A comparison of general practice encounters with patients from English-speaking and non-English-speaking backgrounds

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ABSTRACT

Objective: To determine whether doctor–patient encounters in general practice with patients from a non-English-speaking background (NESB) differ from encounters with patients of English-speaking background (ESB) in terms of the type of practice where the encounters occur and the type of problems managed.

Design and setting: A national cross-sectional survey of GP–patient encounters from a sample of all active registered GPs in Australia.

Participants: A random sample of 1047 GPs recruited in the 12 months from April 1999 to March 2000, each providing details of 100 consecutive patient encounters.

Main outcome measures: GP demographics, practice characteristics, patient demographics (including whether the patient mainly spoke a language other than English at home), and problems managed at the encounter.

Results: After adjusting for significant predictors, encounters with NESB patients were significantly more likely to occur at solo practices than practices of five or more GPs (odds ratio [OR], 2.15; 95% CI, 1.49–3.09), in metropolitan practices (OR, 6.34; 95% CI, 4.04–9.96), and with GPs who mostly consulted in a language other than English (OR, 5.44; 95% CI, 3.78–7.83). NESB encounters were relatively more likely to involve a respiratory problem (OR, 1.14; 95% CI, 1.04–1.26), endocrine/metabolic problem (OR, 1.41; 95% CI, 1.22–1.63) or digestive problem (OR, 1.14; 95% CI, 1.02–1.27), and relatively less likely to involve a psychological problem (OR, 0.73; 95% CI, 0.61–0.88) or social problem (OR, 0.67; 95% CI, 0.49–0.92).

Conclusion: Differences in morbidity management rates between encounters with NESB patients and ESB patients may reflect both differences in underlying prevalences of some disorders in the population of general practice patients, as well as different reasons among the two groups for attending general practice.

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PEOPLE FROM CULTURALLY and linguistically diverse backgrounds form an integral part of Australia's social fabric. Data from the 1996 census showed that 27% of Australian residents were born overseas and 15% were born in a non-English-speaking country. Among adults of working age, the proportion of those born in non-English-speaking countries was 22%.[1]

Understanding the utilisation of primary care, in particular general practice, is considered important in evaluating further demands for health services.[2] There is ample evidence from Australian and overseas studies of health differences between ethnic groups, although the picture is complex.[3-5] Issues of culture and language may constitute barriers to obtaining adequate healthcare,[6] and issues of ethnicity and health are nearly always confounded by socioeconomic factors.[3,7] Given these complexities, it cannot be assumed that people from culturally and linguistically diverse backgrounds consult general practitioners for the same purposes as the Australian community as a whole.

Most studies of ethnic differences in primary care have focused on one particular health aspect[4,8] — very few have looked at group differences in overall use of healthcare services. There is some limited evidence from the United Kingdom of ethnic differences in consultation rates and the nature of problems managed in general practice.[9] However, there have been no recent large-scale studies investigating the overall morbidity profile of culturally and linguistically diverse patients consulting GPs in Australia.

We wished to determine whether encounters in general practice with patients from a non-English-speaking background (NESB) differ from encounters with patients from an English-speaking background (ESB) in terms of the characteristics of the patients, the practices where the encounters took place and the problems managed at the encounters.

METHODS

Data collection

Our study was based on data from the Bettering the Evaluation and Care of Health (BEACH) program, a national study of Australian general practice. The method used in the BEACH study has been described in detail elsewhere.[10] In brief, BEACH is a continuous cross-sectional survey of general practice activity in Australia that commenced in April 1998. A random sample of about 1000 Australian GPs is recruited each year. The sampling is done in a "rolling" manner, designed so that a GP has one chance in three years of being recruited into the study. The unit of measure is the patient encounter with the GP. The sample of encounters is a cluster sample with the GP as the primary sampling unit, each GP providing records of 100 consecutive patient encounters. Since a patient may have more than one encounter with a GP, encounter rates are an indication of both the frequency that patients consult

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1: A comparison of patient demographics, GP and practice characteristics at encounters with NESB and ESB patients (number [%] of encounters)

