

A COMPARISON OF MORBIDITY IN TWO AREAS

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Aintree

*With change of place, we change our ideas; nay our
opinions and feelings (Hazlitt—'On Going a Journey')*

THE practice is single-handed and covers two separate geographical and ecological areas in the suburban fringe of Liverpool. It had been felt for some time that there was a higher morbidity rate in the 'younger' area than in the original section of the practice, and the object of the present survey was to investigate this hypothesis, and if found to be based on fact, to try to find the reason for the differing morbidity rates.

During the first three months of 1961, a pilot survey was carried out, which indicated that the original intuition was correct, and accordingly a larger scale investigation was planned, the results of which are presented here.

For convenience the two areas of the practice will be referred to as Area A and Area B. Area A borders on what is, at present, green belt. It is a new community, having been in existence only since 1955, living largely in three-bedroomed, semi-detached houses whose cost has risen from £1,900 to £2,400 in seven years. There are also a few local authority houses for rent and a dozen or so pensioners' flats. The community is served by a comprehensive, although largely non-competitive, shopping centre, has three churches, three doctors, two primary schools (with no 11-plus examination), a library and a public park. Interests are catered for by a conservative club, a rate-payers association, various organizations belonging to the churches, a small youth club, night-school classes at the local school and clubs serving special interests such as gardening, football and dramatics.

The practice in this area has been in existence since July 1958, starting in temporary cramped premises, but moving in 1960 to a newly built surgery after I had come to live in the district. The

majority of patients are in social classes II and III.

Area B is older and rather more mixed, comprising all strata of society with the emphasis on classes IV and V. The practice has been in existence since 1926. The majority of patients live in rented accommodation, most of the property being between 30 and 60 years old. About ten per cent of the patients are living in a pleasant pre-war corporation housing estate. There are a few cases of overcrowding, where younger married children awaiting their turn on the lengthy housing list are living with their parents. The pattern of change seems to be that the fertile, but impecunious young couples, when they are eventually housed by the local council, move out of the area into a neighbouring 'new town'; this emigration is balanced by the more thrifty ones, who, since the recent Rent Act, are able to purchase decontrolled 40-year-old properties in the area for £1,000 to £1,500. There are the usual amenities one would expect in a settled area, churches, schools, library, etc., although coming under the aegis of Liverpool as it does, the 11-plus can become a source of family tensions. There is a little light industry in the neighbourhood that provides convenient full- and part-time employment for working wives.

The two areas are also distinct geographically. They lie two miles apart, separated from each other by the large wedge of Aintree racecourse. They are administered by separate executive councils. Owing to the inconvenience of public transport there is virtually no diffusion of patients between the two surgeries. Surgery hours in area A are 9.30 to 10.00 a.m. and 7.00 to 7.30 p.m., and in area B are 11.00 to 12.00 noon and 5.30 to 6.30 p.m. As there are approximately twice as many patients in area B as in area A, the available consulting time per patient is about equal in both areas.

The total practice population at the conclusion of the survey year was 2,864; there were 990 in area A and 1,874 in area B. The age distribution in area A is markedly uneven and reflects the preponderance of young, married couples and their families. Area B shows an even distribution over the whole age range (table I).

The population over 50 years of age in area A is too small to give meaningful rates, so for the purpose of comparing morbidity in the two areas, only the age group 0-49 has been used. The percentage distribution for this age-range is shown in table II.

In view of the difference between the areas, all further analysis was carried out on the age-specific rates.

