

RESEARCH ARTICLE

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# Subjective reasons why immigrant patients attend the emergency department

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## Abstract

**Background:** Some patients visit a hospital's emergency department (ED) for reasons other than an urgent medical condition. There is evidence that this practice may differ among patients from different backgrounds. The objective of this study was to examine the reasons why patients from a non-English speaking background (NESB) and patients with an English speaking background but not born in Australia (ESB-NBA) visit the ED, as compared to patients from English-speaking backgrounds but born in Australia (ESB-BA).

**Methods:** A cross-sectional survey was conducted at the ED of a tertiary hospital in metropolitan Brisbane, Queensland, Australia. Over a four-month period patients who were assigned an Australasian Triage Scale score of 3, 4 or 5 were surveyed. Pearson chi-square test and multivariate logistic regression analyses were performed to examine the differences between the ESB and NESB patients' reported reasons for attending the ED.

**Results:** A total of 828 patients participated in this study. Compared to ESB-BA patients NESB patients were less likely to consider contacting a general practitioner (GP) before attending the ED (Odds Ratios (OR) 0.6 (95% Confidence Interval (CI) 0.4–0.8,  $p < .05$ ) While ESB-NBA were more likely to consider contacting a GP 1.7 (1.1–2.5,  $p < .05$ ). Both the NESB patients and the ESB-NBA patients were far more likely than ESB-BA patients to report that they had visited the ED either because they do not have a GP (OR 7.9, 95% CI 4.7–13.4,  $p < .001$ ) and 2.2 (95% CI 1.1–4.4,  $p < .05$ ) respectively and less likely to think that the ED could deal with their problem better than a GP (OR 0.5 (95% CI 0.3–0.8,  $p < .05$ ) and 0.7 (0.3–0.9,  $p < .05$ ) respectively. The NESB patients also thought it would take too long to make an appointment to consult a GP (OR 6.2, 95% CI 3.7–10.4,  $p < 0.001$ ).

**Conclusions:** NESB patients were the least likely to consider contacting a GP before attending hospital EDs. Educational interventions may help direct NESB people to the appropriate health services and therefore reduce the burden on tertiary hospitals ED.

**Keywords:** Emergency department, General practitioner, Immigrants

## Background

Several international studies have suggested that immigrants, particularly those from non-English speaking backgrounds (NESB) might use emergency departments EDs inappropriately [1-3]. These studies identified several potential barriers confronting immigrants when accessing health care. These obstacles were suggested to include the ease of access to emergency services, language and

cultural barriers, unawareness of service availability, and a lack of knowledge about other health care services in the new country. It has been argued that emergency department (ED) presentations for non-urgent conditions are less likely to involve preventive care and are costlier to the healthcare systems than visits to general practitioner (GP) clinics [4]. Moreover, such presentations may adversely affect people who are presenting at the same time with more urgent conditions through prolonged length of stay and increased wait times in EDs [2,5-7]. As a result the quality of the care provided in EDs might be reduced which can lead to an increased probability of complications [2,5-7].

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The use of EDs for non-urgent conditions might also result in ED overcrowding which increases both patient dissatisfaction and the number of patients who leave the ED before being seen [8,9]. Consequently, it would be beneficial to reduce the demand for ED use and encourage patients to utilise primary care services for non-life threatening conditions.

In Australia, no studies have been conducted on either the reasons of non-English speaking background (NESB) patients for seeking medical care from the ED or the barriers they face when accessing health services in general. Understanding these reasons might help in developing policies and educational interventions that promote NESB patients' access to appropriate health care facilities that meet their needs.

This study aimed to investigate the subjective reasons why immigrants to Australia (NESB patients and English speaking background not born in Australia (ESB-NBA)), compared to English-speaking background born in Australia (ESB-BA) patients, attended the tertiary hospital ED at Brisbane, Australia. An understanding of the reasons for seeking primary health care in the ED setting will support health service strategies.

## Methods

### Study design and setting

A cross-sectional survey was conducted in the ED of Princess Alexandra Hospital (PAH), an adult, tertiary-referral teaching hospital located in metropolitan south Brisbane, Queensland, Australia. The ED has an annual census in excess of adult 50,000 presentations. The majority of immigrants to Queensland live in metropolitan areas and the South Brisbane region is home to the largest number of people in Queensland who identify as being NESB [10,11].

The study was carried over a four-month period from 27 August to 28 December 2012. The data were collected by the main author, who attended the study hospital ED from Monday to Saturday between 12:00 pm and 8:00 pm. These times were chosen because, during this time period, patients are also more likely have a choice to go to a general practitioner (GP) or the ED.

