CHARACTERISTICS OF STABLE AND NON-STABLE FAMILIES IN THE MORBIDITY STUDY IN THE EASTERN HEALTH DISTRICT OF BALTIMORE[1]

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THE morbidity study, conducted from June, 1938 to May, 1943, in the original Eastern Health District of Baltimore, is the first investigation of illness where, due in large part to the method of sampling, families with relatively short periods of observation constitute an important part of the total observed population of families. Preliminary analysis of the morbidity experience of the first year of the study indicated that about one-third of the total families either moved out of or into the study area during that period (1). Movement of families continued throughout the five-year period. This paper presents a study of some of the socio-economic characteristics of the moving and non-moving families—characteristics which form a background for forthcoming analyses of illness.

Reed, *et al.* have presented some general characteristics of the population in the Eastern Health District (Wards 6 and 7) from which the morbidity study population was drawn (2). They found that in 1939, 56 per cent of the white families in the district were home owners. They concluded also that "The population is essentially in the lower middle economic class with a greater proportion of skilled and semi-skilled workers 'relatively' than in the rest of the city."

DATA AND METHOD OF STUDY

The method of sampling in this particular study differed from that of previous periodic surveys of illness. City blocks rather than streets formed the sampling units. Data showing the number of white and colored households in each square block in the

[1] From the Milbank Memorial Fund and the Division of Public Health Methods of the United States Public Health Service.

The Departments of Biostatistics and Epidemiology of the Johns Hopkins School of Hygiene and Public Health and the Baltimore City Health Department also cooperated in the general morbidity study on which this paper is based.

district had been obtained in a census made in 1933 by the Department of Biostatistics of the Johns Hopkins School of Hygiene, with the assistance of the Baltimore City Health Department. Since it was desired to limit the sample to around 1,500 families and yet have it representative of the population from which it was drawn, the census of families by square blocks made it possible to estimate the number of blocks needed to give the desired number of families. Entire city blocks in each of the ten census tracts were selected by picking square blocks roughly according to a checkerboard pattern. An effort was made to select a sufficient number of blocks from each census tract so that the sample drawn from each tract would constitute the same percentage of the total sample population as the white population of that census tract was of the white population of the entire Eastern Health District. A total of thirty-five square blocks was selected in this manner. All of the white families in these blocks, except families which refused to cooperate in giving information, formed the sample population.

The plan of the study was to follow white families that lived in a group of houses in certain blocks rather than to follow a selected group of families. No attempt was made to continue visiting families that moved out of these houses during the period of the study, but the new families that moved into the houses vacated in the sample blocks were included in the study.

It was considered important to obtain illness records from the families at fairly frequent intervals. Past experience had led to the belief that monthly visits would yield more accurate reports of illness than would visits at longer intervals of time and that with this plan fewer of the minor cases of sickness would be missed. Consequently, monthly visiting was initiated in this study.

A preliminary analysis of data of the first year of the study, June, 1938 to May, 1939, indicated that families moving out of or into the sample blocks constituted about 27 per cent of the total families observed two months or longer (1). Further observation indicated that one of the square blocks was atypical

with respect to the family moving rate when compared with the other thirty-four sample blocks. This fact was shown clearly in an analysis of family migration by Rider and Badger (3). At the end of two years, observation of the families in this particular block was discontinued.

Investigation of the chronic diseases was of major interest in the study of illness in the Eastern Health District. An analysis of the morbidity experience during the second year of observation indicated that only 22 per cent of the total families had in them one or more persons with a major chronic illness (4). It was considered desirable to study a larger number of chronic-disease families. Consequently, the original plan of the morbidity study was changed at the end of the third year of observation. Observation was continued in 17 (or one-half) of the 34 blocks for another two years; in the other 17 blocks all families, except those in which there was chronic illness, were no longer observed. A new sample of 34 blocks was selected in the same manner as the first sample and surveyed for illness. The families in this new group of 34 blocks which reported one or more cases of chronic illness were included in the study and observed for two years, or until May, 1943.

This particular analysis of moving and non-moving families is concerned with families observed two months or longer for illness in the 17 blocks which were included in the morbidity study for all five years.

In addition to the record of illness, certain information was obtained for each member of the household. These data were as follows: place and date of birth, employment status, highest education attained, place of employment, and type of work for all employed workers. Weekly or monthly earnings and other money income were inquired about and recorded at each visit. Information was also obtained as to whether the place of residence of the family was owned or rented. The valuation of owned homes and the amount of rent for rented living quarters was a part of the record. The record also included the number of rooms in the house or living quarters.

In this study the term "family" is synonymous with the usual meaning of the word "household." It includes all persons living in the house, the immediate family, other relatives, and any lodgers. Persons who had their meals in the house and did not sleep there were excluded.

All changes of residence formed a part of the records in the morbidity study. In this analysis a "move" included any move of the family unit into or from one of the houses in the 17 blocks.

