

General practice in New Zealand and the UK

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SUMMARY. The morbidity and referrals in a New Zealand and an English practice are described and compared, and the results analysed and discussed.

Method

The diagnoses of all patients seen in a New Zealand practice from 1 January 1976 to 30 June 1976 were noted. These were classified, using the College of General Practitioners' Classification of Morbidity (1963). A similar classification was carried out on all patients seen in an English practice from 1 August 1976 to 31 January 1977. A note was made of all referrals and late calls in each practice.

The results have been analysed by the Birmingham Research Unit of the Royal College of General Practitioners.

The New Zealand practice

The New Zealand practice is situated in the town of Mosgiel, ten miles inland from Dunedin on the South Island. There is a total population of about 12,000 which is served by a modern health centre.

There are five full-time practitioners and one part-timer, each in single-handed practice but working in close association. The patients are not registered, as in the UK, but they do tend to stay with their own doctor. The health centre staff comprises nurses, social workers, and a physiotherapist. There is a small x-ray unit, and a laboratory technician comes each day to take blood samples and collect pathological specimens. One of the receptionists records ECGs at the request of the doctors. There is a close liaison between medical, nursing, and paramedical staff which benefits the patients.

The patients represent a good cross-section of New Zealanders—business and professional men, farmers and smallholders, council employees, factory workers, and commuters to Dunedin.

The British practice

The UK practice is on the Isle of Sheppey in Kent. There are 12,700 patients shared between six full-time partners and one part-time partner working in a group practice. The practice staff comprises nurses, an attached health visitor, and a practice midwife. The local hospital gives similar cover to that given by the health centre in New Zealand. The patients are businessmen, farmers, and employees of the local steel works and deep water docks. There are also council employees and a large holiday population in the summer months.

There was thus quite a marked similarity between the practices and the workload and also between the services available to the doctor.

Classification of morbidity

All consultations were classified according to the College Morbidity Classification (1963). After each consultation we had to decide what the main problem had been: for example, a man anxious about his blood pressure and found, in fact, to have a raised blood pressure, would be classified as "anxiety state" or "hypertension", depending on which was considered to be the main diagnosis at this consultation. Although there would obviously be subjective bias, it was hoped that this would be consistent throughout the survey and so would not adversely affect its comparative value. The classification of morbidity is shown in Table 1.

Results

Morbidity

A total of 4,615 consultations was recorded in New Zealand and 4,468 in the UK. Although the exact figures are not available, approximately half of these were follow-up consultations.

There were two main differences in the findings. The first was that there were almost three times as many cases of pregnancy and childbirth recorded in the New Zealand practice. This is partly due to the fact that almost all deliveries in New Zealand are carried out personally by the doctor, as is most of the antenatal care. In the UK practice much of this is now done by the

Table 1. Classification of morbidity.

<i>Disease group</i>	<i>New Zealand</i>			<i>England</i>		
	Male	Female	Total	Male	Female	Total
Infections	70	59	129 (2.8)	99	76	175 (3.9)
Neoplasms	5	42	47 (1)	46	60	106 (2.8)
Allergic, metabolic, endocrine, nutritional	106	132	238 (5.2)	118	108	226 (5.1)
Blood	20	19	39 (0.8)	19	26	45 (1.0)
Mental	109	314	423 (9.2)	149	421	570 (12.3)
Nervous system	159	187	346 (7.5)	167	178	345 (7.7)
Circulatory system	145	272	417 (9.0)	276	265	541 (12.1)
Respiratory system	274	306	580 (12.6)	356	349	705 (15.8)
Digestive system	97	148	245 (5.3)	138	122	260 (5.8)
Genitourinary system	36	206	242 (5.2)	28	137	165 (3.7)
Pregnancy and childbirth	—	324	324 (7.0)	—	113	113 (2.5)
Skin	126	186	312 (6.8)	67	133	200 (4.5)
Musculoskeletal system	104	170	274 (5.9)	146	182	328 (7.4)
Congenital anomalies	2	1	3 (0.1)	17	4	21 (0.5)
Perinatal	0	6	6 (0.1)	3	2	5 (0.1)
Ill defined	1	5	6 (0.1)	4	39	43 (1.0)
Accidents	334	199	533 (11.5)	205	169	374 (8.3)
Prophylactic	156	295	451 (9.8)	77	170	247 (5.5)

Table 2. Age/sex ratio.

Age group	New Zealand		England	
	Male	Female	Male	Female
0-4	183	168	212	186
5-14	320	251	247	266
15-44	631	1,397	573	1,022
45-64	370	603	457	550
65 plus	239	449	421	532
Total	1,743 (38)	2,869 (62)	1,910 (43)	2,556 (57)

practice midwife, although the doctor has general responsibility. The fact that there is a lady partner in the English practice who does most of the postnatal examinations is also probably relevant.