Method of recording

At each consultation an entry was made on a foolscap sheet, prepared as a grid, detailing the sex, age-group and diagnosis and

TABLE I
AGE/SEX DISTRIBUTION IN AREAS A AND B

		0-	10-	20-	30-	40-	50-	60-	70+	Total	
		<i>Area A</i>									
<i>Area A</i>	Males ..	166	52	51	147	48	24	8	4	500	
	Females ..	132	44	93	147	38	17	9	10	490	
	Total ..	298	96	144	294	86	41	17	14	990	
		<i>Area B</i>									
		Males ..	115	110	138	144	99	115	101	69	891
<i>Area B</i>	Females ..	125	119	127	127	112	147	117	109	983	
	Total ..	240	229	265	271	211	262	218	178	1874	

TABLE II
PERCENTAGE AGE/SEX DISTRIBUTION (0-49) IN BOTH AREAS

		<i>Area</i>	0-	10-	20-	30-	40-
Males ..	A	35.8	11.2	11.0	31.6	10.4	
	B	19.0	18.1	22.8	23.8	16.3	
Females ..	A	29.0	9.7	20.5	32.4	8.4	
	B	20.5	19.5	20.8	20.8	18.4	

allowing differentiation between first and subsequent consultations for that particular 'disease-incident'. Each sheet was sufficient to take the consultations for one week, at the end of which the details were consolidated and entered in a ledger. Separate sheets were used for each area. Only those consultations were recorded that concerned patients registered on the N.H.S. list; temporary residents, private patients and patients seen on behalf of colleagues were excluded. A consultation is defined as "any occasion when a patient (or his representative) attends at the surgery for treatment or advice or when the practitioner visits the patient to give treatment or advice elsewhere". (It will be seen that this definition excluded all telephonic transactions, but includes the personal request for "some more of Dad's tablets".) Only one diagnosis was made per consultation. When multiple diagnoses occurred, it was often difficult to decide which to record, but, as far as possible, either that diagnosis more relevant to the patient's symptoms at the time, or the principal disease, was the one chosen. For example menorrhagia with an

associated iron-deficiency anaemia may present either as anaemia with lassitude, palpitation, breathlessness—or as a complaint of heavy, prolonged bleeding. The diagnostic label here depends on the primary complaint. On the other hand, the patient with sciatica due to a secondary malignant deposit would be classified under neoplasms. 'First consultations' are strictly first consultations; a patient with two attacks of acute bronchitis during the year would be recorded as having two first consultations for acute bronchitis. In the *Morbidity Survey* (Logan and Cushion, 1958), no distinction was made between separate attacks of the same illness on the patient.

The diagnoses were based on the main headings of the *International Classification of Disease*. Group 14 (congenital malformations) were, on account of their rarity, distributed among the other groups according to the system affected. Group 11—deliveries and complications of pregnancy, childbirth and the puerperium is not representative, inasmuch as I do not undertake my own confinements, and those figures are records solely of antenatal care shared with the hospital. For the same reason I had no occasion to use group 15 (certain diseases of early infancy), and this has been omitted. It is appreciated that such a simple diagnostic classification as the first level of the *International Classification of Disease* lacks precision, but the primary purpose of this investigation was to determine possible causes for differing consultation rates. One of these possible causes could be a preponderance of illness among one or other diagnostic groups, and for this purpose a simple disease classification was adequate. Furthermore, the pilot survey showed that there were insufficient numbers to make a more detailed diagnostic comparison with any statistical accuracy.

Mention must be made of group 5—mental, psychoneurotic and personality disorder. This group of conditions is one of my special interests and I thus might be expected to diagnose these illnesses more frequently than the average practitioner. In an effort to overcome this bias, I have deliberately classified only overt emotional illness as such. Many cases of 'fibrositis', dyspepsia, menstrual disorder and the like, were in all probability psychosomatic manifestations, but this might not be universally accepted. This problem of bias in general practice has been discussed by Howard (1959).

Group 18—non-sickness—has been sub-divided. Routine antenatal care has been placed in group 11 (maternity); the vast majority of patients left in group 18 are there by reason of prophylactic injections.

Results

During the survey year there were 13,378 consultations, comprising 11,326 surgery attendances and 2,052 visits, an A/V ratio of 5.5:1. (table III).

