EPIDEMIOLOGICAL STUDY OF HOSPITAL ADMISSION IN A COMMUNITY OF NEW IMMIGRANTS

BY

L. S. TERESPOLSKY

Department of Social Medicine, Hebrew University-Hadassah Medical School and Hadassah-University Hospital, Jerusalem

AND

J. YOFE

Chief Epidemiologist, Ministry of Health, Jerusalem, Israel

There are many published studies which describe hospitalization from the viewpoint of the hospital or of a group of hospitals, as in the study of Forsyth and Logan (1960); or from the viewpoint of total populations, as published by the Israel Central Bureau of Statistics (1960), in the Ministry of Health Report on Hospital In-Patient Enquiry for the two years 1956-57 (1961), and by Roth, Acker, Roemer, and Myers (1955) and Acker (1956) in Canada. Where smaller communities have been studied, the subject usually revolves upon the use of general practitioner services within single general practices, as in the studies of Hopkins (1956) and Fry (1959), or within a small number of practices, as in the studies of Logan (1954) and Logan and Cushion (1958). A hospitalization study of a complete community living in a small urban neighbourhood with well-delineated geographical boundaries is uncommon. This paper describes hospital in-patient admissions in such a small urban neighbourhood for the four-year period 1954 to 1957.

COMMUNITY SURVEYED.—These people live in a government housing estate in a suburb of Jerusalem

(Kiryat Yovel). The 520 flats were erected specially for new immigrants in 1950-51 and are all of standard design, consisting of one or two rooms, a kitchen-dining room, and a bathroom which also contains a lavatory. There are four to eight flats per building.

The number of persons living in this community varied between 1,829 in 1954 and 2,073 in 1957 (Yekutieli and Berendt, 1954-57); altogether 7,723 person-years at risk during the four-year study period (Table I).

The residents are new immigrants to Israel from thirty countries, situated in East and Central Europe (28.8 per cent.), North Africa (45.9 per cent.), and the Middle East (24.4 per cent.). Almost all the families immigrated between 1949 and 1951, and all are Jews.

The population studied is a young one with a broad-based age structure, as seen in Table I. This is due to a preponderance of young persons (0-39 years) among the North Africans, in contrast to a large proportion of persons aged 60 years and above among the Europeans. The average family size of the

TABLE I
DISTRIBUTION OF POPULATION, 1954-57, BY AGE AND PERSONS AT RISK; AND PERCENTAGE DISTRIBUTION OF POPULATION BY AGE, SEX, AND REGION OF ORIGIN (THE LAST FOR 1956-57 ONLY)

Age (yrs)	No. of Persons at Risk					Sex (Per cent.)		Region of Origin* (Per cent.)				
	1954	1955	1956	1957	Total 1954-57	Male	Female	Europe	North Africa	Middle East	Unknown	Total
0	62	64	49	55	230	56.1	43.9	14.4	64.4	19.2	2.0	100.0
1-4	280	300	300	270	1,150	50.9	49.1	14.0	64.9	20.9	0.2	100.0
5-19	522	526	582	650	2,280	49.9	50.1	22.0	50.6	27.1	0.3	100.0
20-39	515	533	538	569	2,155	49.2	50.8	23.0	47.9	27.1	2.0	100.0
40-59	324	326	342	377	1,369	46.4	53.6	50.9	28.5	20.2	0.4	100.0
60+	126	124	137	152	539	50.6	49.4	58.8	17.3	22.1	1.8	100.0
Total	1,829	1,873	1,948	2,073	7,723	49.4	50.6	28.8	45.9	24.4	0.9	100.0

* Based on 1956 to 1957 only.

total community varied from 4.15 persons per family in 1954 to 4.18 in 1957, but the sizes of families from different regions of origin varied greatly. In 1956 to 1957 European families contained, on an average, three members each, Middle East families 4.6 members, and North African families 5.3 members. The proportion of males to females in this population is 1:1.02.