Incidence of Moving

The average monthly incidence of moving of families in the 17 blocks for each of the five years, June, 1938 to May, 1943, is shown in Table 1. Data for three years for the original sample of 34 blocks studied by Rider and Badger are also included (3). This table includes all families visited to obtain a record of illness. The incidence rates are an expression of the ratio of the entries or departures to the total number of households present during each month. Rider and Badger noted that there was a tendency for migration of families to decrease as time after first observation increased. The same tendency was evident in the 17 blocks and continued into the fifth year of observation. The average monthly entry rate for entering families for the five-

Table 1. Average monthly incidence of moving in a sample of families—Eastern Health District of Baltimore.

Study Year	Average Monthly Rate Per 100			
	17 Retained Blocks[1]		34 Blocks[2]	
	Entry Rate	Departure Rate	Entry Rate	Departure Rate
First	1.75	1.55	1.70	1.72
Second	1.75	1.53	1.70	1.68
Third	1.50	1.42	1.42	1.49
Fourth	1.68	1.35		
Fifth	0.95	1.11		

[1] At the beginning of observation there were 855 families; during the five-year period a total of 828 entered and 755 departed.

[2] At the beginning of observation there were 1,589 families; during the three-year period a total of 918 entered and 913 departed. Data for the three-year period are from Rider, Rowland V. and Badger, George F.: Family Studies in the Eastern Health District, III. A Consideration of Issues Involved in Determining Migration Rates for Families. *Human Biology*, May, 1943, *15:* No. 2, pp. 116–120.

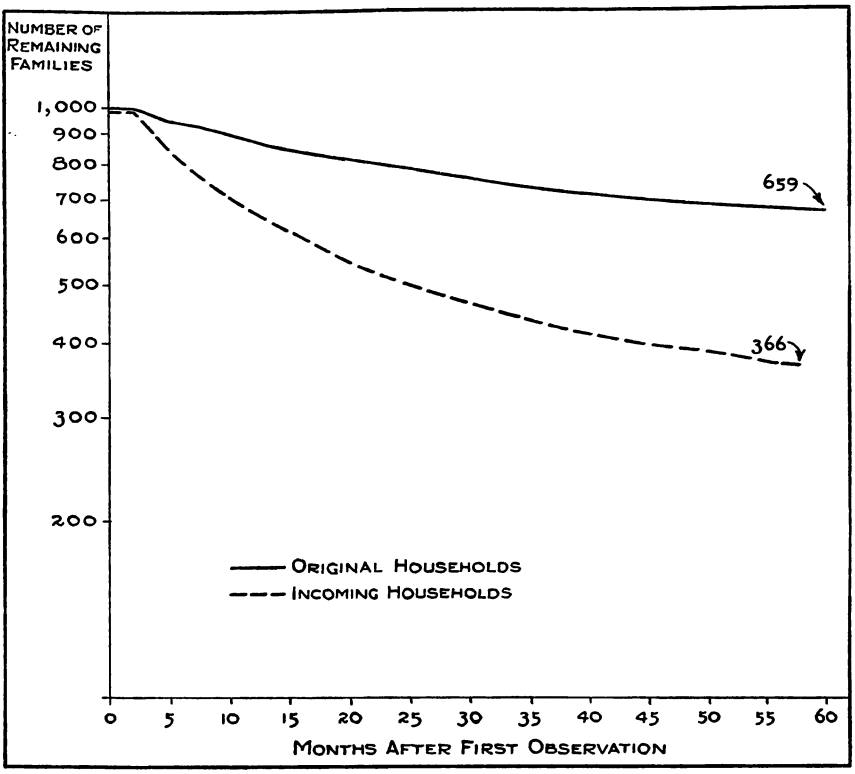

Fig. 1. Number of households remaining in the same house or at the same address in specific months after first observation—Eastern Health District of Baltimore.

year period was 1.52 per 100 families compared with a departure rate of 1.39 per 100. These rates indicate that there was no net loss of families in the 17 blocks during the period under consideration.

It is evident from Table 1 that in the five-year period there was a continual movement of families. The following question may be raised: In a period as long as five years do most of the families observed at the beginning of the period eventually participate in the moving rate or is family moving in this area chiefly confined to a particular group? Rider and Badger investigated this question (3).[2] Figure 1, following their procedure, also throws considerable light upon the question. The

[2] Rider and Badger used the method employed in life tables to obtain a nonmigration curve. It is similar to the life-table curve of survivorship.

heavy or continuous line shows the rate of loss over a period of five years for the original families or households; 659 out of 1,000 of these families had not moved during that period. On the other hand, the moving out of the incoming households, shown by the broken line, was at a much more rapid rate. About one-third remained in the sample blocks for 4.5 years. The non-migration curve of the incoming families shows a rapid decline during the first twelve months after observation; from that point on the decline is much more gradual. This means that a fairly high proportion of the incoming families constituted a very mobile group in that they moved into and out of the sample blocks within a relatively short period of time. Thirty-three per cent of these families moved out of the sample blocks within twelve months after entry.