The average number of surgery attendances per patient registered is 4.0 and the average number of visits 0.7—giving a total of 4.7 services per year (table IV).

TABLE III
TOTAL CONSULTATIONS (ALL AGE GROUPS)
AS SURGERY ATTENDANCES AND VISITS

	<i>Surgery attendances</i>	<i>Visits</i>	<i>A/V ratio</i>
Area A	4187	573	7.3 : 1
Area B	7139	1479	4.8 : 1

TABLE IV
SERVICES PER PATIENT REGISTERED
(ALL AGE GROUPS)

	<i>Surgery attendances</i>	<i>Visits</i>	<i>Total</i>
Area A	4.2	0.6	4.8
Area B	3.8	0.8	4.6

The variation in attendance throughout the year is brought out in table V.

TABLE V
AVERAGE DAILY CONSULTATIONS—BASED ON TEN SURGERIES AND SIX VISITING
DAYS WEEKLY

	<i>Jan.</i>	<i>Feb.</i>	<i>*Mar.</i>	<i>April</i>	<i>May</i>	<i>June</i>
S.A. Area A ..	17.4	15.2	21.0	15.8	18.4	15.6
Area B ..	30.8	31.4	32.2	27.2	28.2	25.2
V. Area A ..	3.1	2.0	2.8	1.1	1.4	1.5
Area B ..	7.9	4.7	5.2	5.2	4.4	3.0
	<i>July</i>	<i>Aug.</i>	<i>Sept.</i>	<i>Oct.</i>	<i>Nov.</i>	<i>Dec.</i>
S.A. Area A ..	16.2	11.0	16.8	15.4	16.8	12.6
Area B ..	26.2	22.8	26.8	27.6	29.2	24.8
V. Area A ..	1.5	1.4	1.2	2.0	1.6	2.7
Area B ..	3.2	4.2	4.0	4.5	4.5	5.4

*These figures are corrected to exclude an influx of patients for immunization during a polio vaccination campaign organized by the local authority.

The variation in attendance is 1.6:1 (March to August) and in visits 2.4:1 (January to June), a ratio which compares with that of Handfield-Jones (1959) in his rural practice.

There is no differing pattern between areas A and B. The traditional drop in surgery attendances in August (holidays) and December (Xmas) is demonstrated.

The morbidity in both areas is shown in table VI (first consultations) and table VII (consultation rates). These tables show the distribution of consultations by age and sex among 16 of the 18 main sections of the international classification. As was mentioned earlier, the population over 50 in area A is very small and these rates are included for the sake of completeness, rather than for any statistical value. These figures have been subjected to statistical analysis and show a highly significant difference between the two areas in both the rate for first consultations and the total consultation rate. The rates for area A are higher in all but two instances.

There is no evidence of an interaction between these rates and the age groups; that is, the difference in both rates seems to be due rather to a uniformly higher number of consultations throughout area A, than to the specific effect of certain age groups. An interesting exception to this statement is the practically identical rates in the two areas for the 10-19 male age group.

There is no evidence of a difference between the number of consultations per episode for the two areas, i.e. the difference between the two areas in 'consultations' is due entirely to the difference in 'first consultations'.

If the percentage incidence of disease groups for the age group 0-49 is compared (see table VIII), we find no significant variation in the distribution. There is no specific disease group that provides a higher proportion of patients than normal in area A, with the possible exception of skin disease in males. It will be seen from table VI that the age group 10-49 is responsible for this difference.

It would thus appear from these figures that the difference in morbidity rates between the two areas is caused by a uniformly higher rate of first consultations for all disease groups in area A.

As a correction to any bias, table IX is included, which compares the consultation rates in area B—which has a reasonably normal age distribution—with the rates obtained by Logan and Cushion in the *Morbidity Survey* (1958). These rates are not strictly comparable as I also include visits to the surgery by patient's representatives, but these are relatively few and do not affect the comparison to any great extent.