In general the population is stable compared with other urban populations in Israel. A study of families in this neighbourhood showed that, of 148 North African families in 1954, 145 were still present after 4 years; of 91 Middle East families, 77 were present after 4 years; and of 202 European families 131 were present after 4 years.

Most breadwinners are unskilled or semi-skilled labourers, with a sprinkling of technicians, policemen, clerks, and small store owners. The average annual percentage of families receiving social welfare aid was 10.3 per cent. (range 9.2 to 12.1 per cent.). (Medalie, 1962.)

The medical service to the community was provided predominantly from a family and community health centre of the Hadassah Medical Organization in co-operation with the Department of Social Medicine of the Hebrew University-Hadassah Medical School and was comprehensive (curative and preventive) in nature. Basically the staff consisted of family doctors and trainees working together with public health nurses and in close co-operation with a municipal social worker. In some cases patients used other medical services available in the town of Jerusalem in addition to the health centre service. Specialist services (medical, social work consultations, and investigations) and admission to the three general hospitals in the city and to tuberculosis hospitals were easily available to every member of the community, either through the General Labour Health Insurance Fund (Kupat Cholim) at no cost to the patient or through the Municipal Social Welfare Agency at no cost or at low cost. Mental hospitalization was more difficult to arrange because of the shortage of beds in the period reviewed.

METHODS

(A) DEFINITIONS

Hospital Admissions.—Those dealt with in this paper include all admissions from the community to general hospitals as well as to specialized hospitals (tuberculosis, mental) between January 1, 1954, and December 31, 1957. Aged and chronically ill persons admitted to closed institutions from which no return home was expected (*e.g.*, old-age homes) were not included in this study. Normal deliveries were all

carried out in maternity wards of general hospitals as is the custom in Israel and were not included in our study.

Region of Origin.—The countries in which members of the community were born were grouped into three regions: Europe, North Africa, and Middle East. "Europe" includes all European countries from Russia westwards and all Mediterranean European countries up to but not including Turkey. Turkey, Syria, Lebanon, Egypt, and all Moslem countries east up to India are included under "Middle East". "North Africa" includes Libya, Tunisia, Algeria, and Morocco. Because the whole population consisted of new immigrants, children born in Israel were included in the father's region of birth.

Diagnostic Groups.—The principal diagnosis on discharge from hospital was considered in this paper, and these diagnoses were classified according to the "C" List of the International Classification with slight modifications. For purposes of this paper, the fifty diagnoses contained in the "C" List were further grouped under fourteen headings (see Table VII).

(B) COLLECTION OF DATA

Notifications of referral of patients to hospital by doctors at the health centre, and hospital discharge reports of patients living in the community were received at the health centre by a health recorder, who recorded demographic and hospitalization details on a card made out for every known admission.

In addition special studies were made of the records of the three general hospitals in Jerusalem, and of the notifications received by the Ministry of Health from all mental hospitals in Israel.

It was found that the doctors' notifications included 433 admissions over the 4 years at risk. A further 99 admissions were extracted from hospital records and checked against patient's files at the health centre. The total number of admissions was 532.

The hospitalization data obtained from health centre and hospitals were checked one against the other, and further checks were made as necessary from the doctors' notes in the family record files of the patients and from the Health Insurance Fund (Kupat Cholim) records. The items of information recorded at the health centre and hospitals were found to be reliable when they were checked against each other.

Analysis of the data was carried out by a manual punch-card technique.

FINDINGS

There were 532 admissions to hospital during the 4 years, a crude hospitalization rate of 69 per 1,000 person-years at risk (Table II). This rate varied over the 4 years from 78 to 59 but these differences were not statistically significant. The number of persons hospitalized decreased from 124 in 1954 to 104 in 1957, but again the decrease was not statistically significant. In each year there were from 12 to 21 per cent. more hospital admissions than persons hospitalized, that is there were from 1.1 to 1.2 admissions per person.