Socio-Economic Characteristics of the Families

During the five-year period, June, 1938 to May, 1943, 1,270 families in the 17 blocks were observed two months or longer for illness. Slightly over a third of the families, 444, were present in the study in June, 1938, and did not move during the five years. The remaining 826 families moved one or more times while under observation. For purposes of analysis the families were divided into three groups: 1. The 444 families which did not move during the period were considered as a "stable" group. 2. Families which moved only once, either into or out of the sample blocks, during the five-year period were classed as an "intermediate" group. These numbered 448. 3. Families which moved more than once, either into and later out of one of the observed city blocks or vice versa during the five-year period, were classed as a "very mobile" group. These numbered 378.[3]

It is of interest to learn whether there were important differences among the three classes of families. Data which indicate certain socio-economic characteristics of the family and of its environment are age, education, and occupation of the head of

[3] In addition there were thirteen families which moved from one observed block to another observed block during the study. These families have been excluded from the present analysis because they do not fall within the definition of any of the three groups.

household. Home ownership, amount of family income, and amount of living space or housing are also considered important environmental factors of family life.

In periodic surveys, certain socio-economic characteristics of the family may change. For that reason, employment status, occupation of all gainfully employed persons, and amount of family income was asked about at each visit to the family and any changes were recorded. In this analysis, certain of these characteristics of the families observed for five years are expressed in terms of an average experience over that period. In the case of the "moving families," these characteristics are expressed in terms of the experience over one year, the year of first observation. Since moving of families took place in each of the five years, the experience of the total "moving families" actually represents conditions during the five-year period.

Age. The age distribution of the family heads classified according to the moving status of the family is shown in Appendix Table 1. In both groups of moving families the heads of household tended to be younger than those in the non-moving families. The mean age for each of the three groups was as follows:

	Mean (Years)	*Standard Error*	*Standard Deviation*
Very Mobile	35	± 0.62	12
Intermediate	39	± 0.63	13
Stable	49	± 0.61	12

The difference[4] between these means are significant and may

[4]

	Mean Age	*Difference*	*Standard Error of Difference*
Very Mobile	35.2	4.2	± 0.89
Intermediate	39.4		
Very Mobile	35.2	14.1	± 0.87
Stable	49.3		
Intermediate	39.4	9.9	± 0.87
Stable	49.3		

not be attributed to chance variation. It may be concluded that within the period studied the younger the family the greater were the probabilities of a change of residence during the period studied.

Size of Family. Since the younger families may be assumed to be going through the early process of growth in the biological sense, it is to be expected that they are smaller in size than families in the older group which have reached a later period of growth. Table 2 shows the mean size of family according to the moving status of the family. The distributions upon which the means are based are shown in Appendix Table 2. The "very mobile" families had the smallest mean size and the "stable" or oldest families had the greatest mean number of persons per family. The differences between the means for the "very mobile" and the "intermediate" compared with the "stable" group are statistically significant.[5]

Place of Birth. Two-thirds of the heads of household in the "stable" families were born in Baltimore, about 24 per cent were

Table 2. Mean size of family by moving status of the family—Eastern Health District of Baltimore.[1]

Moving Status	Mean Size	Standard Error of Mean	Standard Deviation	Number of Families
Very Mobile	3.35	±0.09	1.79	373[2]
Intermediate	3.53	±0.09	1.86	443[2]
Stable	3.82	±0.09	1.79	444

[1] Mean size of family is as of first year of observation for "very mobile" and "intermediate" families. It is an average for the five years for the "stable" families.
[2] Size of family was unknown for five families.

[5]

	Mean Size of Family	*Difference*	*Standard Error of Difference*
Very Mobile Intermediate	3.35 3.53	.18	±0.13
Very Mobile Stable	3.35 3.82	.47	±0.13
Intermediate Stable	3.53 3.82	.29	±0.13

Nativity	Moving Status of the Family					
	Very Mobile	Inter-mediate	Stable	Very Mobile	Inter-mediate	Stable
	Per Cent			Number of Families		
Total	100.0	100.0	100.0	378	448	444
Born in Baltimore	55.5	55.6	66.6	210	249	295
Born Elsewhere In U.S.	35.2	27.7	8.6	133	124	38
Born in Foreign Country	9.3	16.7	24.8	35	75	110
Unknown Birthplace						1

Table 3. Distribution of family heads according to nativity and moving status of the family—Eastern Health District of Baltimore.

foreign born, about 9 per cent were born in the United States but in areas outside of Baltimore. The moving families differed from the stable families chiefly in that they had relatively few heads of household who were foreign born. Also, in the moving families, the proportion who had come to Baltimore from other areas of the United States varied from 28 to 35 per cent—three to four times as high a per cent as was noted for the "stable" group of families. These data are shown in Table 3.