Although private health is available in Australia medical treatment is free for all Australian citizens, New Zealand citizens, permanent residents in Australia, or those people who have applied for a permanent visa. All that is required is a Medicare card. By law public ED cannot charge for services. It is up to the discretion of GPs whether they charge in excess of what is covered by Medicare. For the vast majority of GPs an appointment must be made and this is usually one or two days in advance. In some locations GP books are full. In the ED onsite interpreter services and free telephone interpreter services are available. Only the latter may be available in GP clinics.

### Study population

A convenience sample was recruited. The inclusion criteria were patients aged 18 years and over, with Australasian Triage Scale (ATS) categories of 3 (urgent), 4 (semi-urgent) or 5 (non-urgent) [12]. The exclusion criteria were patients in triage categories 1 (critical) and 2 (emergency), those below 18 years of age, patients with dementia, mental health patients, pregnant women with obstetrical complaints and admitted patients.

The participants were divided into three groups as defined by the Australian Bureau of Statistics (ABS): patients born in Australia, patients born in English-speaking countries (predominately United Kingdom, New Zealand, Republic of Ireland, South Africa, the United States, and Canada,) and patients born in other countries where English is not the principal language [13]. These groups were named English speaking background born in Australia (ESB-BA), English speaking background not born in Australia (ESB-NBA) and Non English speaking background (NESB).

Arguing that being from an NESB did not indicate disadvantage, the federal government formally replaced 'NESB' with 'culturally and linguistically diverse' (CALD) in 1996 [14]. However, we chose to employ the old term 'NESB' to indicate that patients from this group might be disadvantaged in terms of access to appropriate health care facilities specifically due to language and cultural barriers.

### Questionnaire

We developed a questionnaire in the English language with questions adapted from validated questionnaires [2,15,16]. The questionnaire was pilot tested prior to use (see Additional file 1). In addition to questions about age, residency background, education and income the patients were asked about their visit to the hospital. They were asked specifically whether they considered contacting the GP before attending the ED and if not why they chose to come to the ED. The patients were asked also where they would go if they developed the same condition in their birth country.

The procedure for answering the questionnaire was self-completion or a face-to-face interview by the principal author. If required interpretation of the questions was provided by either a family member or a health service provided interpreter.

The study received ethical approval from the Human Ethics Committee of both the Princess Alexandra Hospital (HREC/12/QPAH/185) and the Queensland University of Technology (1200000369).

### Sample size and data analysis

Utilizing a two-tailed alpha of 0.05 and a beta of 0.10, we estimated that we would require 150 NESB patients and

**Table 1 Demographic characteristics of the participants, n (%)**

Variable	ESB-BA (n = 446)	ESB-NBA (n = 151)	NESB (n = 231)	Total (n = 828)
<b>Sex</b>				
Females	204 (45.7)	57 (37.7)	102 (44.2)	363 (43.8)
Males	242 (54.3)	94 (62.2)	129 (55.8)	465 (56.2)
<b>Age (years)</b>				
18–39	217 (48.7)	50 (33.1)	118 (51.1)	385 (46.5)
40–64	173 (38.8)	67 (44.4)	76 (32.9)	316 (38.2)
65+	56 (12.6)	34 (22.5)	37 (16.0)	127 (15.3)
<b>Education (highest)</b>				
Did not complete secondary school	98 (22.0)	21 (13.9)	49 (21.2)	167(20.3)
Completed secondary school	170 (38.1)	70 (46.4)	54 (23.4)	287 (35.5)
Tertiary education	178 (39.9)	59 (39.7)	128 (55.4)	365 (44.2)
<b>Fortnight income (AUD\$)</b>				
400–999	142 (31.8)	35 (23.2)	103(44.6)	280 (33.8)
1,000–1,499	101 (22.6)	35 (23.2)	52 (22.5)	188 (22.7)
1,500–1,999	80 (17.9)	27 (17.9)	34 (14.7)	141 (17.0)
2,000+	123 (27.6)	54 (35.8)	42 (18.2)	209 (26.4)

(Sex  $p = .230$ , Age  $p = .001$ , Education  $p < .001$ , Income  $p < .001$ ).

590 ESB patients for the study to have 90% power to identify a significant difference between the groups [17].

Descriptive statistics were used to describe the demographic characteristics of the three groups. Pearson chi-square test was used to compare groups and multivariate logistic regression analyses was undertaken to examine the potential confounding effects of socioeconomic factors.