TABLE II

DISTRIBUTION OF HOSPITAL ADMISSIONS AND PERSONS HOSPITALIZED, 1954-57 (EXCLUDING HOSPITALIZATION FOR NORMAL CHILDBIRTH)

Year	No. of Hospital Admissions	Rate per 1,000 Persons at Risk	No. of Persons Hospitalized	Rate per 1,000 Persons at Risk	No. of Hospital Admissions per Person Hospitalized
1954	143	78	124	68	1.2
1955	125	66	112	59	1.1
1956	143	73	118	61	1.2
1957	121	59	104	50	1.2
Total	532	69	—	—	—

Age-specific crude hospitalization rates are shown in Table III. The initial high hospitalization rate for infants contrasts with the low rate among the 5 to 19-year-olds, and the levelling off in the subsequent age groups.

TABLE III

DISTRIBUTION OF ADMISSIONS BY AGE AND SEX FOR 1954-57 IN COMMUNITY STUDIED AND FOR 1956 IN ISRAEL AS A WHOLE

Age (yrs)	Community Population						Israel (1956)	
	Male		Female		Total		Male	Female
	No.	Rate*	No.	Rate	No.	Rate	Rate	Rate
0	33	256	18	178	51	222	284.0	263.5
1-4	58	99	19	34	77	67	75.7	57.2
5-19	33	29	27	24	60	26	42.9	40.2
20-39	46	43	139	126	185	86	51.6	108.8
40-59	41	66	74	103	115	84	78.2	94.8
60+	24	84	20	72	44	82	146.1	130.2
Total	235	62	297	76	532	69	71.6	88.6

* Rates per 1,000 person-years at risk in each category in italics.

The overall ratio of male to female admissions is 1 to 1.2 (Table III). Up to the age of 19 years, there is a higher rate for males than for females, and the male rate is very much higher at age 0 to 4 years. The rate for female admissions also is high in infancy, and both male and female rates decline

during childhood. At 20 to 39 years, hospitalization rates again rise, this rise being associated with a preponderance of female admissions which continues into the 40 to 59-year age group. The male hospitalization rate is higher than the female rate in persons aged 60 years and over.

Of the 532 admissions during the 4-year period, 149 were Europeans, 101 Middle Easterners, and 282 North Africans (Table IV). Since demographic information was available by region of origin only for the years 1956 and 1957 (Table I), analysis of admissions by region of origin and age of patient was undertaken for these two years only. Table IV shows that the total number of admissions during 1956-57 was 264, of which 73 were Europeans, 140 North Africans, and 51 Middle Easterners, yielding origin-specific hospitalization rates of 63 for Europeans, 76 for North Africans, and 52 for Middle Easterners. To validate these differences in hospitalizations among the three groups, the summary χ^2 test of Mantel and Haenszel (1959) was performed and the differences found to be statistically significant ($\chi^2 = 6.842$; $n = 2$; $0.02 < P < 0.05$).

TABLE IV

DISTRIBUTION OF HOSPITAL ADMISSIONS BY PLACE OF ORIGIN AND AGE, 1956-57 ONLY

Age (yrs)	Region of Origin						Total	
	Europe		North Africa		Middle East		No.	Rate
	No.	Rate*	No.	Rate	No.	Rate	No.	Rate
0	1	53	17	119	2	22	20	89
1-4	4	35	35	6	1	18	40	27
5-19	6	22	21	34	6	77	33	80
20-39	20	78	45	85	23	77	88	74
40-59	33	90	14	68	6	41	53	104
60+	9	53	8	160	13	203	30	66
Total	73	63	140	76	51	52	264	66

* Rates per 1,000 person-years at risk in italics
 $\chi^2 = 6.842$; $n = 2$; $0.02 < P < 0.05$

The age-specific rates indicate that the largest differences occur at ages 0 to 4 and 5 to 19 years, North African admissions being more common than those of Europeans or Middle Easterners. In the 20 to 39-year age group, the North African rate is only slightly above the average. At age 40 and over, the rates vary considerably, possibly because of small numbers. High rates of admission in the 60-year and over age group occurred among Middle Easterners and North Africans who had fewer old people at risk than the Europeans.