Consultation rates are unsatisfactory measurements of morbidity in different practices because of differences in practice circumstances and organization, and a truer guide to morbidity is given by the first consultation rates. Unfortunately my rates and those of the *Morbidity Survey* are not comparable.

Allowing for the fact that my consultation rate is some 20 per cent higher, there are some discrepancies. The difference in infectious illnesses may be partly explained by the drop in consultations for

TABLE VI

FIRST CONSULTATIONS (MALE) AGE/SPECIFIC RATES PER 100

Area B

Area A

	0-	10-	20-	30-	40-	50-	60-	70+	All ages	0-	10-	20-	30-	40-	50-	60-	70+	All Ages
1 Infections	26	10	—	3	—	—	—	—	10	19	5	3	3	1	2	—	3	5
2 Neoplasm	—	—	—	—	—	—	13	—	—	—	—	—	—	—	—	—	—	—
3 Allergy	9	4	6	8	4	—	—	—	7	6	2	7	5	1	1	—	1	3
4 Blood	1	—	—	—	—	—	—	—	—	3	—	1	—	1	—	—	—	1
5 Psych.	16	4	4	12	17	17	—	—	12	9	9	13	8	9	7	4	1	8
6 C.N.S.	42	12	18	16	13	17	13	—	24	29	13	8	14	12	25	15	16	16
7 C.V.S.	—	—	—	2	2	21	13	50	4	—	—	3	1	8	8	13	16	5
8 Resp.	153	37	49	56	58	25	86	25	85	136	58	51	39	40	70	56	43	62
9 G.I.T.	21	10	16	12	10	21	25	25	15	22	13	12	13	20	23	24	11	17
10 G.U.T.	8	4	16	3	2	—	13	—	6	4	3	1	1	5	4	6	9	4
12 Skins	32	35	35	21	27	17	—	25	28	33	20	14	10	10	11	9	7	15
13 Skeletal	9	10	24	14	15	8	13	—	12	3	8	17	9	25	29	13	10	14
16 Miscellan.	33	2	18	13	—	—	—	—	17	33	13	12	7	3	10	7	7	12
17 Accidents	13	25	10	8	8	4	—	—	11	7	13	14	7	5	8	3	3	8
18 Immunity	15	4	10	8	2	—	—	—	9	18	2	4	1	1	2	—	—	4
	376	156	204	179	160	129	175	125	240	322	157	157	117	140	198	154	131	173

TABLE VI—continued
FIRST CONSULTATIONS (FEMALE) RATES PER AGE/SPECIFIC 100

Area B

Area A

	Area A										Area B							
	0-	10-	20-	30-	40-	50-	60-	70+	All ages	0-	10-	20-	30-	40-	50-	60-	70+	All ages
1 Infections	19	16	3	2	5	—	—	—	8	19	5	6	2	1	—	—	1	5
2 Neoplasm	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3 Allergy	—	9	5	2	16	6	11	10	9	11	2	10	5	10	5	3	3	1
4 Blood	—	5	2	2	3	6	—	—	2	—	2	2	4	3	—	—	1	1
5 Psych.	11	16	39	30	26	24	11	20	24	6	28	24	24	30	31	13	4	19
6 C.N.S.	36	14	23	18	18	35	11	20	24	28	10	10	10	15	20	23	25	18
7 C.V.S.	1	5	12	10	13	12	11	30	8	2	9	9	9	4	7	13	8	7
8 Resp.	161	71	69	50	24	35	67	50	85	114	50	50	43	44	42	53	33	57
9 G.I.T.	20	14	17	11	5	41	11	10	16	19	13	9	6	16	16	21	19	15
10 G.U.T.	4	14	41	25	21	18	—	—	20	8	29	29	24	22	12	8	6	15
11 Maternity	—	2	38	10	—	—	—	—	10	—	4	21	5	—	—	—	—	4
12 Skin	30	41	27	16	16	12	22	10	24	29	15	15	13	10	5	15	5	14
13 Skeletal	5	25	20	19	26	18	67	40	18	5	6	11	10	16	15	28	26	14
16 Miscellan.	39	7	18	12	16	—	—	20	20	30	10	10	10	5	4	5	6	11
17 Accidents	8	14	8	4	11	—	—	20	8	12	8	3	3	2	4	9	6	7
18 Immunity	20	5	9	3	—	—	11	—	9	18	2	2	2	3	3	—	—	4
	362	254	329	221	200	206	233	210	286	296	202	221	171	179	163	192	144	196

