



Emergency Department Presentations by International Migrants Requiring Interpreter Service: An Observational Study

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ABSTRACT

Objective: To describe interpreter services provided to international migrants in the emergency department (ED). **Methods:** This observational study used health service data pertaining to all patient presentations made to two public EDs between 2019 and 2021.

Results: In total, 4560 patients required an interpreter. An 18-month subset data showed that an interpreter was requested for 47 of the 2509 patients in the ED. Thirty-eight patients received the service.

Conclusions: This study has identified a significant gap between interpreter service requirements and utilisation. Further research is recommended to explore the barriers and decision-making process of interpreter service utilisation in the ED.

1 | Introduction

Worldwide, there are 281 million migrants, which equates to 3.6% of the global population [1]. International migrants in the Oceania region represent 22% of its total population [1]. Australia has one of the fastest growing international migrant populations. In 2023–2024, there were 1.77 million presentations to the public emergency departments (EDs) in Queensland [2]. International migrants can face challenges when presenting to the ED due to language barriers, cultural differences and/or unfamiliarity with healthcare systems. Understanding ED presentations and interpreter services used by this cohort contributes to the United Nations Sustainable Development Goals of Good Health and Wellbeing and Reduced Inequalities [3] and can inform if and where gaps in culturally and linguistically competent care may be addressed.

2 | Methods

This observational study analysed the data collected from the hospital's health information systems for all patient presentations made to two public hospital EDs (a level 6 tertiary-level facility and a level 4 facility) in Southeast Queensland, Australia between

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1st January 2019 and 31st December 2021. A level 6 tertiary-level facility provides high complex care services, and a level 4 facility provides moderate complex care services. Two public hospitals had a total of 192,377 ED presentations in 2023–2024 [4]. The health service covers a catchment area which has almost 50% of residents whose parents were born overseas [5]. Around 35% of residents were born overseas and 20% speak a language other than English at home [5]. Patient presentations were categorised by country of birth: Australia-born (AB), overseas-born in an English-speaking country (OSE) and overseas-born in a non-English speaking country (OSNE). The classification of OSE and OSNE groups was guided by the United Nations' terms 'international migrants' to reflect people who change their country of usual residence, which can be temporary, short- or long- term or permanent. For a 3-year period, we assessed differences between groups by interpreter requirement, and preferred language using data from First Net/ieMR (an integrated electronic medical record system) and HBCIS (Hospital Based Corporate Information System; a patient information system) which were entered by administrative staff and/or nursing staff upon patient arrivals in the EDs to obtain a comprehensive picture. For a shorter period (1st July 2020 and 31st December 2021), we used available data from a 24-h interpreter online (iO) booking service and manually cross-checked against interpreter service invoices from service providers to assess interpreter service utilisation. Characteristics of interpreter service were analysed to determine the service length, delivery method and language provided. Human Research Ethics Committees Approvals (HREC/2022/QGC/84221; SCU: 2022/029; GU Ref No: 2022/353) were obtained. The reporting of studies conducted using observational routinely-collected health data statement was used.

3 | Results

For a 3-year period, 27.5% of ED presentations were international migrants. OSE and OSNE groups represented 15.9% and 11.6% of all 688,231 ED presentations. In total, 4560 patients (0.7% of all ED presentations) were recorded as requiring an interpreter (see Table 1). The majority were born in North-East Asia (n = 1752, 38.2%), and Chinese was the preferred language for 1226 patients (26.8%) (see Table 2).

Within the 3-year period, a subset of an 18-month data shows that an interpreter was requested by the ED for 47 of the 2509 patients (1.9%) coded as requiring an interpreter. Thirty-eight of the 47 patients (80.9%) received the service whilst still in the ED. For 38 patients who received an interpreter service in the ED, the majority (92.1%) had this service via audio, and 5.3% received the service in-person. The three most common languages provided were Mandarin (28.9%), Cantonese (13.2%), and Japanese (10.5%). The duration of interpreter service ranged from 5 to 120 min (see Table 2).