Analysis of the diagnostic groups (*i.e.* the diagnosis on discharge from hospital) (Table V, opposite) shows that the main causes of admission and were infectious

TABLE V
DISTRIBUTION OF HOSPITAL ADMISSIONS BY REGION OF ORIGIN AND DIAGNOSTIC GROUP, 1954-57

Diagnostic Group	Region of Origin						Total All Regions	
	Europe		North Africa		Middle East			
	No. of Hospitalizations	Per cent.	No. of Hospitalizations	Per cent.	No. of Hospitalizations	Per cent.	No. of Hospitalizations	Per cent.
* 1. Respiratory tuberculosis (C1)	3	2	2	1	4	4	9	2
2. Infectious diseases (C3–C11, C38)	7	5	44	16	8	8	59	11
3. Neoplastic lesions (C12, 13)	9	6	6	2	9	9	24	4
4. Allergic, metabolic, and nutritional diseases (C14 to 18)	2	1	6	2	1	1	9	2
5. Psychoses, psychoneuroses, etc. (C19) ..	12	8	9	3	5	5	26	5
6. Diseases and disorders of the eyes (C21) ..	0	0	6	2	6	6	13	2
7. Diseases of the cardiovascular system (C20, C23 to 27)	9	6	11	4	8	8	28	5
8. Diseases of the respiratory system (C28 to 34, C22)	15	10	41	15	9	9	65	12
† 9. Diseases of the gastrointestinal system (C35, 36, 37, 39, 40)	28	19	27	10	5	5	60	11
10. Diseases of the renal tract (C41)	4	3	10	3	5	5	19	4
‡ 11. Diseases of the genital system (C42, 43)	20	13	25	9	16	16	61	12
12. Curettages and abortions (C43)	11	7	43	15	11	11	65	12
13. Diseases of the skin, congenital and ill-defined conditions (C44, 45, 46, 48, 49)	18	12	39	14	11	11	68	13
14. Accidents and diseases of bone (C47, 50) ..	10	7	12	4	4	4	26	5
Total	149	(100)	281	(100)	102	(100)	532	100

* Diagnostic groups follow the grouping of the "C" list of the International Classification of Diseases, Injuries (WHO, 1955).

† Excluding diarrhoea and enteritis (C38) which is included under Infectious Diseases.

‡ Including complications in and around pregnancy and labour but excluding curettages and abortions.

respiratory diseases, gastrointestinal disorders, conditions of the female genital tract including curettages and abortions, and a miscellaneous group of congenital, skin, and ill-defined conditions.

Infectious and respiratory diseases were prominent causes of hospitalization among North Africans and the main causes of admission at ages 0 to 4 years.

Disorders of the genital system and curettages and abortions were prominent causes of admission at ages 20 to 39 years. There were 43 admissions for abortions and curettages in North African women aged 20 to 59 years and 22 among the rest, a ratio of 2 to 1, whereas the expected ratio is about one to one.

Only 2 per cent. of North Africans were hospitalized for neoplasms, benign or malignant, compared with 6 per cent. of Europeans and 9 per cent. of Middle Easterners.

5 per cent. of all admissions were for mental illness, these admissions being more numerous especially at ages 20 to 59 among Europeans. The rate for mental hospitalization was 3.4 per 1,000 person-years at risk for all ages.

In the 60-years and over age group, cardiovascular and gastrointestinal tract conditions accounted for 23 out of 44 admissions.