TABLE VII
CONSULTATION RATES (MALE) AGE SPECIFIC RATES/100

Area A

Area B

	0-	10-	20-	30-	40-	50-	60-	70+	All ages	0-	10-	20-	30-	40-	50-	60-	70+	All ages
1 Infections	35	10	—	3	—	—	—	—	14	22	6	6	13	1	3	8	7	8
2 Neoplasm	—	—	16	—	6	—	175	—	3	—	—	—	—	1	5	20	77	9
3 Allergy	21	33	—	18	15	—	—	—	19	7	2	18	23	3	12	8	19	12
4 Blood	2	—	—	—	—	8	—	—	1	5	—	1	6	1	1	11	1	3
5 Psych.	18	6	18	13	27	21	—	—	16	8	12	17	18	18	25	12	4	15
6 C.N.S.	59	18	33	23	25	33	100	—	37	34	27	48	26	22	52	37	32	35
7 C.V.S.	5	2	—	20	6	96	—	250	17	—	—	3	4	20	77	118	128	37
8 Resp.	189	50	77	94	92	100	250	25	121	164	86	93	62	85	195	252	125	129
9 G.I.T.	22	14	49	18	31	100	375	275	35	28	20	19	19	47	68	85	32	38
10 G.U.T.	9	4	29	8	4	—	50	50	10	4	6	6	1	7	14	16	25	9
12 Skin	47	54	49	32	46	38	13	25	42	44	32	28	17	14	32	26	12	26
13 Skeletal	9	10	31	28	27	25	63	25	20	4	10	25	52	45	98	37	25	38
16 Miscellan.	45	10	24	17	—	—	—	25	23	41	16	14	13	8	18	12	49	20
17 Accident	13	35	45	14	19	4	—	—	19	8	22	33	26	10	32	6	7	20
18 Immunity	46	16	29	31	17	—	—	—	31	45	14	9	6	8	9	2	—	12
	520	259	400	320	313	424	1140	650	409	412	254	320	286	292	640	648	543	412

TABLE VII—continued
CONSULTATION RATES (FEMALE) AGE SPECIFIC RATES/100

	Area A										Area B							
	0-	10-	20-	30-	40-	50-	60-	70+	All ages	0-	10-	20-	30-	40-	50-	60-	70+	All ages
1 Infections	22	16	13	5	13	—	—	—	13	20	7	17	4	5	1	3	4	7
2 Neoplasm	—	25	—	—	3	29	—	—	4	—	—	1	—	37	22	1	51	16
3 Allergy	10	9	25	42	50	24	56	10	27	12	20	32	17	36	29	10	22	22
4 Blood	1	9	10	5	18	18	—	—	6	1	2	9	22	10	18	15	25	13
5 Psych.	14	39	56	55	69	100	78	30	46	10	20	65	56	56	69	38	51	46
6 C.N.S.	40	25	45	38	18	35	—	100	39	31	36	26	13	29	42	45	70	36
7 C.V.S.	2	7	19	18	71	41	22	240	23	—	5	14	32	39	37	94	317	63
8 Resp.	197	95	113	86	47	35	89	120	119	135	106	74	56	77	86	110	77	91
9 G.I.T.	28	23	26	30	26	71	56	40	30	22	25	16	10	39	61	45	111	41
10 G.U.T.	4	14	78	62	29	41	—	10	40	17	20	48	43	44	31	12	20	29
11 Maternity	—	5	226	99	3	—	—	—	75	—	10	139	62	—	—	—	—	27
12 Skin	42	68	50	42	18	24	22	30	43	34	41	21	28	18	16	46	19	28
13 Skeletal	5	34	20	35	34	65	210	150	31	6	13	21	17	64	55	54	136	44
16 Miscellan.	55	7	22	18	21	6	—	40	28	33	19	15	14	7	9	12	27	17
17 Accident	8	16	10	8	24	—	—	30	11	8	17	13	18	3	6	16	13	12
18 Immunity	60	14	26	22	16	12	22	—	31	54	12	12	13	15	13	3	2	16
	483	404	737	565	460	500	556	800	567	384	350	520	408	478	493	505	944	505