	NESB (*n* = 7 327)	ESB (*n* = 96 572)	*P*
Male patient	3 091 (42.3%)	39 319 (40.9%)	0.2
Patient's age (years)			
Under 15	892 (12.2%)	13 442 (13.9%)	
15–24	568 (7.8%)	10 092 (10.4%)	
25–44	2 074 (28.3%)	25 392 (26.3%)	
45–64	2 098 (28.6%)	23 627 (24.5%)	
65 and over	1 695 (23.1%)	24 019 (24.9%)	0.0005
Patient holds healthcare card	3 338 (45.3%)	38 673 (39.7%)	0.012
Patient is new to practice	485 (6.6%)	7 811 (8.0%)	0.046
Encounters at metropolitan practices	6 997 (94.9%)	69 003 (70.9%)	< 0.0001
Size of practice			
Solo GPs	2 500 (34.7%)	16 200 (17.0%)	
2–4 GPs	2 532 (35.2%)	34 768 (36.4%)	
5–10 GPs	1 853 (25.7%)	38 147 (39.9%)	
> 10 GPs	317 (4.4%)	6 483 (6.8%)	< 0.0001
Encounters with male GP	5 108 (69.3%)	67 792 (69.7%)	0.92
Encounters with GP who mostly consults in a language other than English	2 908 (39.5%)	7 592 (7.8%)	< 0.0001

ESB = English-speaking background. GP = general practitioner. NESB = non-English-speaking background.

a GP for a problem and the prevalence of the problem in the general practice patient population.

The data presented here are for the 12-month period from April 1999 to March 2000.

Outcome measures

Data were collected on GP and practice characteristics, including GP age and sex, whether the GP conducted most consultations in a language other than English, and the number of GPs in the practice. The location of the practice was classified by postcode as either rural/remote or urban/metropolitan.[11] Patient demographic factors recorded in the study included patient age and sex, whether the patient held a healthcare concession card and whether the patient was new to the practice. Problems managed at the encounter were classified according to the *International classification of primary care* (ICPC-2).[12] Morbidity was analysed at both the specific problem level and the broader ICPC-2 chapter-based body-system level.

Definition of NESB

In our study, "NESB" patients were defined as those who reported primarily speaking a language other than English at home. This included people born overseas and those born in Australia into an NESB family.

The GP was instructed to ask the patient at each encounter whether the primary language spoken by the patient at home was *not* English. The NESB group of patients was defined by this criterion, with the remaining patients constituting the "ESB" group.

Statistical analysis

Unadjusted differences between NESB and ESB patients were analysed using cross-tabulations. Multiple logistic regression was used to test for differences, after adjusting for age and sex. Stata 7.0 software[13] was used to correct for the design effect of the cluster sample. For cross-tabulations the *P* values for the Pearson χ^2 statistic, corrected for the design effect, are reported. For logistic regression, 95% CIs are reported, based on standard errors calculated using the robust variance estimator method.[13]

Multiple logistic regression was used to explore the significant differences in problem management rates for NESB versus ESB encounters, after adjusting for all other significant explanatory variables. The model was reduced using backward elimination, with variables entered in related groups ("families"): GP/practice characteristics, patient characteristics, and morbidity. Variables were reduced in family order, starting with morbidity, and individual variables were retained or removed based on the *P* value of the Wald statistic, adjusted for the cluster sample (α, 0.05).

Ethics approval

The BEACH program was approved by the Ethics Committee of the University of Sydney and the Health and Welfare Ethics Committee of the Australian Institute of Health and Welfare.

RESULTS

There were 104 700 GP–patient encounter records from 1047 GPs, of which 7372 encounters (7.0%) were with NESB patients.

Patient characteristics

There was no difference in the sex distribution of patients at NESB and ESB encounters. In NESB encounters, a higher proportion of patients were adults aged 25–64 years, and a higher proportion of patients held government-supplied healthcare concession cards (Box 1).

Practice characteristics

Encounters with NESB patients were more likely than encounters with ESB patients to occur in metropolitan practices, with solo GPs, and with GPs who conducted most of their consultations in a language other than English (Box 1).