The other difference was the larger number of patients seen in New Zealand in the prophylactic group—ten per cent of the total. This was due to the large number of patients who came for routine medical examinations, some to enable them to renew driving licences, but the majority simply attended as a routine preventive measure.

The morbidity figures for the two practices were remarkably similar in other ways, with respiratory diseases being the most common group, followed by mental disease and cardiovascular disease. Accidents were high in each series and many of these come into the category of preventive diseases. The neoplasms seemed a large group but they included all benign tumours.

The congenital anomaly group was five times as large in the UK series and the ill defined diagnoses were ten times greater than the New Zealand figure. In each of these there were only a few patients; however, four of these were seen frequently in the UK practice and this explains the relatively large number of consultations.

Age/sex ratio

The figures for age and sex are similar for the two practices (Table 2). It is notable how large the section "Female 15-44" is in each group. Thirty per cent and 23 per cent of all patients seen in New Zealand and the UK respectively are women in the childbearing age group.

Referrals

An analysis of the referrals is given in Table 3. The consultant list is shown in Table 4, and the reasons for referral to the consultant are listed in Table 5.

Only four per cent of all consultations in New Zealand and three per cent of consultations in the UK were referred to a consultant.

Table 3. Referrals.

Referral	New Zealand			England		
	Male	Female	Total (percentage of all cases in brackets)	Male	Female	Total
Emergency admissions	30	28	58 (1.2)	33	27	60 (1.3)
Consultants	85	104	189 (4.1)	60	67	127 (2.9)
Investigations (pathological)	16	75	91 (2)	28	71	99 (2.2)
Investigations (haematological)	34	94	128 (2.7)	42	83	125 (2.8)
Investigations (radiological)	94	99	193 (4.2)	130	106	236 (5.3)
Investigations (others)	1	0	1	2	1	3
Practice nurse	133	173	306 (6.9)	77	94	171 (3.8)
Social services	0	4	4	13	4	17
Others—dentist, physiotherapist	16	24	40 (0.9)	10	9	19 (0.4)
ECGs	27	32	59 (1.2)	31	12	43 (1.0)

Table 4. Referrals to consultants.

Consultant	New Zealand			England		
	Male	Female	Total	Male	Female	Total
Surgical	38	29	67	21	23	44
Gynaecological	—	23	23	—	13	13
Orthopaedic	4	7	11	3	6	9
ENT	12	9	21	5	8	13
Eye	7	8	15	6	4	10
Medical	12	8	20	15	5	20
Obstetrical	—	4	4	—	2	2
Paediatric	4	3	7	3	5	8
Geriatric	—	1	1	—	—	—
Psychiatric	3	4	7	2	3	5
Dermatological	4	2	6	1	1	2
Others	9	7	16	7	1	8

The majority in both series were sent for an opinion about diagnosis; most of the rest were sent for treatment. Surgical and gynaecological cases together accounted for about half of all referrals.

The total number of patients referred is not quite the same in Tables 4 and 5. At the beginning of the survey, some emergency admissions were also entered as "referred for medical treatment" and so appear twice. This happened in only a few cases.

Emergency admissions

These were defined as patients whom, it was considered, should be seen as soon as possible by a hospital colleague with a view to probable admission. The

Table 5. Reasons for referral to consultants.

Reasons for referral	New Zealand	England
Opinion about diagnosis	82	45
Opinion about treatment	21	23
Special investigations (e.g. EEG)	5	1
Treatment (e.g. surgery, radiotherapy)	65	35
Request of patient	15	12
Reassurance of general practitioner	7	8
"Special help" (e.g. spinal support, hospital rest period)	8	4
Other	2	—

numbers were the same in both practices. There are about two such cases each week in an average practice.

Twice as many patients in New Zealand were referred for "opinion about diagnosis" or for "treatment" (Table 5). This is a big difference and was most marked in the accident and prophylactic groups. The fact that the English doctors act as casualty surgeons at the local hospital, which gives full radiological and nursing cover, meant that more severe cases could be dealt with by the general practitioner. In New Zealand many of these severe cases were referred to one of the consultant hospitals, especially at the weekends when neither radiological nor nursing help was available at the health centre. In New Zealand more patients were referred in the prophylactic group, and slightly more were referred in most of the other morbidity groups. I may have been more anxious about some of my patients when working in a new practice in a different country, and so tended to refer them more readily.

The other large group featured on the consultant list was the medical group. There were 20 patients in each series.

Relatively few patients were referred to geriatric, paediatric, psychiatric, or dermatology departments.

Pathological, haematological, and radiological investigations

These were again very similar in each series. They accounted for ten per cent of all patients seen.