Home Ownership and Rental. There was a striking difference among the three groups of families with respect to home ownership (Table 4). About 79 per cent of the families which

Table 4. Distribution of families according to home ownership and moving status of the family—Eastern Health District of Baltimore.[1]

Classification	Moving Status			Moving Status		
	Very Mobile	Inter-mediate	Stable	Very Mobile	Inter-mediate	Stable
	Per Cent			Number of Families		
Total	100.0	100.0	100.0	378	448	444
Owners	5.0	25.0	78.8	19	112	349
Renters	95.0	75.0	21.2	359	336	94
Unknown						1

[1] Rent and ownership as of first observation.

did not move owned their homes compared with only 5 per cent of the "very mobile" group and 25 per cent of the "intermediate" group. Families renting homes in this area evidently had greater freedom of movement from one place to another than did those who owned homes. It is apparent that very few renters failed to move at some time during the five years of observation. Home ownership no doubt contributed to family stability, that is, non-moving.

Table 5 shows the mean amount of rent and the mean value of owned homes for each of the three groups of families. The mean amount of rent showed only slight variation when the three groups are compared; it varied from $24 per month for the "very mobile" families to a mean monthly rental of $21 for the "stable" families.

The value of the owned homes in the 17 blocks also showed relatively little variation; the mean values were from $2,500 to $3,000.[6] It may be concluded that the 17 blocks where the

Table 5. Mean amount of rent and mean value of owned homes of families classified according to moving status of the family—Eastern Health District of Baltimore.

Moving Status	Mean	Standard Error of Mean	Standard Deviation	Number of Families
	Monthly rental of rented homes[1]			
Very Mobile	$24	±0.44	8.19	351
Intermediate	23	±0.46	8.32	328
Stable	21	±0.87	8.19	89
	Value of owned homes[2]			
Very Mobile	$2,559	±190	760	17
Intermediate	3,008	±140	1,384	99
Stable	2,738	± 71	1,278	327

[1] Amount of rental is as of the time of the first observation of the family. Nine families received living quarters in return for services, 2 in the "very mobile" group, 2 in the "intermediate," and 5 in the "stable" group. These families have been excluded.

[2] Value of the home is as of the time of the first observation of the family.

[6] Under a system of ground rent, residential houses in the Eastern Health District of Baltimore may be bought separately from the land on which they stand. In cases where this was done, values of the houses noted here do not include the value of the land.

families in this study lived constituted an area with relatively uniform housing, since there was little variation in either rentals or in the value of owned homes.

Employment Status of Heads of Household. Table 6 presents the distribution of the heads of household according to employment status. The proportions employed ranged from 87 per cent in the "very mobile" group to 77 per cent in the "stable" group of families. The "intermediate" and the "stable" families had fairly similar proportions of their household heads

Table 6. Employment status of heads of household classified according to moving status of the family—Eastern Health District of Baltimore.[1]

Employment Status	Moving Status of Family		
	Very Mobile	Intermediate	Stable
	PER CENT		
Total	100.0	100.0	100.0
Employed			
Full Time	85.2	81.0	73.4
Part Time	1.9	2.5	3.8
Unemployed			
Seeking Work	5.0	3.6	2.9
Retired	0.8	2.7	3.4
Disabled	1.3	3.3	4.3
Other[2]	5.8	6.9	12.2
	NUMBER		
Total	378	448	444
Employed			
Full Time	321	363	326
Part Time	7	11	17
Unemployed			
Seeking Work	19	16	13
Retired	3	12	15
Disabled	5	15	19
Other[2]	22	31	54
Unknown	1	0	0

[1] Employment status is as of the first year of observation for the "very mobile" and "intermediate" families. For the "stable" families employment status is the average status over a period of five years.

[2] This class consists chiefly of unemployed housewives who were heads of household. In the "very mobile" group, 12 per cent of the heads were females; in the "intermediate", 13 per cent; and in the "stable" group 18 per cent.

classed as retired or disabled; from 6 to 8 per cent. In each of the groups a relatively small proportion were seeking work. The differences among the three groups of families actually are small and are due to the fact that some housewives not gainfully employed were head of the household. In the "very mobile" group, 12 per cent of the heads were females; in the "intermediate" group 13 per cent; and in the "stable" group 18 per cent were females.

Education of Heads of Household. There were interesting differences among the three groups of family heads with respect to educational attainment (Table 7). Slightly more than a third of the heads of both groups of "moving" households had more than a grade school education compared with only 20 per cent of the heads of the "stable" families. These differences are a reflection of an older age group in the "stable" families compared with the "moving" families. Very few of the household heads had college or professional education. Foreign-born heads of household have been excluded from Table 7 because

Table 7. Distribution of native-born heads of household by completed education and classified according to moving status of the family—Eastern Health District of Baltimore.[1]

Classification of Education	Moving Status of Family		
	Very Mobile	Intermediate	Stable
Total	100.0	100.0	100.0
None	0.3	1.1	1.6
Grade School	58.7	63.7	77.6
1–6 Grades	21.6	25.4	36.8
7 or 8 Grades	37.1	38.3	40.8
High School[2]	35.6	31.4	16.4
1–3 Years	23.2	20.6	12.5
4 Years	12.4	10.8	3.3
Business School	1.6	0.3	1.0
College[2]	2.5	2.9	1.3
1–3 Years	1.3		0.7
4 Years			0.3
Professional	1.3	0.6	2.0

[1] Heads of household with unknown educational attainment have been excluded; the proportion of unknown in each group was as follows: very mobile 7.9, intermediate 6.2, and stable 8.7 per cent.
[2] Total includes unknown years of high school or college.

they were not equally distributed among the three groups of families. Furthermore, it is believed that data on educational attainment of the foreign-born heads may not be strictly comparable with those for native-born heads.

