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*acute care diversity
collaboration, CEH*

Centre for Culture Ethnicity and Health

Diversity in Victoria and Selected Victorian Hospitals

**An Overview of
Country of Birth and
Language Preference Data**

Vicky Totikidis

Accuracy

Although the utmost care to avoid and identify errors was taken during the production of this report, the reader needs to be aware that hundreds of data files were manipulated in the process. For this reason, the author cannot guarantee that it is totally free of errors or take responsibility for errors arising from the use of the report; and neither should the Centre for Culture Ethnicity and Health, Department of Human Services or Australian Bureau of Statistics be held accountable for any errors. Nevertheless, should any errata be noticed, we will make every attempt to supply a correction where necessary.

Acknowledgements

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Vicky Totikidis

Master of Applied (Community) Psychology

Phone CEH: 9427 8766

Email: vickyt@nrhc.com.au

vickydownunder@iprimus.com.au

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This project was initiated by the Acute Care Diversity Collaboration (ACDC) Project within the Centre for Culture Ethnicity and Health. The ACDC project is a Department of Human Services funded project designed to assist Victorian Hospitals to improve access and service delivery to people from non-English Speaking Backgrounds.

Foreword

The data contained in this report has been designed to assist in the planning and provision of services to NESB people within the acute hospital system.

Programs and initiatives seeking to improve services to culturally and linguistically diverse persons in Victorian hospitals need to not only engage in ongoing consultation with stakeholders but also have access to an evidence base of hospital and regional data relating to cultural and linguistic diversity of such groups.

With 16.82% of Victorians born in non-English Speaking countries and 19.92% speaking a language other than English at home, access to comprehensive and accurate statistical information relating to the communities a hospital operates in, the nature of stakeholder groups and demographic trends that influence consumer activity, service delivery and organisational planning is essential.

The statistical data contained in this report is an invaluable resource, providing an extensive overview of language and country of birth data, supported by numerous tables and graphs together with a thorough analysis and summary of findings for each data set.

The concluding chapter provides an overview of emerging issues and implications, including the need for hospitals to be adequately supported in the collection and analysis of data and the need for further development of standards such as the establishment of appropriate interpreting systems and training of hospital staff in the provision of culturally appropriate acute services. The report also recommends further examination and management of data to be an ongoing priority for the Centre for Culture Ethnicity and Health and Department of Human Services.

With this report, the Acute Care Diversity Collaboration Project looks forward to the further development and implementation of a framework for enhancing access and service delivery for people from Non-English speaking backgrounds within the acute health sector. We hope you find it both useful and informative.

Tatjana Bahro
Coordinator
Acute Care Diversity Collaboration Project

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Abbreviations

ABS: Australian Bureau of Statistics
ACDC: Acute Care Diversity Collaboration
BCP: Basic Community Profile (drawn from 2001 census)
CALD: Cultural and Linguistic Diversity, Culturally and Linguistically Diverse
CEH: Centre for Culture Ethnicity and Health
COB: Country of Birth
DHS: Department of Human Services, Victoria
FYROM: Former Yugoslav Republic of Macedonia
LGA: Local Government Area
LOTE: Language Other than English
NES COB: Non-English Speaking Country of Birth
NES: Non-English Speaking
NESB: Non-English Speaking Background/Backgrounds
SAR: ‘Special Administrative Region’. SARs comprise ‘Hong Kong (SAR of China)’ and ‘Macau (SAR of China)’ (ABS, 2001).
VAED: Victorian Admitted Episodes Dataset
VEMD: Victorian Emergency Minimum Dataset

Executive Summary

This project forms the quantitative component of the Acute Care Diversity Collaboration (ACDC) Project within the Centre for Culture Ethnicity and Health. The ACDC initiative is a Victorian Department of Human Services (DHS) funded project that aims to provide a resource to Victorian hospitals to improve access and service delivery for people from Non-English Speaking Backgrounds. Within this broader context, the present report presents an overview of ethnicity data (country of birth and language) for Victoria, including DHS metropolitan and rural regions. Comparative data is also presented for twenty-one major metropolitan and rural hospitals in the Victorian Acute Health System.

Key considerations

- Of the DHS regional data presented, only the top ten Country of Birth (COB) and language-spoken data could be analysed in this report. Any health planning should also give consideration to smaller and emerging cultural and language groups.
- While outpatient presentations make up a considerable amount of activity in Victorian hospitals, the scope of this project did not allow for outpatient data to be considered.
- The recorded percentage of people (7.08%) preferring a LOTE in emergency situations in the hospitals of interest is extremely low in comparison with the percentage of people who speak a language other than English in Victoria (19.97%). It is also low in comparison to the percentage (13.61%) of people born in NES countries who have low English proficiency according to the ABS 2001 data. Given that the NES COB emergencies are quite high and that about 18.95% of Victorians born in a NES country may have low English proficiency, the recorded percentage of people preferring a LOTE in emergency situations could be due to an underestimation in reporting by most hospitals.
- While numerical data can serve as the basis for enhancement of the hospital system, a more systematic effort is required. The improvement or implementation of services to culturally and linguistically diverse persons in hospitals also calls for adequate funding and organisational support, as well as external support (e.g., from

CEH, other community and ethno-specific organisations). It is essential that NESB patients are representatively included in consumer participation strategies.