4 | Discussion

To our knowledge, this is the first study to integrate data from the health service interpreter system for ED presentations by international migrants. This study found that migrants represented over a quarter of all ED presentations within one of Queensland's health services.

About 1 in 20 presentations from the OSNE group were noted to require an interpreter. A study (2013) of patients presenting to Queensland public EDs between 2008 and 2010 reported the interpreter requirement and preferred language [6]. However, information on the interpreter service utilisation and characteristics of services provided was limited. Our findings uncover that only a small proportion (1.9%) of patients who were noted to require an interpreter service received the service in the ED (1.5%) and post ED (0.4%). The findings of this study highlight the significant gap between the interpreter service requirement

TABLE 1 | All patient presentations made to the emergency department and interpreter requirement, by country of birth category, 2019–2021.

| Number of | All visits | | Australian born (AB) n=498,927 | | Overseas born, English (OSE) speaking country n=109,202 | | Overseas born, non- English (OSNE) speaking country n=80,102 | |
|-----------------------------------|------------|-------|-----------------------------------|-------|--|-------|---|-------|
| presentations | | | | | | | | |
| Characteristics | n | % | n | % | n | % | n | % |
| Year of presentation | | | | | | | | |
| 2019 | 178,564 | 25.9% | 130,733 | 26.2% | 28,736 | 26.3% | 19,095 | 23.8% |
| 2020 | 232,488 | 33.8% | 168,407 | 33.8% | 37,850 | 34.7% | 26,231 | 32.7% |
| 2021 | 277,179 | 40.3% | 199,787 | 40.0% | 42,616 | 39.0% | 34,776 | 43.4% |
| Interpreter required ^b | | | | | | | | |
| Yes | 4560 | 0.7% | 183 | 0.0% | 11 | 0.0% | 4366 | 5.5% |
| No | 674,102 | 97.9% | 491,757 | 98.6% | 108,240 | 99.1% | 74,105 | 92.5% |
| Not stated/ unknown | 9569 | 1.4% | 6357 | 1.3% | 951 | 1.4% | 1631 | 2.0% |

Abbreviations: AB, Australian-born; OSE, born overseas in an English-speaking country; OSNE, born overseas in a non-English speaking country. ^aExcludes 3890 people with country of birth not stated.

^bExcludes sign language and Auslan group.

TABLE 2Image: Preferred language, country of birth, and characteristicsof interpreter service provided to people presenting to the emergencydepartment.

(a) Language and country of birth for 4560 people identified in emergency department as requiring an interpreter, 2019–2021

| | п | % |
|---|---------|------|
| ABS region of country of birth ^a (based on A group classification) | SCCEG b | road |
| North-East Asia | 1752 | 38.2 |
| Southern and Eastern Europe | 1071 | 23.4 |
| South America | 382 | 8.3 |
| North Africa and the Middle East | 367 | 8.0 |
| South-East Asia | 288 | 6.3 |
| Southern and Central Asia | 210 | 4.6 |
| Australia | 183 | 4.0 |
| Sub-Saharan Africa | 142 | 3.1 |
| North-West Europe | 91 | 2.0 |
| Oceania and Antarctica | 59 | 1.3 |
| Central America and the Caribbean | 20 | 0.4 |
| New Zealand | 12 | 0.3 |
| North America | 5 | 0.1 |
| Preferred language (top 10) ^a | | |
| Mandarin, Cantonese, or Chinese, not further defined | 1226 | 26.8 |
| Serbian, Bosnian or Croatian | 368 | 8.0 |
| Spanish | 326 | 7.1 |
| English | 309 | 6.7 |
| Korean | 287 | 6.3 |
| Japanese | 219 | 4.8 |
| Arabic | 123 | 2.7 |
| Portuguese | 101 | 2.2 |
| Other languages | 1583 | 34.5 |
| Missing | 40 | 0.9 |
| | | |