Morbidity (prior to multiple logistic regression)

After adjusting for age and sex, we found that encounters with NESB patients more frequently involved respiratory, metabolic/endocrine, skin, digestive or general/unspecified disorders, and less frequently involved psychological problems, than encounters with ESB patients (Box 2).

Pregnancy, and problems involving the neurological, eye, urinary, blood and male genital systems were each managed at less than 5% of encounters,

with no significant differences between language background groups.

The specific problems most frequently managed in general practice were similar for both NESB and ESB encounters (Box 3). However, hypertension, acute upper respiratory tract infections, diabetes and lipid disorder were all managed significantly more frequently at NESB encounters, after adjusting for age and sex. Depression was significantly less likely to be managed at NESB encounters.

Multiple logistic regression analysis

Adjusted odds ratios for patient, practice and morbidity variables after multiple logistic regression analysis are summarised in Box 4.

After adjusting for other significant variables, patient age, healthcare card status, practice size, practice location and the GP speaking a language other than English remained as independent predictors of NESB encounters.

After adjusting for significant patient and practice characteristics, NESB encounters were significantly more likely to involve the management of a metabolic/endocrine problem and significantly less likely to involve a psychological or social problem.

DISCUSSION

In metropolitan practices, NESB patients consulted GPs in a diverse range of general practice settings. GPs who operated solo practices and those who consulted in a language other than English were more likely to have encounters with NESB patients. This confirms that bilingual GPs have an important role in providing healthcare to many NESB patients.[6]

Our results support previous findings of different morbidity patterns managed in general practice for patients from different language backgrounds.[9] Because statistics for encounters do not distinguish between the number of visits by separate patients and the number of return visits by an individual patient, morbidity rates can not be related directly to underlying differences in the prevalence of certain medical problems among NESB and ESB groups. It is also possible that apparent differences in morbidity between the two groups are more a reflection of differing beliefs about what type of problems are appropriate to discuss with a GP.

The higher rates of diabetes management in NESB encounters may reflect the relatively higher population prevalence of self-reported diabetes among Australians who do not speak English at home.[14] However, differences in community prevalence do not readily explain the higher rates of hypertension problems discussed in NESB encounters, as self-reported cardiovascular conditions such as hypertension are no higher among NESB than ESB people in the general population.[15]

Whether mental disorders are any more or less prevalent among the NESB population than the rest of the community is uncertain, as studies have produced conflicting results.[2,6,16] It is unclear from our study whether lower rates of psychological problems managed at NESB encounters reflect lower prevalence of these disorders in NESB

2: The most common types of problem* managed in encounters with NESB and ESB patients, classified by ICPC-2† body systems chapter

	Number (%) of encounters at which at least one problem from the chapter was managed		Odds ratio (95% CI), after adjusting for age and sex (reference, ESB)
	NESB (*n* = 7 327)	ESB (*n* = 96 572)	
ICPC-2 chapter			
Respiratory	1 736 (23.6%)	20 287 (20.8%)	1.22 (1.11–1.34)
Cardiovascular	1 268 (17.2%)	14 678 (15.1%)	1.16 (1.04–1.28)
Musculoskeletal	1 228 (16.7%)	15 804 (16.2%)	0.99 (0.91–1.09)
Skin	979 (13.3%)	15 927 (16.4%)	0.79 (0.73–0.87)
Metabolic/endocrine	940 (12.8%)	8 229 (8.5%)	1.54 (1.37–1.73)
General	839 (11.4%)	13 863 (14.2%)	0.79 (0.70–0.89)
Digestive	801 (10.9%)	9 302 (9.6%)	1.15 (1.03–1.28)
Psychological	607 (8.2%)	10 492 (10.8%)	0.72 (0.60–0.87)
Female genital	521 (7.1%)	6 519 (6.7%)	1.00 (0.82–1.22)

*Occurring at least once at more than 5% of encounters with GPs. †*International classification of primary care*. 2nd edition.[12] ESB = English-speaking background. GP = general practitioner. NESB = non-English-speaking background.