- There is a need for ongoing analysis of ethnicity data. A limitation of the census data used in this project is that numbers recorded in the Basic Community Profiles refer to visitors in the region as well as to permanent residents. Therefore, NESB numbers should be regarded as an estimate rather than an exact figure. Demographic distribution of certain population groups is not static and is likely to alter from year to year in Victoria and the acute hospital system as older immigrants die and new immigrants arrive.
- VAED and VEMD data contained data entry errors and omissions. Since analysis of these data sources represents significant opportunities for enhancing service systems in the hospital sector, particular care and training in relation to the data should be undertaken in future years.
- Figures from VEMD and to a degree VAED statistics may under-represent language and cultural need due to the 'invisible' percentages of Australian-born children who are of parents from NESBs. In these circumstances, the patient is recorded as born in Australia, while the caregiver may have specific cultural and language needs.

Key findings

- Close to 17% of Victorians were recorded as being born in a Non-English-Speaking Country. Figures varied in each region with the Southern metropolitan region having the highest raw numbers of people born in a NES country and the Western Region the highest percentage. The Grampians had the least number of people born in a NES country.
- 19.97% of Victorians were recorded as speaking a language other than English at home with 13.61% indicating low English proficiency. The Northern metropolitan region had the highest number of people who speak a LOTE while the Western region had the highest percentage speaking a LOTE.
- The Basic Community Profile (BCP) for Victoria (2001) recorded the top five languages spoken at home to be Italian (149,185), Greek (122,351), Vietnamese (63,816), Cantonese (60,583) and Arabic (47,182).

- Overall, Italy, Netherlands, Germany, Yugoslavia and Croatia were the top NES countries of birth and Italian, German, Greek, Croatian and Netherlandic the top NES languages spoken in the rural regions of Victoria.
- The overall percentage of NES COB admissions 172,521 (25.82%) and emergency presentations 129,287 (20.70%) is relatively high, indicating that people from NESB access most of the analysed hospitals to a greater degree than their representation in the Victorian Demographics.
- In comparison to the above figures, the recorded percentage of people preferring LOTE in emergency situations is extremely low (7.08%). Given that the NES COB emergencies are quite high this recorded percentage is likely to be an underestimation in reporting by some hospitals.
- There was significant variance between hospitals with NES COB emergency presentations ranging from a low 2.42% (Bendigo) to 38% (Western) and admissions (VAED) varying between 3.33% (Bendigo) and 44.36% (Western).
- The hospitals with the highest percentage of emergency presentations from NES COB were the Western - 38.0%, Royal Women's - 35.5%, Royal Melbourne - 34.6%, Eye and Ear - 33.3% and St Vincent's Hospital - 30.5%.
- The hospitals with the highest percentage of emergency presentations with a recorded preference for a language other than English were the Mercy - 14.00%, Royal Women's - 13.97%, Royal Children's - 9.90%, Box Hill - 9.46%, Royal Melbourne - 8.57%.
- Of the A1 classified hospitals the highest percentage of people born in a non-English speaking country was the Royal Melbourne and St Vincent's with 34.56% and 30.53%, respectively. The two highest recorded preferences for a language other than English) were at the Austin 30.44% (of number born in NES country) and St Vincent's (27.92%).
- Of B1 hospitals Bendigo had the highest number of emergency presentations with 30,700 people while the second greatest was Goulburn with 25,735 people. The hospitals with the greatest number percentage of emergency presentations associated with a NES country of birth were Goulburn and Latrobe, with 7.93% and 7.02%,

respectively, while preference for a language other than English was recorded as less than 10% for all of these B1 hospitals.

- Overall, there are significant differences in both numbers and complexity of the patient groups across Victoria, potentially leading to greater costs for some hospitals with high number of patients with low English proficiency or additional needs such as special needs. This is currently not recognised in hospital funding and service agreements.

Emerging issues

- Hospitals with high NES COB, LOTE figures and C.I. scores need to be adequately supported and funded.
- The collection of Country of Birth and Language preference (VAED and VEMD) data need to be continuously improved and utilised for hospital planning purposes.
- The examination and management of ethnicity related data should be an ongoing priority for hospital planning.
- Systems for appropriate utilisation of language services need to be improved.
- Hospitals should provide training on data collection/accuracy/utilisation to their staff.