Occupation of Employed Heads of Household. Occupational class is considered as a general indication of socio-economic status. Table 8 shows the distribution of the heads of the family in each of three groups accordingly to Edwards' occupational classification (5). The "stable" families had a relatively high proportion of their heads in the manager-proprietor class compared with either of the moving groups. On the whole, however, the three groups of families were more similar than dissimilar with respect to occupational class. The heads of household were concentrated in the skilled and semi-skilled classes.

Family Income. Table 9 presents the mean annual family income for each group of families. The annual income of the family includes money received from all sources by any member of the family. The mean family income was similar in the

Table 8. Occupational class of heads of the households according to moving status of the family—Eastern Health District of Baltimore.[1]

Occupational Class[2]	Moving Status of Family		
	Very Mobile	Intermediate	Stable
	per cent		
Total	100.0	100.0	100.0
Managers and Proprietors[3]	9.3	11.3	19.0
Clerks and Salesman	10.7	11.1	10.8
Skilled Workers	24.2	31.3	31.3
Semi-Skilled Workers	37.9	29.9	24.2
Unskilled Workers	8.2	8.0	5.6
Protective Workers	2.1	3.0	5.6
Service Workers[4]	7.6	5.4	3.5
Unknown[5]			

[1] Occupation as of first year of observation for "very mobile" and "intermediate" families. For "stable" families it is the average occupational class over a five-year period.
[2] Edwards—1940.
[3] Includes a few professional.
[4] Includes two domestic workers, one in the "mobile" and one in the "intermediate" group.
[5] Those with unknown occupation have been excluded from this table. The proportion of unknown in each group was less than 1 per cent.

"very mobile" and the "intermediate" groups The mean annual income of the "stable" families was significantly higher than the mean income of each of the moving groups of families.[7] The number of employed persons per family may be the factor which has contributed to these differences in mean family income. The "very mobile" group had 1.29 workers per family, the "intermediate" had 1.49, and the "stable" group had 1.73 per family. The distribution of the families by income group is shown in Appendix Table 3.

Crowding. Each family was given a crowding rating; that is, each was graded as to the number of rooms in relation to the number, age, and sex constitution of the family or household members. There were four categories: (1) more than adequate; (2) adequate; (3) unsatisfactory; and (4) very unsatisfactory. The description of these categories is as follows:

1. More than adequate: More than one room for sleeping per person or per married couple plus two additional rooms (for living room and kitchen).

Table 9. Mean family income according to moving status of the family—Eastern Health District of Baltimore.[1, 2]

Moving Status	Mean Income	Standard Error of Mean	Standard Deviation	Number of Families
Very Mobile	$1,724	± 49.38	± 865	308
Intermediate	1,754	± 50.94	± 967	362
Stable	1,913	± 52.50	± 1,007	369

[1] For the "very mobile" and "intermediate" groups, income is for the date first observed; for the "stable" group, it is for the third study year. Twenty-five families in the "stable" group having unknown income during the third year of observation but known income in another year were classed according to the income known for the study year nearest to the third year.
[2] Families which received relief or public assistance have been excluded.

[7]

	Means	*Difference*	*Standard Error of Difference*
Very Mobile Stable	$1,724 $1,913	$189	$73.03
Intermediate Stable	$1,754 $1,913	$159	$73.15

2. Adequate: One room for sleeping per person or for each two persons of suitable age and sex plus two additional rooms (for for living room and kitchen).

3. Unsatisfactory: One room for sleeping for each two persons of suitable age and sex, plus one additional room for kitchen.

4. Very unsatisfactory: Less than one room for sleeping for each two persons of suitable age and sex, plus additional room for kitchen.

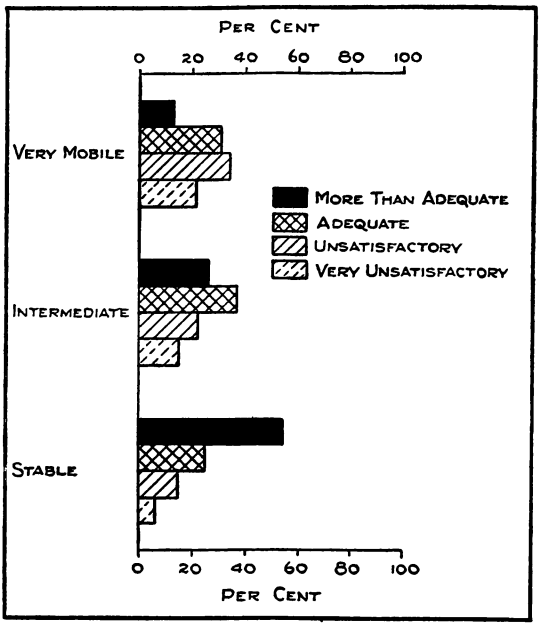

Fig. 2. Distribution of families by crowding rating—Eastern Health District of Baltimore.