Analyses were performed using Statistical Package for the Social Sciences (SPSS) version 19 (IBM SPSS Statistics 19).

## Results

A total of 828 patients—446 (53.9%) ESB-BA, 151 (18.2%) ESB-NBA and 231 (27.9%) NESB—were interviewed during the study period. Table 1 provides the demographic characteristics of the study population, showing differences in educational levels and fortnightly income between the two groups.

Table 2 reveals that there was no significant differences between the types of visa and considering to contact a GP among NESB patients ( $p = .189$ ). However, NESB patients who had been in Australia less than 2 years were least likely to consider contacting a GP 7 (15.7%, 95% CI 7.8–28.8) compared to those who had been in Australia for more than 5 years 67 (47.5%, 95% CI 39.5–55.8),  $p = .001$  (Table 3).

Compared to the ESB-BA patients, the NESB patients were less likely to consider contacting a GP before attending the ED (OR 0.6, 95% CI 0.4–0.8), however ESB-NBA patients were more likely to consider contacting a GP (OR 1.7, 95% CI 1.1–2.5) (Table 4). Both the NESB patients and the ESB-NBA patients were significantly more likely than the ESB-BA patients to report not having a GP and less likely to think that the ED could deal with their problem better than a GP (Table 4). NESB patients also reported that the belief that it would take a

**Table 2 NESB patients considered contacting a GP and their visa status, n (%), 95% CI)**

Variable	Yes	No	Total (%) (n = 231)
<b>Visa status</b>			
Skilled migrant	18 (46.2, 31.6–61.4)	21 (53.8, 38.6–66.4)	39 (16.9, 12.6–22.3)
Refugee (Humanitarian)	22 (36.1, 25.2–48.6)	39 (63.9, 51.3–74.8)	61 (26.4, 21.1–32.4)
Student	12 (31.6, 19.1–47.5)	26 (68.4, 52.5–80.9)	38 (16.5, 12.2–21.8)
Family, spouse	34 (48.6, 37.3–60.1)	36 (51.4, 40.0–62.8)	70 (30.3, 24.7–36.5)
Other (working, holiday, not sure)	6 (26.1, 12.6–46.5)	17 (73.9, 53.5–87.4)	23 (10.0, 6.7–14.5)

$p = .189$ .

**Table 3 Patients considered contacting a GP and length of stay in Australia, n (% , 95% CI)**

Length of stay in Australia	NESB (n = 231)			ESB-NBA (n = 150)		
	Yes	No	Total	Yes	No	Total
Less than 2 years	7 (15.7, 7.8–28.8)	38 (84.4,71.2–92.3)	45 (19.5,14.9–25.1)	6 (60.0,31.3–83.2)	4 (40.0, 16.8–68.7)	10 (6.7, 3.7–11.8)
2–4 years	18 (40.0,27.0–54.6)	27 (60.0,45.5–73.0)	45 (19.5,14.9–25.1)	23 (65.7,49.24–79.2)	12 (34.3, 20.8–50.9)	35 (23.3,17.3–30.7)
5 years or more	67 (47.5,39.5–55.8)	74 (52.5, 44.3–60.1)	141 (61.0,54.6–67.1)	68 (64.8,55.3 –73.2)	37 (35.2, 26.8–44.8)	105 (70.0,62.2–76.8)

P = .001 for NESB / P = .945 for ESB-NAB.

long time to see a GP as the reason for coming to the ED (OR 6.2, 95% CI 3.7–10.4) (Table 4).

Table 5 shows where overseas born patients would seek help if they developed the same problem in their birth countries. More than 30% of ESB-NBA and 50% of NESB said that they would visit a primary care service.

**Discussion**

The study showed that the NESB patients in triage categories 3 to 5 were far less likely than those patients with an ESB to consider contacting a GP before attending the ED. Their reported reasons for not contacting a GP were either that they do not have a regular GP or that it can take a long time to obtain an appointment with their GP. However, the ESB-BA patients were more likely than the NESB patients and the ESB-NBA patients to perceive the ED as more suitable for treating their medical condition.

In our sample, over 50% of the NESB and ESB-NBA patients indicated that they would go to a GP or private doctor if they were to develop the same condition in their country of origin. Thus, the study findings suggest that the NESB patients did not choose the ED according to the urgency of their medical condition or the belief that the ED would deal better with their problem than a GP. However, there is a possibility that some of these patients attended the ED because they thought their

condition would not need a GP so did not secure one. It is also possible that the condition was considered to be a temporary or transient one which could be addressed in the ED without the need to register with a GP.