TABLE VIII
PERCENTAGE INCIDENCE BY DISEASE GROUPS (0-49)

Group in I.C.D.	Patients consulting				Consultation rates			
	Males		Females		Males		Females	
	A	B	A	B	A	B	A	B
1 Infections ..	4.5	3.4	3.1	3.1	3.6	2.8	2.5	2.4
2 Neoplasms ..	0.1	0.0	0.0	0.1	0.2	0.0	0.5	1.6
3 Allergy ..	3.0	2.6	3.2	3.5	5.1	3.4	4.9	5.3
4 Blood ..	0.1	0.5	0.6	0.9	0.2	0.8	1.1	1.7
5 Psych. ..	4.8	5.3	8.6	9.7	4.0	4.3	7.9	9.7
6 C.N.S. ..	9.9	8.4	8.3	7.3	9.3	9.3	6.9	6.3
7 C.V.S. ..	1.0	1.3	2.6	2.3	2.4	1.4	3.1	4.2
8 Respiratory	35.7	36.1	30.1	31.4	30.9	27.9	22.3	21.1
9 G.I.T. ..	6.0	8.8	5.2	5.9	6.1	7.4	5.0	5.2
10 G.U.T. ..	2.4	1.4	7.2	8.9	2.5	1.3	7.5	8.0
11 Maternity ..	0.0	0.0	3.9	2.8	0.0	0.0	14.6	10.2
12 Skin ..	11.6	9.6	8.6	8.0	11.0	7.7	8.1	6.6
13 Skeletal ..	5.1	6.9	5.6	4.4	4.9	8.1	5.2	5.7
16 Symptoms ..	7.2	7.6	7.2	6.6	6.4	5.3	5.3	4.1
17 Accident ..	4.9	5.2	2.6	3.1	5.1	6.1	2.0	2.8
18 Immunity ..	3.8	2.9	3.2	2.8	8.5	4.6	6.0	5.0

TABLE IX
COMPARISON OF CONSULTATION RATE/100 IN AREA B AND MORBIDITY SURVEY

Group in I.C.D.	Males		Females	
	Area B	Morbidity survey	Area B	Morbidity survey
1 Infections ..	8	18	7	15
2 Neoplasms ..	9	7	16	8
3 Allergy/metabolic ..	12	13	22	23
4 Blood disorders ..	3	3	13	10
5 Psychological ..	15	11	46	25
6 C.N.S. ..	35	31	36	35
7 C.V.S. ..	37	34	63	46
8 Respiratory ..	129	94	91	83
9 G.I.T. ..	38	34	41	30
10 G.U.T. ..	9	7	29	24
12 Skin disorders ..	26	29	28	27
13 Musculo-skeletal ..	38	23	44	31
16 Symptoms/senility ..	20	20	17	27
17 Accidents ..	20	29	12	20
18 Immunization ..	12	7	43	31
Total ..	412	338	505	408

pulmonary tuberculosis since the widespread use of chemotherapy. The low figure for 'symptoms senility and ill-defined conditions' (group 16) in women may be counterbalanced by higher rates for cardiovascular disorders. I may have a tendency to diagnose arteriosclerosis in preference to senility. The high rate for diseases of the bones and organs of movement matches with the low rate for accidents—Is that pain in the back due to lumbago (group 13) or strain of a joint (group 17)? Is the pain in the knee due to internal derangement of the joint (group 13) or a sprain (group 17)? My psychiatric bias is still obvious as far as the women are concerned.