In Appendix 4 there is a further description of what is meant by suitable age and sex groups for room sharing. The crowding rating is an attempt to arrive at a more sensitive index than is afforded by grades based on number of persons per room.

Figure 2 shows the distribution of each group of families according to their crowding rating. It should be recalled that the "very mobile" families had the smallest mean size (Table 2), yet about 56 per cent of these families were graded as having an unsatisfactory amount of living space. In comparison, the "stable" families, having the largest mean size of family, had an unsatisfactory rating for only 21 per cent of their total.

In Table 10 the families in each group are classified according to size and crowding rating. It is clearly apparent that the "stable" families, no matter what the size of family, had higher proportions which had "more than adequate" living space than did either of the other two groups of families. The "very mo-

bile" families showed the greatest degree of crowding in the small, medium, and large families compared with the "intermediate" and "stable" families.

Unsatisfactory living space in relation to size of family may have been an important reason for moving. Rider and Badger (3) obtained information as to the destination of the families which moved during the period June, 1938 to May, 1941. Destination was limited to whether the family moved to another address in the Eastern Health District (Wards 6 and 7), to some other part of Baltimore, or moved away from Baltimore. They found that about 50 per cent of the moving families moved to another address in the Eastern Health District, that is, they moved within a relatively small area. In view of the degree of crowding in the moving families, it seems reasonable to suppose that unsatisfactory living quarters had some influence upon family moving, especially since so many did not leave the Eastern Health District.

Certain Characteristics of All Family Members

The three groups of families included a total of 5,047 persons: 1,310 were in the "very mobile" group; 1,743 in the "intermediate" group; and 1,994 in the "stable" group. In each group

Table 10. Distribution of families by crowding rating and family size and according to moving status of the family—Eastern Health District of Baltimore.[1]

Crowding Rating	Moving Status								
	Very Mobile			Intermediate			Stable		
	Size of Family			Size of Family			Size of Family		
	1–2	3–4	5+	1–2	3–4	5+	1–2	3–4	5+
	PER CENT								
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
More Than Adequate	10.4	19.3	7.7	26.5	36.8	7.8	75.0	67.0	16.8
Adequate	61.1	5.3	24.4	51.6	20.5	43.7	15.5	13.2	51.1
Unsatisfactory	24.3	50.0	21.8	16.1	28.1	19.4	6.9	15.7	19.9
Very Unsatisfactory	4.2	25.4	46.1	5.8	14.6	29.1	2.6	4.1	12.2
Number of Families	144	150	78	155	185	103	116	197	131

[1] For the "very mobile" and "intermediate" groups, crowding rating and size of the family refer to the time of first observation; for the "stable" group they are an average for the five-year period.

the ratio of males to one hundred females was as follows: "very mobile" 98; "intermediate" 93; and "stable" 105.

Age. Table 11 shows the age distribution of the total males and females in each group of families. The "very mobile" and "intermediate" families differed from the "stable" families in that they had higher proportions of young children in them. The "stable" families had a higher proportion of middle and old-age persons, aged 45 and over, than was true of either of the moving groups. These populations thus were typical of young families, intermediate families, and older families in the biological sense.

Males and females in the three groups of families (Table 12) were classed according to the nature of their major activity, such as gainfully employed and not gainfully employed. The unemployed were classed as seeking work, attending school, disabled, or "other" which includes chiefly preschool children and, among females, also includes housewives.

Table 11. Age distribution of males and females according to moving status of the family—Eastern Health District of Baltimore. [1, 2]

Age Group	Moving Status of the Family					
	Very Mobile		Intermediate		Stable	
	Males	Females	Males	Females	Males	Females
	Per Cent					
Total	100.0	100.0	100.0	100.0	100.0	100.0
Under 1 Year	7.3	8.3	6.5	5.6	4.1	4.9
1– 4	11.8	9.2	8.3	9.8	5.5	4.2
5– 9	7.3	10.0	8.8	7.4	6.4	4.7
10–14	5.1	6.8	6.0	7.0	8.5	8.7
15–19	7.9	9.5	7.4	10.0	10.0	9.7
20–24	16.6	18.7	10.7	15.5	10.3	8.9
25–34	22.1	18.5	23.5	19.7	16.6	15.1
35–44	11.1	9.0	12.7	10.4	13.4	13.8
45–54	6.5	5.3	8.7	6.0	12.6	13.4
55–64	2.8	3.2	4.5	4.4	8.1	8.0
65 & Over	1.5	1.5	2.9	4.2	4.5	8.6
Number of Persons	646	663	841	900	1,015	969

[1] Age of all persons is as of the mid-point, or January 1st, of the study year of first observation.