These results agree with other studies which have indicated that immigrants and linguistic and ethnic minorities tend to use ED services for non-urgent conditions at the expense of primary health care [1,2,18]. A Danish study reported immigrants were more likely to have irrelevant ED visits than the Danish population [2]. Furthermore, an American study found that a large number of Somali patients use the ED for care that a GP normally provides [1]. Similarly, Cots and colleagues suggested that immigrants in Spain tend to use the ED in preference to other health services [19].

Our findings suggested that patients who have been in Australia for a short period of time are less likely to consider contacting a GP before attending the ED might support the existence of some barriers such as the unawareness of service availability and a lack of knowledge about the health system in the new country. The short stay of these groups in the country would also make it difficult for them to establish a relationship with any primary health care services. The majority of NESB patients in the study also thought it takes too long to obtain an appointment with a GP; this might be due to unfamiliarity to this way to access health care in their countries of

**Table 4 Logistic regression model for considered contacting a GP & main reasons for attending the ED**

Reasons for attending the ED	NESB		ESB-NAB	
	OR (95% CI)	P	OR (95% CI)	P
Reference group: ESB-BA				
Considered contacting a GP before visiting the ED	0.6 (0.4–0.8)	0.002	1.7 (1.1–2.5)	0.013
I do not have a GP	7.9 (4.7–13.4)	<0.001	2.2 (1.1–4.4)	0.038
GPs charge extra fees	1.0 (0.4–2.1)	0.934	0.6 (0.2–1.9)	0.356
My GP’s opening hours are not suitable	1.9 (0.9–4.0)	0.117	0.6 (0.2–2.0)	0.357
It would take a long time to get an appointment with my GP	6.2 (3.7–10.4)	< 0.001	0.4 (0.1–1.4)	0.152
The ED is closer than my GP	0.4 (0.9–1.5)	0.182	0.2 (0.0–1.4)	0.107
The ED can deal with the problem better than a GP	0.5 (0.3–0.8)	0.001	0.7 (0.3–0.9)	0.022
I generally prefer the ED than a GP	1.6 (0.6–4.0)	0.306	1.0 (0.3–3.3)	0.973

**Table 5 Where would immigrants seek help if they developed the same problem in their birth country, n (%)**

	Hospital ED	GP	Private doctor	Other	Total
ESB-NBA	98 (68.5)	41 (28.7)	4 (2.8)	0 (0)	143 (100)
NESB	109 (47.4)	45 (19.6)	71 (30.9)	5 (2.2)	230 (100)
Total	216 (55.5)	86 (23.1)	75 (20.1)	5 (1.3)	373 (100)

origin. We suggest that educational intervention regarding the importance of having a regular GP, how to make an appointment with a GP, availability of health services and the health system in Australia, targeting new arrivals to the country, which might help them to access the most appropriate services to meet their health needs. Such education might reduce the burden on already overcrowded EDs in Australia [20].

Despite the insight that it provided on the differences between NESB and ESB patients' use of ED services, this study had several limitations. First, the use of a convenience sample and the cross-sectional nature of the study limit the generalisability of the findings as there might be some over representations for certain overseas born group. The generalisability of the study is also limited based on the healthcare system. Second, the study period was limited to the four-month data collection period. Third, we assumed that country of birth define the background which might not be the case all times. Finally, we considered NESB patients as one group. However, people from NESBs are not a homogeneous group; their attitudes towards ED services might differ according to their ethnicity and cultural needs.

## Conclusions

The study showed that NESB patients in our study area might attend the ED for other reasons besides an urgent medical condition. Patients who are new to Australia and those on student or refugee visas are less likely to consider contacting a GP before attending the ED. These groups might be unfamiliar with their options within the Australian health care system. Therefore, educational interventions might assist them accessing the most appropriate health care service that meet their needs and thus reduce the burden on the hospital ED.

## Consent

Written informed consent was obtained from the patient for the publication of this report and any accompanying images.

## Additional file

**Additional file 1: Emergency Department Questionnaire.**

## Abbreviations

ABS: Australian Bureau of Statistics; ATS: Australasian Triage Scale; CALD: Culturally and Linguistically Diverse; ED: Emergency Department; ESB-BA: English Speaking Background Born in Australia; ESB-NBA: English Speaking Background Not Born in Australia; GP: General Practitioner; PAH: Princess Alexandra Hospital; NESB: Non-English Speaking Background.