Table VI (overleaf) shows the distribution of hospital admissions by duration of stay in hospital. 243 admissions (*i.e.* 46 per cent. of the total) were hospitalized for 1 to 7 days, and a further 123 (23 per cent.) for 8 to 14 days. On the other hand, 58 admissions were for 36 days and longer and of these fourteen were for 100 days or longer. Admissions for abortions and curettages and accidents required an average stay of 4 and 8 days respectively; admissions for tuberculosis, mental disease, and cardiovascular disease were of much longer duration. Admissions for the other diagnostic groups were in most cases for from 1 to 35 days. Of the 58 admissions lasting 36 days and longer, 28 were for chronic chest and mental diseases.

The 37 admissions for all mental and chronic chest diseases required 3,661 days of hospitalization out of a total of 9,815 for all causes (Table VII, overleaf). The greater part of the stay for these chronic diseases occurred in 1954 (1,989 days), and in subsequent years the total number of days spent in hospital and the average hospital stay both decreased greatly. This markedly influenced the average hospital stay for all admissions, which fell from 26 days per admission in 1954 to between 15 and 16 days in 1955 to 1957. During the whole 4-year period the

TABLE VI
DISTRIBUTION OF ADMISSIONS, 1954-57, BY DIAGNOSTIC GROUP AND DURATION OF HOSPITAL STAY

Diagnostic Group	Duration of Stay in Hospital (days)						Mean Stay (days)
	1-7	8-14	15-35	36-99	100+	Total	
1. Respiratory tuberculosis	1	—	—	1	7	9	165
2. Infectious diseases	20	17	18	4	—	59	7
3. Neoplastic lesions	6	8	8	2	—	24	13
4. Allergic, metabolic, and nutritional diseases	2	2	3	2	—	9	23
5. Psychoses, psychoneurosis, etc.	—	5	4	12	5	26	77
6. Diseases and disorders of the eyes	5	4	4	—	—	13	14
7. Diseases of the cardiovascular system	7	6	10	4	1	28	23
8. Diseases of the respiratory system	32	17	13	3	—	65	13
9. Diseases of the gastrointestinal system	17	23	15	5	—	60	18
10. Diseases of the renal tract	5	3	8	3	—	19	20
11. Diseases of the genital system	31	16	12	2	—	61	13
12. Curettages and abortions	61	3	1	—	—	65	4
13. Diseases of the skin, congenital, and ill-defined conditions	37	16	8	6	1	68	15
14. Accidents and diseases of bone	19	3	4	—	—	26	8
Total	243	123	108	44	14	532	18

TABLE VII
ANNUAL DISTRIBUTION OF ADMISSIONS, 1954-57 BY DURATION OF HOSPITAL STAY

Year	Total No. of Days of Hospitalization (All Admissions excluding Normal Child-birth)	Average Hospital Stay per Admission (days)	Chronic Chest and Mental Diseases (including Tuberculosis)		Average Hospital Stay per Admission, excluding Chronic Chest and Mental Diseases (days)
			Total No. of Days	Average Hospital Stay (days)	
1954	3,719	26	1,989	124	14
1955	2,001	16	702	88	11
1956	2,202	15	405	81	13
1957	1,893	16	565	71	12
Total	9,815	18	3,661	100	12

average hospital stay excluding chronic chest and mental disease fluctuated only slightly (between 14 and 11 days per admission).

The mean hospital stay for the various age groups was as follows:

Age Group (yrs)	No. of Days
0	20
1-4	14
5-19	15
20-39	18
40-59	22
60+	20

The longer mean hospital stay in the first year of life reflects the serious nature of infant morbidity. Children aged 1 to 4 years were hospitalized predominantly for periods of up to 14 days. As the age at admission increases up to 59 years so there is an increase in the length of hospital stay. In persons

aged 60 years and over, admission for 1 to 7 days and for 36 days and over decreased, but admissions for 22 to 35 days increased.

DISCUSSION

Attempts were made to keep constant as many variables as possible, and the population and its physical habitat were both selected with this aim in view. In addition one of us (L.S.T.) has been associated with the community and medical service since 1954.