(b) Interpreter service requested and characteristics of interpreter services provided to 38 people in the emergency department, 1st July 2020–31st December 2021^b

| | п | % | | |
|---|----|-----|--|--|
| Interpreter service requested by the emergency department | | | | |
| Yes, received in ED | 38 | 1.5 | | |
| Yes, but provided post emergency department | 9 | 0.4 | | |
| | | | | |

(Continues)

(b) Interpreter service requested and characteristics of interpreter services provided to 38 people in the emergency department, 1st July 2020–31st December 2021^b

| | п | % |
|---------------------------------------|-------------|------|
| No | 2462 | 98.5 |
| Type of service | | |
| Audio | 35 | 92.1 |
| In-person | 2 | 5.3 |
| Both | 1 | 2.6 |
| Language | | |
| Mandarin | 11 | 28.9 |
| Cantonese | 5 | 13.2 |
| Japanese | 4 | 10.5 |
| Bosnian or Croatian | 3 | 7.9 |
| Spanish | 3 | 7.9 |
| Korean | 2 | 5.3 |
| Portuguese | 1 | 2.6 |
| Other | 9 | 23.7 |
| Duration of service charged (minutes) | | |
| Median (interquartile range) | 16 [13–28] | |
| Mean (sd) | 24.5 (21.9) | |
| Minimum—maximum | 5-120 | |

Abbreviations: ABS, Australian Bureau of Statistics; ASCCEG: Australian Standard Classification of Cultural and Ethnic Groups.

^aExcludes 3890 people with country of birth not stated.

^bOnly applies to visits (2509 of 4560 visits) during the period (1st July 2020–31st December 2021) when interpreter service data was available within the health service.

and the interpreter service utilisation. The literature suggests that interpreter service underutilisation can be due to time constraints and/or organisational-level considerations (i.e., policy or resources) [7]. Further studies are recommended to explore the process of interpreter service use as well as care delivery experiences to patients from culturally and linguistically diverse backgrounds among clinicians and patients in the ED.

4.1 | Limitation

Our findings may not be generalisable to jurisdictions that have different migrant profiles. This study was also limited to routinely-collected hospital administrative data in several ways. First, as the hospital administrative system only collected country of birth and preferred language data, we were unable to explore the cultural identity of 183 people from AB group requiring interpreter service. Second, there may be under-documentation of the interpreter service requirement due to time constraints at the triage. The data collected in this study may not reflect the actual

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number of patients requiring interpreter service. Third, this study was limited to exploring an in-depth understanding of experiences regarding interpreter service utilisation and use of alternative communication methods among clinicians and patients.

5 | Conclusion

This study has identified a significant gap between the interpreter service requirement and the interpreter service utilisation in two public EDs in Southeast Queensland that serve a high proportion of culturally and linguistically diverse population residing in the region. Future research is recommended to explore the perceived barriers and decision-making process of interpreter service utilisation among clinicians and patients in the ED.

Author Contributions

Y.-L.H.: conceptualisation, methodology, project administration, funding acquisition and management, data acquisition, formal analysis, visualisation, writing-original draft, writing – review and editing. A.L.S.: conceptualisation, methodology, funding acquisition, formal analysis, data curation, visualisation, writing – review and editing. R.L., D.P., S.B.: conceptualisation, funding acquisition, writing – review and editing. B.C.: conceptualisation, data acquisition, writing – review and editing. J.C.: conceptualisation, methodology, funding acquisition, visualisation, writing – review and editing. All authors approve of the final version submitted and agree to be accountable for all aspects of the work.

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Ethics Statement

Study approval was granted by the Gold Coast Health (HREC/2022/ QGC/84221), Southern Cross University (SCU: 2022/029) and Griffith University (GU Ref No: 2022/353) Human Research Ethics Committees.

Conflicts of Interest

Some of the authors were employees at the health service where the study was conducted. The opinions and research findings presented in this paper are those of the authors and do not represent those of the collaborative organisations.

Data Availability Statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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