[2] Persons who have been excluded because age was unknown were as follows: "Very Mobile", one male; "Intermediate", one male and one female; "Stable', six males and four females.

Approximately 60 per cent of the males in each group were employed. The males in the three groups showed considerable similarity with respect to all classes of employment status except that in the "stable" families a higher proportion were in school and a lower proportion were classed as "other" than was true of the moving families. Twenty-six per cent of the females in the "stable" families were gainfully employed compared with 16 per cent in the "very mobile" group.

It will be recalled that the number of employed persons per family was lowest in the "very mobile" group, 1.29; highest in

Table 12. Percentage distribution of males and females according to employment status and by moving status of the family—Eastern Health District of Baltimore.

Employment Status	Moving Status of the Family		
	Very Mobile	Intermediate	Stable
	MALES		
Total	100.0	100.0	100.0
Employed			
Full Time	59.1	54.6	61.6
Part Time	1.2	2.4	2.0
Unemployed			
Seeking Work	3.6	5.5	4.3
Disabled	1.4	2.2	2.1
School	12.4	15.1	19.0
Other[1]	22.3	20.2	11.0
Number of Persons	645	841	862
	FEMALES		
Total	100.0	100.0	100.0
Employed			
Full Time	15.6	21.1	23.6
Part Time	0.9	1.0	2.3
Unemployed			
Seeking Work	3.5	3.0	2.2
Disabled	0.4	2.3	1.9
School	14.2	14.0	16.0
Other[1]	65.4	58.6	54.0
Number of Persons	662	897	864

[1] Among males this class consists chiefly of preschool-age children; among females it consists chiefly of preschool-age children and housewives.

the "stable" group, 1.73; and in the "intermediate" group with 1.49 employed person per family fell between the two extremes.

Occupation. Table 13 shows the usual differences in the type of occupation of employed males compared with females. In each group of families gainfully employed females were concentrated in three occupational classes: clerks and sales persons, semi-skilled workers, and service workers. The males were classified chiefly as skilled or semi-skilled workers.

From this analysis of socio-economic characteristics of the families observed in the 17 blocks and classed according to moving and non-moving, several points of interest have been noted. It had already been shown by Reed, *et al.* (2) that the Eastern Health District of Baltimore was populated chiefly by lower middle-class families; employed white persons mainly were skilled and semi-skilled workers and housing was considered fairly uniform. These same characteristics were found true

Table 13. Distribution of all employed persons according to occupational class and moving status of the family—Eastern Health District of Baltimore.[1]

Occupational Class[2]	Moving Status					
	Very Mobile		Intermediate		Stable	
	Males	Females	Males	Females	Males	Females
	Per Cent					
Total	100.0	100.0	100.0	100.0	100.0	100.0
Managers and Proprietors[3]	8.5	7.3	9.2	8.1	13.9	5.9
Clerical and Salesmen	12.2	21.1	12.9	21.8	15.3	41.4
Skilled Workers	24.2	4.6	30.1	4.1	27.9	3.2
Semi-Skilled Workers	38.8	39.4	30.7	43.1	29.8	33.3
Unskilled Workers	8.3	0.9	9.0	0.0	6.6	0.4
Protective Workers	1.9	0.0	3.0	0.0	4.1	0.0
Service Workers[4]	6.1	26.7	5.1	22.9	2.4	15.8
Number of Persons[5]	376	109	466	197	541	222

[1] For the "very mobile" and "intermediate" groups, occupation refers to that of the date first observed; for the "stable" group, it is an average of the five years.
[2] Edwards—1940.
[3] Includes a few professional.
[4] Includes 25 domestic workers; 3 females in the "very mobile" group, 1 male and 9 females in the "intermediate" group, and 12 females in the "stable" group.
[5] Occupational class was unknown for "very mobile," 3 males; "intermediate," 4 males; and "stable," 4 males. A very small number employed on work relief have been excluded.

of the families in the sample 17 blocks. There the moving groups were composed mainly of families living in rented homes; they were generally smaller in size, had fewer wage-earners per family, and were living under more crowded conditions than were the "stable" families.

Summary

A study of some of the socio-economic characteristics of the families in the morbidity study in the original Eastern Health District (Wards 6 and 7) of Baltimore has been presented. The socio-economic characteristics describe the observed population and afford a background for forthcoming analyses of illness.

During the five-year period June, 1938 to May, 1943, 1,270 families in 17 of the sample blocks were observed two months or longer for illness. Eight hundred and twenty-six of these families moved one or more times and 444 did not move during the five years.

The moving families differed from those that did not move as follows: Among the moving families the head of household tended to be younger, the size of family was generally smaller, a lower proportion of household heads were foreign born, relatively few were home owners, and the educational attainment was somewhat higher than among families that did not move.