Discussion

The Classic work on morbidity on a new housing estate is that Brotherston *et al.* (1956). The interpretation of their results (Martin *et al.*, 1957) was hampered by the absence of a norm with which to compare them, and recourse was made to comparing the actual rates obtained by Brotherston with the expected age-specific rates prepared by Logan (1953) for the Registrar General; there was a wide variation between the eight practices studied by Logan, and Martin suggested that this could be due partly to differences in diagnostic practice as well as to the differing incidence of illness in the various practice areas.

This present study, carried out by a single observer in two separate areas, overcomes the problem of diagnostic variation. That my diagnoses do not always agree with those of others has been demonstrated (table IX), but it is reasonable to assume that the diagnoses in my two areas are comparable, and that any difference between the figures in the two areas would reflect a true variation in disease incidence. In fact, as has been shown, the difference in rates between the two areas is due solely to a uniformly higher rate of consultations for all disease groups; in particular there is no difference in the areas in the number of patients consulting with psychological disorder. This was a surprising and unexpected finding.

Martin (1958) investigated the problems arising on the post-war L.C.C. estate mentioned above, which had a population of 19,000, 40 per cent of whom were under 16 and only 12 per cent over 45. He found that psychosomatic disorders such as duodenal ulcer, migraine, urticaria, asthma and hay fever all show consultation rates falling into the top third of the range observed by Logan. Anorexia, debility, undue fatigue and headache are all more common than in any of the 26 practice-years studied by Logan. Martin *et al.* (1957) attributes this increase in consultations for neurosis and psychosomatic illness to two principal factors: (1) dislocating effects of re-housing (often for health reasons) on the pattern of expenditure, employment, leisure activities and relations with neighbours. (2) The attenuation of kinship ties. The tendency for each family to keep itself to itself

“may generate a degree of loneliness and social isolation inconsistent with positive mental health”. The increased rate of psychic stress that Martin noted, but which I have not seen in my survey, is possibly due mainly to the first of the above factors. There is a world of difference between selecting and buying a new house in the area of one’s choice, and being transported involuntarily to a vast new local authority estate. But it is my opinion that attenuation of kinship ties is one of the main factors in the increased general use of medical services in a new area.

The effect of separation from kin has been investigated by a number of sociologists. Young and Willmott (1957) devote a chapter of their book to “Keeping themselves to themselves”.

On the new estate, they mostly reveal that their own behaviour is the same as they resent in others; that (since *others* are unfriendly) to withdraw will avoid trouble and keep the peace; that co-existence is safer, because more realistic, than co-operation. “The policy here is don’t have a lot to do with each other, then there won’t be any trouble” says Mr Chortle . . . Mrs Chortle has broken off trading as well as diplomatic relations with one of her neighbours. “These people are very dirty” she said, “and I have told them I don’t want to borrow or lend”.

This insularity is present in area A, although not to the same degree. Professional colleagues seeing patients for me have remarked on the coldness of their welcome at many houses, and I too have noticed this, particularly in my early days in the area. This emotional withdrawal has been remarked on by Bott (1957). “The doctor was often described as a ‘sort of superior plumber’. In nearly every case the family valued the services of their doctor, but did not particularly want to know him personally.”

