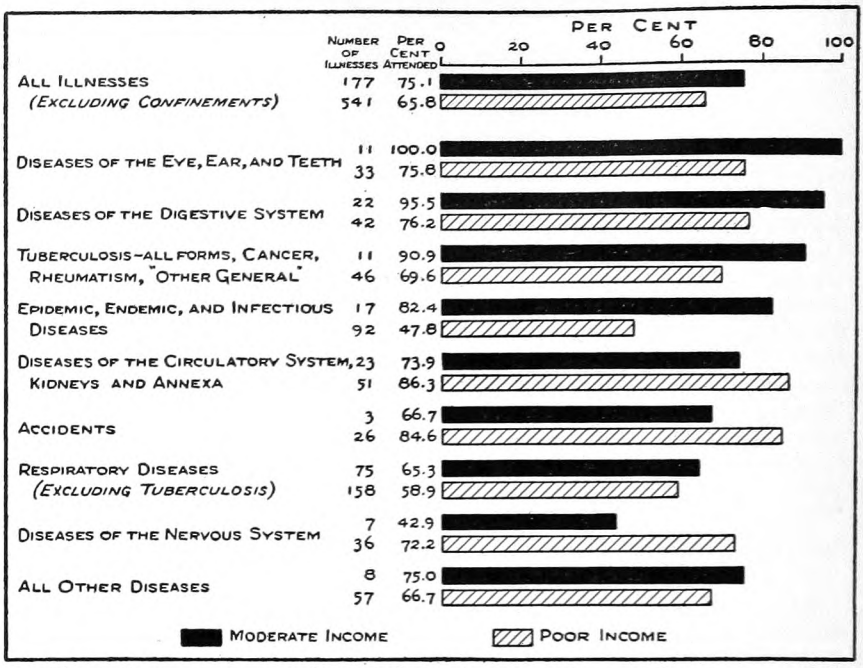

Fig. 3. Economic status and medical care for broad classes of illness. Per cent of illness classified into broad categories for which some medical attendance was reported by families in two income groups surveyed in the Mott Haven district in 1932.

but for organic and chronic illness and the few serious acute types shown, such as appendicitis and pneumonia, there was no significant difference.

It is of interest to note for what types of illness the economic status of the family was more likely to influence the question of medical attendance. For broad categories of the diseases, a comparison of the percentages of illnesses attended in families of moderate and poor economic status is shown in Figure 3. The proportion attended was higher in the families of moderate income than in poor families for nearly all types of illness, but for diseases of the circulatory system, kidneys and annexa, and for diseases of the nervous system, the percentage with medical care during the year of record was lower for persons of moderate income.[19] The differ-

[19] The percentage of accidents with medical attendance in moderate income families also was lower than in poor families, but only three accidents were reported in the higher income group and the percentage has no significance.

ence in the extent of medical care for respiratory illness according to income of the family was very slight. The greatest difference in medical attendance was for epidemic and infectious diseases; 82 per cent of the illnesses from these diseases in moderate income families had been seen by a physician and only 48 per cent in poor families.

Only very broad indications concerning the adequacy of medical service in the Mott Haven district are afforded by this study. Which cases or how many were in need of medical care cannot be determined. When the relatively high proportion of serious and disabling illnesses in the total is considered, the percentage of cases with medical attention appears to be somewhat lower than previous studies indicate as average experience; and for a list of specific diseases, the medical attendance rate was lower than that found in the studies made by the Committee on the Costs of Medical Care except for diseases for which medical diagnosis is a factor in identifying the cause of illness. Hospitalization of illness was found to be especially low compared with other urban communities.

Lack of income was associated with the failure to obtain medical care, especially in the case of acute conditions; persons with diseases of an organic nature were attended at least as frequently in "poor" families as in those with slightly higher incomes.

The low-income families surveyed in the district, representing at least 75 per cent of the total population, used public medical facilities very extensively. One-half of the illnesses which received any care had had some part-pay or free care.