Medical recording was accurate and standardized and the sources used for the collection of data were meticulously counter-checked. However, because the health centre records had been planned primarily for service use, we were unable to include in the study additional variables, such as the income and education of adults at risk. In future studies the records would need to be modified and in addition the study would need to extend longer than 4 years so as to allow for more fruitful statistical analysis.

We feel that certain aspects of the service, even if unmeasured, particularly influenced admissions. For example, from 1955 onwards the number of new cases of severe chronic respiratory disease decreased and a policy of home-treatment was instituted for persons suffering from chronic illness. This is reflected in the marked decline in hospitalization for chronic mental and respiratory diseases from 1,989 days in 1954 to 702 days in 1955, and a further less dramatic decline in 1956 and 1957.

The decline in the number of admissions and in the number of persons admitted to hospital is not statistically significant, possibly because of the small numbers studied. The crude hospitalization rate of 69 per 1,000 person-years at risk may be compared

with findings in studies of communities where a medical service was more or less easily available to all, bearing in mind that the definition of hospital admission or hospital discharge varies, sometimes considerably, from study to study, and that age and occupational class may differ from those of our immigrant population which was young and mainly of the lower social classes (occupational classes IV and V). Our findings are comparable with those of other general practitioner studies in England and Canada by Forsyth and Logan (1960), Roth and others (1955), Fry (1959), and Logan and Cushion (1958), and compare favourably with the Israeli rate of 79.9 in 1956.

A comparison of age-sex distribution in our study with that of the Jewish population in Israel in 1956 (see Table III) indicates that both males and females were hospitalized less frequently in our community, although the ratio of males to females was similar in both studies for all age groups. Infants had a far higher admission rate than those in other age groups and persons aged 5 to 19 years had a lower rate. The age-sex distribution in the general practice study of Horder and Horder (1954) much resembles ours, but differs in that there is a second peak of admissions in the oldest age groups, an observation noted also by Fry (1959) for persons aged up to 69 years. The reason for the absence of this peak in our study is not clear, although it is possible that families and hospital doctors are reluctant to hospitalize this group.

The preponderance of male hospital admissions in childhood in Israel was noted by Winter and Mainzer (1960) and is confirmed here.

That the cultural origin of a population may play an important role in determining hospital admission rates is amply illustrated in our community, which consists of immigrants from Europe, North Africa, and the Middle East. The overall difference in the crude hospitalization rate between the three groups is statistically significant, but the biggest differences are localized to the age group 0 to 4 years. Because of the small numbers of Middle Eastern and European children at risk, no statistically valid comparison of rates for this age group can be made. However, the numbers of North African children hospitalized were far greater than those in the other two groups, and this we attribute partly to the larger number of children at risk and the larger number of children per family, as well as to cultural factors such as poor food hygiene among the North African families.

The number of admissions for abortions and curettages among North African women aged 20 to 39 years was greater than for women from Europe or the Middle East. This also applies to the fertility and birth rates (Yekutieli and Berendt, 1954-57).

The question that arises is whether the high fertility rate among North African women is accompanied by a relatively high natural abortion rate or whether interference with pregnancy is becoming more widespread among North Africans, as Halevi and Brzezinski (1958) have suggested. Our own observations lead us to believe that the acculturation process into a Western society is encouraging family size limitations, either by early termination of unwanted pregnancies or by a greater use of contraceptives.

By far the commonest causes of hospitalization are diseases of the genital system and abortions and curettages, then follow diseases of the respiratory system, then those of the gastrointestinal system, and infectious diseases, in that order (if the mixture listed as diseases of the skin and congenital and ill-defined conditions is excluded). Logan and Cushion (1958) list, in order, gastrointestinal disease, respiratory disease, neoplasms, fractures, and mental disorders as the commonest causes of hospitalization and Bloor's (1962) list comprises gastrointestinal, respiratory, and mental diseases.