## Competing interests

The authors declare that they have no competing interests.

## Authors' contributions

IM study design, acquisition of data, analysis and interpretation of data; and drafted the manuscript. RE and X-YH assisted and supervised the study design, data interpretation & discussion, and critical review of the manuscript. All authors read and approved the final manuscript.

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## References

- DeShaw PJ. Use of the emergency department by Somali immigrants and refugees. *Minn Med*. 2006;89(8):42.
- Norredam M, Mygind A, Nielsen AS, Bagger J, Krasnik A. Motivation and relevance of emergency room visits among immigrants and patients of Danish origin. *Eur J Public Health*. 2007;17(5):497-502.
- Oliver A, Mossialos E. Equity of access to health care: outlining the foundations for action. *J Epidemiol Community Health*. 2004;58(8):655-8.
- DeSalvo A, Rest SB, Knight T, Nettleman M, Freer S. Patient education and emergency room visits. *Clin Perform Qual Health Care*. 2000;8(1):35-8.
- Pines JM, Pollack CV, Diercks DB, Chang AM, Shofer FS, Hollander JE. The association between emergency department crowding and adverse cardiovascular outcomes in patients with chest pain. *Acad Emerg Med*. 2009;16(7):617-25.
- Ackroyd-Stolarz S, Guernsey JR, Mackinnon N, Kovacs G. The association between a prolonged stay in the emergency department and adverse events in older patients admitted to hospital: a retrospective cohort study. *BMJ Qual Saf*. 2011;20(7):564-9.
- Bolton MB, Tilley BC, Kuder J, Reeves T, Schultz LR. The cost and effectiveness of an education program for adults who have asthma. *J Gen Intern Med*. 1991;6(5):401-7.
- Rodi SW, Grau MV, Orsini CM. Evaluation of a fast track unit: alignment of resources and demand results in improved satisfaction and decreased length of stay for emergency department patients. *Qual Manag Health Care*. 2006;15(3):163.
- Baker DW, Stevens CD, Brook RH. Patients who leave a public hospital emergency department without being seen by a physician. *JAMA*. 1991;266(8):1085-90.

10. Labour Market Research Unit. Persons of non-English Speaking Background. Queensland Government; 2008 [12/09/2013]; Available from: <http://training.qld.gov.au/resources/employers/pdf/issue8-non-english-speaking.pdf>.
11. Planning Information and Forecasting Unit. Multicultural Communities in Queensland. Diversicare; 2007 [12/09/2013]; Available from: [http://www.diversicare.com.au/upl\\_files/file\\_74.pdf](http://www.diversicare.com.au/upl_files/file_74.pdf).
12. Forero R, Nugus P. Literature Review on the Australasian Triage Scale (ATS); University of New South Wales. 2012.
13. Australian Bureau Statistics (ABS). Perspectives on Migrants. Canberra: ABS; 2013 [16/04/2013]; Available from: <http://www.abs.gov.au/AUSSTATS/abs@nsf/Lookup/3416.0Glossary1Mar%202013>.
14. Garrett PW, Dickson HG, Whelan AK, Whyte L. Representations and coverage of non-English-speaking immigrants and multicultural issues in three major Australian health care publications. *Aust New Zealand Health Policy*. 2010;7(1):1.
15. Carrasquillo O, Orav EJ, Brennan TA, Burstin HR. Impact of language barriers on patient satisfaction in an emergency department. *J Gen Intern Med*. 1999;14(2):82–7.
16. Woods SE, Bivins R, Oteng K, Engel A. The influence of ethnicity on patient satisfaction. *Ethn Health*. 2005;10(3):235–42.
17. Australian Bureau Statistics (ABS). 2006 Census of Population and Housing Canberra: ABS2006 [06/09/2011]; Available from: <http://www.abs.gov.au/AUSSTATS/abs@nsf/DetailsPage/2914.02006?OpenDocument>.
18. Bazargan M, Bazargan S, Baker RS. Emergency department utilization, hospital admissions, and physician visits among elderly African American persons. *Gerontologist*. 1998;38(1):25–36.
19. Cots F, Castells X, García O, Riu M, Felipe A, Vall O. Impact of immigration on the cost of emergency visits in Barcelona (Spain). *BMC Health Serv Res*. 2007;7(1):9.
20. Australian Institute of Health and Welfare (AIHW). Public EDs not coping with growing pressure. *Aust Med*. 2009;21(12):3–4.

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