Later, describing two couples in the process of transition from an old to a new neighbourhood, Bott remarks—“In both cases . . . nothing could really take the place of the old network built up from childhood, and both couples felt a good deal of dissatisfaction . . . both husbands and wives often blamed their physical surroundings for their malaise (p. 89 *et seq.*)”. This appears to be a common feeling in area A. One often hears such remarks as “Since I came here, I have never been so much to the Doctor”, or “I am sure this is an unhealthy area—it’s too low lying”.

Bott further found that the families on new estates

Stressed the importance of shared interests and joint recreation and placed a good deal of emphasis on the importance of successful sexual relations. They were more self-conscious about how to bring up their children than couples in close-knit networks (i.e., older established areas). They were aware that the people they knew had a great variety of opinions on this subject and they were worried about which course they themselves should follow.

Mogey’s (1956) investigations led him to a similar conclusion. In the older established areas, children were brought up in the tradi-

tional way—"Clinic advice was accepted only after a thorough testing to see if it agreed with the folk-lore". On the new housing estate, however, the "family lacks the support of a traditional set of behaviour patterns and of a mechanism to find out what is expected, and so projects its uncertainties on to the largely unknown world".

So far we have discussed the negative causes of tension and dissatisfaction—the lack of older relatives and acquaintances, the absence of set patterns and norms with which to conform. Perhaps equally important in the area of this survey is the positive factor of possession of a new house. "In a life now house-centred instead of kinship-centred, competition for status takes the form of a struggle for material acquisition" (Young and Willmott). There is a tremendous pressure to conform, to keep up with, if not to outstrip, the Jones's. There is anxiety lest they do not fit and an aggressive attitude to those that don't. A further factor, not operative on local authority estates, is the stress caused by movement between classes. A large number of families on the estate have ascended the Registrar General's social scale (compared with their parent's occupation), and this provides yet another nebulous norm to conform to.

This then is the emotional backcloth against which the increased morbidity in the new area must be viewed. The insecurity and uncertainty is probably reflected by the increased attendance at the surgery for all types of illness—a pattern which suggests a lower 'illness-threshold'. Although all age groups partake in this increase, the fact that there is only a 20 per cent difference in first consultations in the 40–49 group, compared, for example, with a difference between the two areas of 106 per cent for females and 47 per cent for males in the 20–29 group, suggests that the younger parents are the ones with the most uncertainty.

The consultations in infancy are, of course, initiated by the parent and follow the same pattern. The identical rates of rebellious and independent male adolescents in the two areas lends some support to this hypothesis, although the teenage girls in area A tend to share their parents' insecurity.

There are, however, other and more mundane factors which could contribute to the higher incidence in area A. Brotherston (1958) has pointed out a number of them. The better educated mothers take the children to the doctor more frequently than their sisters who have had the minimum of formal education—the influence of the father's education seems less important. Children in small families tend to be seen more often, as do the more intelligent children. Brotherston has also demonstrated that men who work at a distance, or who work on Saturdays, are less likely to see their doctor; they seem to have "difficulty in finding the time, inclination or energy

to consult the G.P. ”

Finally, there is the attitude of the doctor himself. Opening a surgery in a new area, with initially only a small number of patients, one has the time and incentive to deal with each case thoroughly; indeed the temptation is to give rather more than the optimum medical care to patients, customarily in the form of an excessive number of consultations per illness. Furthermore, the patient knows that the waiting room will not be crowded, and that it will not cause him much inconvenience to consult the doctor about relatively trivial matters. As the list increases, and the time available decreases, our methods revert to the normal pattern, but by then a habit of excessive consultation has been established which takes time to eradicate.

Summary

1. The morbidity in two separate areas of a single-handed practice is analysed, and the results obtained from each area are compared.
2. It is shown that there is a higher consultation rate in the area of new housing. This higher rate is not due to any particular age-group or group of diseases.
3. These results are compared with those of other workers, and it is suggested that the fragmentation of kinship ties and the stresses of new social values may be a major factor in the increased use of the general-practitioner services in new estates.

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