Neither neoplasms, mental disorders, nor fractures account for a large number of hospitalizations in our community. Neoplasms were found least frequently in the younger North Africans, and fractures were relatively rare in spite of the hilly nature of the country. Respiratory diseases appear on all three lists but it is clear that bronchitis causes adult morbidity in England whereas childhood morbidity is common in Jerusalem.

The number of admissions for mental disease was only 26, but the hospitalization rate was 3.4 per 1,000 person-years at risk. Comparative figures for Israel (Halevi, 1960) fluctuated between 1.9 in 1954 and 2.9 in 1958, these rates varying with availability of hospital facilities. Europeans were more prominently represented than the other two groups.

Mental disease, together with chronic respiratory disease, was responsible for about 35 per cent. of the total hospital stay. Recent psychopharmacological advances have no doubt changed this picture greatly in 1965, but up till 1957 mental disease was one of the most serious problems in the community, in spite of the small number of hospitalizations involved.

The average length of occupation of a hospital bed in Israel in 1956 (Israel Central Bureau of Statistics, 1960) was 13 days, excluding hospitalization for pulmonary tuberculosis (194 days for males and females) and mental illness (for which hospital returns were incomplete and analysis unreliable). Thus in general our occupation of hospital beds (Table VII) was shorter than the Israeli average; in our opinion this may have been associated with a

tendency for health centre doctors to hospitalize earlier in the course of serious illness than is the case in Israel generally, and a tendency for hospital doctors to discharge health centre patients earlier than usual because it was known that there would be a satisfactory health centre follow-up of patients who had been hospitalized. These hypotheses are certainly worth further investigation.

CONCLUSIONS

Practical implications of this study concern three main subjects: methodology, the cultural aspects of hospitalization, and the effect of comprehensive medical care on hospitalization in a community.

Regarding methodology, it is clear that a study of a small community is capable of yielding rich results with the proviso that it be carried on long enough, and that it be adequately planned in advance to include the many variables which would permit the investigation of these problems in depth.

The cultural implications of hospitalization immediately focus attention on the medical problems of developing countries. The problem of infant morbidity is well known, and primarily requires a change in the population's health behaviour. This is a wide-open field of action for health education. The increase in artificially induced foetal wastage bodes no good for the mental health of culturally vulnerable North African women, but the concurrent fall in the fertility rate over the 4-year period indicates that the medically more acceptable solution of contraception has been making headway. Health education may break down the resistance to the use of present-day birth control techniques among women and their husbands.

The effect of comprehensive medical care on hospitalization could not be measured, but several signs indicate that it may be associated with an overall decrease in hospitalization and especially in admissions for chronic disease. It was also associated with a shorter overall stay in hospital. The measurement of the effect of this type of medical care on hospitalization will yield interesting results.

SUMMARY

- (1) A descriptive epidemiological study was made of hospital admissions from 1954 to 1957 in a geographically delineated community of about 2,000 persons (7,723 person-years at risk), all new immigrants originating in Europe, North Africa, and the Middle East.
- (2) The records used were those of a family and community health centre providing a compre-

hensive medical service, as well as those from the hospitals in Jerusalem.

- (3) There were 532 admissions, a rate of 68.9 per 1,000 person-years at risk.
- (4) Age-specific and sex-specific rates are analysed and discussed.
- (5) The statistically significant difference in hospitalization between Europeans, North Africans, and Middle Easterners is analysed and discussed in relation to diagnosis on discharge from hospital, with special reference to infectious and respiratory diseases in children aged 0 to 4 years and abortions and curettages in women aged 20 to 39 years.
- (6) Length of hospitalization is discussed in relation to diagnosis.
- (7) The practical implications of this study are summarized under three headings: methodology, the cultural aspects of hospitalization, and the effect on hospitalization of comprehensive medical care.

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