3: The most common individual problems managed in encounters with NESB and ESB patients

	Number (%) of encounters at which at least one problem was managed		Odds ratio (95% CI), after adjusting for age and sex (reference, ESB)
	NESB (*n* = 7 327)	ESB (*n* = 96 572)	
Hypertension	877 (11.9%)	8 059 (8.3%)	1.49 (1.31–1.69)
Acute upper respiratory tract infections	652 (8.8%)	5 929 (6.1%)	1.62 (1.42–1.83)
Diabetes	395 (5.4%)	2 397 (2.5%)	2.21 (1.88–2.59)
Lipid disorder	345 (4.7%)	2 377 (2.4%)	1.87 (1.57–2.23)
Any immunisation	275 (3.7%)	4 298 (4.4%)	0.87 (0.70–1.09)
Back complaint	238 (3.2%)	2 548 (2.6%)	1.15 (0.97–1.37)
Allergic dermatitis	197 (2.7%)	1 748 (1.8%)	1.53 (1.30–1.81)
Asthma	192 (2.6%)	3 093 (3.2%)	0.84 (0.69–1.02)
Acute bronchitis/bronchiolitis	191 (2.6%)	2 835 (2.9%)	0.91 (0.73–1.12)
Depression	182 (2.5%)	3 680 (3.8%)	0.62 (0.51–0.76)

ESB = English-speaking background. NESB = non-English-speaking background.

4: Adjusted odds ratios, after multiple logistic regression, for significant patient, practice and morbidity variables in NESB v ESB encounters (reference, ESB)

Variable	Adjusted odds ratio (95% CI)
Patient's age (years)	
Under 15	1.09 (0.87–1.36)
15–24	0.99 (0.79–1.25)
25–44	1.38 (1.12–1.70)
45–64	1.36 (1.17–1.59)
65 and over	1.00
Healthcare card holder	1.29 (1.07–1.57)
Size of practice	
> 5 GPs	1.00
2–4 GPs	1.31 (0.92–1.87)
Solo GP	2.15 (1.49–3.09)
Urban/metropolitan practice	6.34 (4.04–9.96)
GP mostly consults in language *not* English	5.44 (3.78–7.83)
Any digestive problem	1.14 (1.02–1.27)
Any respiratory problem	1.14 (1.04–1.26)
Any skin problem	0.90 (0.81–0.99)
Any endocrine/metabolic problem	1.41 (1.22–1.63)
Any psychological problem	0.73 (0.61–0.88)
Any social problem	0.67 (0.49–0.92)

ESB = English-speaking background.
GP = general practitioner.
NESB = non-English-speaking background.

groups, different beliefs about the appropriateness of raising such issues with GPs, GPs' skill in detecting psychological problems, or other factors. Previous research has suggested that GPs find it more difficult to detect psychological problems in their NESB patients[8] — whether this is because NESB patients more often express psychological distress in somatic rather than psychological terms is a matter for debate.[8,17]

Although census data indicate that nearly 15% of Australians were born in a non-English-speaking country,[1] only 7% of encounters with GPs in our study were identified as being with NESB patients. This discrepancy may be partly a matter of definition: in our study, we defined NESB in terms of the primary language spoken at home, while in the census it was defined according to country of birth, so the two categories are not exactly equivalent. Nevertheless, the number of encounters with NESB patients may have been underreported in our study, as GPs may have omitted to label certain patients as "NESB" if they spoke English well. There has been some variability over time in the proportion of encounters with NESB patients in the BEACH study, possibly due to GP recording practices, as well as to some small changes to the recording form each year.[18]

Our findings relate to the population of general practice patients. Any extrapolation to the broader Australian population of NESB people should be made with caution. Furthermore, the category "NESB" includes a diverse range of cultures and ethnic identities, and there are limitations in applying the findings from this study to any specific cultural, language or ethnic group. Studies of specific NESB communities are required to explore the extent that the broad differences identified in this study apply to individual groups.

COMPETING INTERESTS

None identified.

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