Practice nurse

In the practice in the UK the nurses have their own patients, for example, they see patients who require dressings, injections, or advice but these do not, of course, count as a doctor consultation. This rarely happens in New Zealand and may explain the difference in the figures. In New Zealand during the three-month period from April to June 1976 the nurses saw 100

patients through direct access and 1,600 patients after referral from the doctors. All the patients seen first by the nurse were later seen by a doctor.

In the UK, for the single month of September, 971 patients were seen by the two practice nurses. Of these, 741 saw the nurse through direct access and 200 of these were referred to doctors. Two hundred and thirty patients were referred to the nurses by the doctors.

Social services

With the social worker now an established member of many practice teams, the small number of referrals by the general practitioner in both countries was an unexpected finding.

Electrocardiograms

In 1968, Eimerl and Pearson found that only six per cent of a sample of British general practitioners had their own ECG machines compared with 30 per cent in Australian, Canadian, and New Zealand samples.

In this survey about two electrocardiographs were carried out each week in both practices and an electrocardiogram now seems to be an essential diagnostic tool for the family doctor in both countries.

Site of consultation

The site of the consultations is shown in Table 6.

The ratio of consultations to home visits was about 7:1 in New Zealand and 5:1 in England, so more home visits were made in the English practice. Of patients in the Kent practice 4.9 per cent were seen at our local hospital where the general practitioners work in rotation as casualty surgeons. This group of patients would have been seen at the health centre in New Zealand where casualty medical care is given.

Night visits

These are defined as visits made at the request of the patient after completion of the evening consultation and before the next morning.

There were two a week, on average, in New Zealand and over three a week in the UK (Table 7).

Procedures carried out by the doctor

These included suturing of wounds, injections, dressings, removal of foreign bodies and cysts, and syringing of ears.

One hundred and eighteen procedures were carried out in the UK and 305 were performed in New Zealand.

The fewer procedures undertaken by doctors in the English practice is almost certainly due to the fact that practice nurses in England do more of this type of work than their New Zealand counterparts. There may have been an individual practice variation.

It seems that the modern general practitioner does much less practical work than his predecessors. Presumably this work is now done more and more by nurses and paramedical staff while the doctor spends more time investigating and diagnosing, and possibly counselling, his patients.

Discussion

There were several differences in morbidity in the two practices. I feel that these were of minor importance and an effort has been made to explain them. On the whole papers on morbidity in general practice give similar results to those found in this survey. Thus Morrell (1971), working from the Department of Clinical Epidemiology at St Thomas's Hospital, obtained comparable results from a three-man practice as did Gallagher (1974) from ten different practices in New Zealand. I found the same differences as both Morrell and Gallagher.

One of the fascinating enigmas of general practice is the astonishing variation in referral rates. Fry (1971) found that this varied from six to 259 per 1,000 consultations and thought that this rate diminished as the doctor became older and more experienced. Wade and Elmes (1968) feel that closer liaison between the general practitioner and the hospital consultant might lower the rate, while Walton (1968) believes that the personality and style of practice of the doctor is of relevance. It has also been suggested (Morrell and colleagues, 1971) that doctors tend to refer more patients to departments in which they themselves have a special interest. All of these comments seem to be valid, as are the availability of facilities to the general practitioner and the social structure of his practice. It is therefore probably not helpful to be critical of these variations.

It is reassuring to note that Forbes (1966), while

Table 6. Sites of consultations.

Site of consultation	New Zealand	England
Consulting room	3,968 (86.3)	3,449 (76.8)
Patient's home	596 (12.7)	790 (16.9)
Doctor's home	23 ($\frac{1}{2}$)	4 —
Hospital	16 ($\frac{1}{3}$)	215 (4.9)
Other	7 —	10 —

Table 7. Night visits.

<i>New Zealand</i>	
Male	28 (44)
Female	35 (56)
Total	63
<i>England</i>	
Male	41 (44)
Female	51 (56)
Total	92

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confirming the remarkable degree of variation of referral rates to his pathology laboratory by family doctors, concludes that "requests which we receive from doctors in this area are, almost without exception, reasonable and sensible, and at no time has the service been abused by any general practitioner, whether he be a frequent, average, or infrequent user."

More patients were referred in the New Zealand practice, apparently for the following reasons:

1. Lack of full general-practitioner facilities for investigating and treating accident cases meant that more of these were referred to consultant hospitals for x-rays, opinions, and treatment.
2. Some of the patients in the UK went directly to the practice nurses for advice and treatment, whereas in New Zealand patients tended to see the doctor first and then be referred to the nurse.
3. Working in a new country in a single-handed practice made me more anxious about diagnosis and treatment and I referred more patients.

Apart from the above, the practices were very similar. While working for six months with the pleasant people of New Zealand in their beautiful country, I became more and more aware of these similarities. Indeed, it would be fair to say that if a British doctor likes the British style of general practice but wants a change for a while, then there is no better place in the world to which he could go than New Zealand; and the reverse might well apply for a New Zealand general practitioner.

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