There were no marked differences among the families with respect to mean rentals and valuation of owned homes. Employment status and occupation of heads of household also showed little variation among the groups studied.

The mean family income of the families that did not move was significantly higher than the mean income of the moving families. The families that did not move also had more wage-earners per family than did the moving families.

The families were rated as to the degree of crowding in their homes; that is, each was graded as to the number of rooms in relation to the number, age, and sex constitution of the family or household members. No matter what the size of family, the families that did not move had higher proportions which

had "more than adequate" living space than did the moving families. The families which moved most frequently showed the greatest degree of crowding.

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Appendix Table 1. Age distribution of family heads according to moving status of the family—Eastern Health District of Baltimore.[1]

Age Group	Moving Status of the Family					
	Very Mobile	Intermediate	Stable	Very Mobile	Intermediate	Stable
	Per Cent			Number of Families		
Total	100.0	100.0	100.0	378	448	444
15–19	0.5	1.1	0.0	2	5	0
20–24	23.4	10.7	0.9	88	48	4
25–34	35.8	35.3	14.4	135	158	64
35–44	20.7	23.0	23.4	78	103	104
45–54	11.1	14.5	27.1	42	65	120
55–64	6.4	9.8	20.7	24	44	92
65+	2.1	5.6	13.5	8	25	60
Unknown				1		

[1] Age of all persons is as of the midpoint, or January 1, of the study year of first observation.

Appendix Table 2. Distribution of families according to size and moving status of the family—Eastern Health District of Baltimore.[1]

Family Size	Moving Status			Moving Status		
	Very Mobile	Intermediate	Stable	Very Mobile	Intermediate	Stable
	Per Cent			Number of Families		
Total	100.0	100.0	100.0	378	448	444
1	5.6	5.0	4.0	21	22	18
2	33.0	30.0	22.1	123	133	98
3	27.9	24.8	23.2	104	110	103
4	12.3	16.9	21.2	46	75	94
5	9.9	10.8	12.8	37	48	57
6	5.1	5.0	8.6	19	22	38
7	2.7	2.7	4.3	10	12	19
8	1.6	2.3	1.8	6	10	8
9	0.8	1.4	1.1	3	6	5
10	0.5	0.5	0.7	2	2	3
11	0.3	0.2	0.2	1	1	1
12	0.3	0.4		1	2	
Unknown				5	5	

[1] Data for the "very mobile" and "intermediate" groups of families refer to size of family as of the date of first observation; those for the "stable" group represent an average of the five-year period.

Appendix Table 3. Annual income of families classified according to moving status of the family—Eastern Health District of Baltimore.[1, 2]

Income Group	Moving Status			Moving Status		
	Very Mobile	Intermediate	Stable	Very Mobile	Intermediate	Stable
	Per Cent			Number		
Total	100.0	100.0	100.0	378	448	444
Relief	7.5	5.5	3.2	25	21	12
$0.00– 500	2.7	2.9	3.9	9	11	15
500– 999	12.9	14.9	12.1	43	57	46
1,000–1,499	26.5	26.6	20.5	88	102	78
1,500–1,999	25.2	22.4	21.5	84	86	82
2,000–2,499	10.2	12.3	16.8	34	47	64
2,500–2,999	7.5	6.5	10.2	25	25	39
3,000–3,999	6.0	5.5	8.4	20	21	32
4,000–4,999	0.9	2.1	2.1	3	8	8
5,000 & Over	0.6	1.3	1.3	2	5	5
And Also:						
Unknown				45	65	63

[1] For the "mobile" and "intermediate" groups, income refers to the date first observed; in the "stable" group, income is for the third year of observation. Twenty-five families in the "stable" group having unknown income during the third year of observation had a known income in another year; the known income for the year of observation, nearest to the third year was taken for these families.

[2] The per cents in this table are based on total families with known income. The proportion of unknown in each group was as follows: "very mobile" 11.9, "intermediate" 14.5, and "stable" 14.2 per cent.

Appendix 4

Instructions (crowding rating) given for determining suitable age and sex for sharing a sleeping room were as follows:

1. *Sex:* One sleeping room for two persons of opposite sex is considered suitable if the two persons are married or if both are under 6 years of age.

2. *Age:* (a) A separate sleeping room is to be allowed for infants under 2 years of age, except where there is more than one infant under 2.

(b) Two persons under 20 years of age who are of the same sex may share the same sleeping room if there is less than six years difference in their ages.

(c) Two adults who are 20 years of age or older and of the same sex may share the same sleeping room if there is less than fifteen years difference in their ages.

(d) An adult who is 20 to 25 years of age may share a room with a younger person of the same sex if there is less than six years difference in their ages.

3. *Lodgers:* A separate room is to be allowed for each lodger of different sex, unless a married couple. Related lodgers will be treated in the same way as family members, except that no allowance will be made for a separate living room and kitchen for lodgers.