Chapter One

Introduction

The Acute Care Diversity Collaboration Project

In 2001, the Centre for Culture Ethnicity and Health (CEH) received funding from the Victorian Department of Human Services (DHS) to develop and implement a framework for enhancing access and services delivery for people from Non-English-Speaking Backgrounds (NESB) within the acute health sector. The project was named the *Acute Care Diversity Collaboration* (ACDC) project. The ACDC initiative aims to provide a resource for hospitals in Victoria to enhance processes and service delivery in the context of cultural diversity (Bahro, 2003).

Aims and Methodology

Within this larger project, the present research project was designed to collect and analyse data and information of relevance to the project. This focused on the two levels of quantitative data presented below:

- a.) Victorian demographical data related to people from NESB.*
- b.) Victorian hospital data (emergency presentations & admissions) related to people from NESB.*

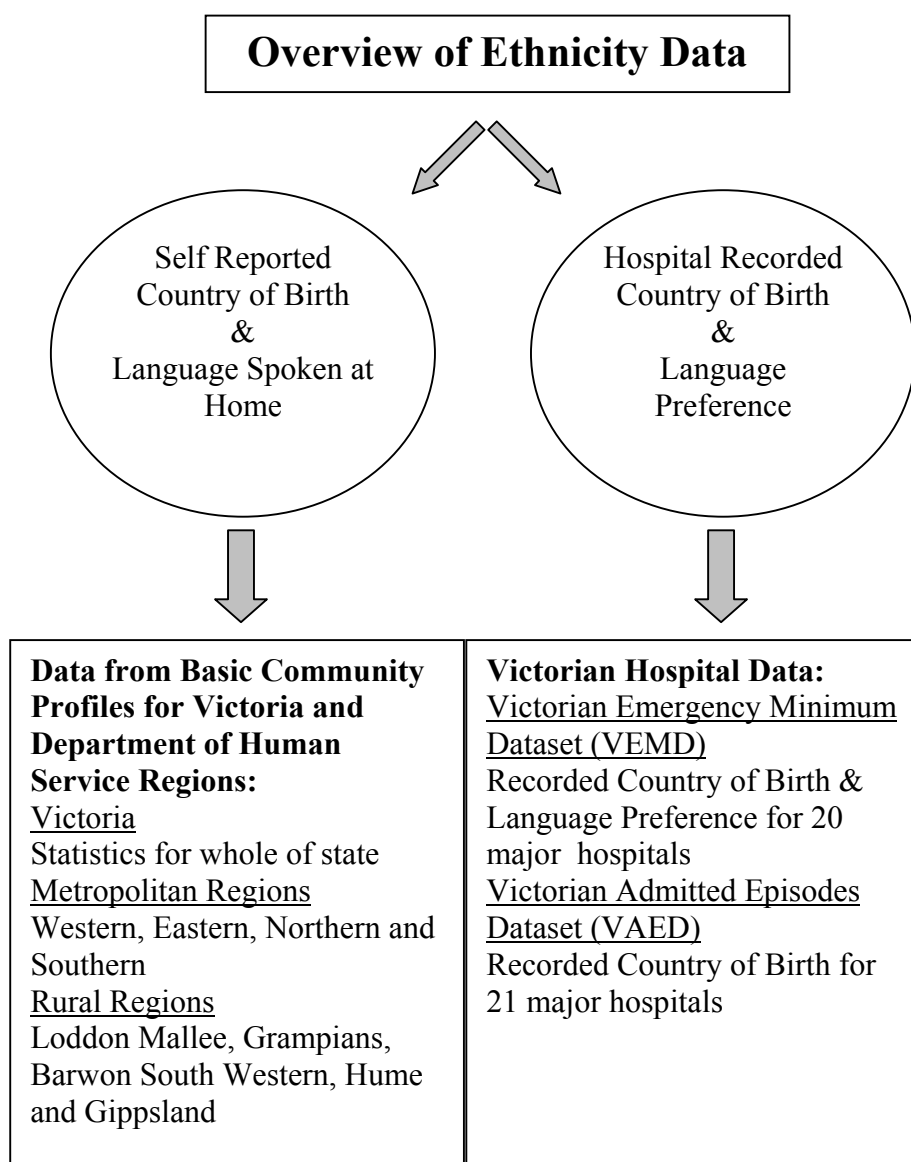
An important part of the project during the initial stages was to determine its *scope*. This included planning, defining concepts and setting parameters and limits. After a review of various publications and State Government websites related to the Victorian acute hospital system, it became clear that the scope was larger than anticipated and that an analysis of the ‘whole’ Acute system could not be accommodated with the current research timeline. For example, an Australian Institute of Health and Welfare publication (1997) lists one hundred and forty two metropolitan and rural hospitals and health services in Victoria, which could potentially be analysed.

It was therefore decided to initially focus on data related to a total of 13 major metropolitan hospitals. From this, a preliminary report was written and presented to the ACDC co-ordinator. However, given the short-term nature, the main focus of the initial project was on

data collection and extraction, file preparation and the production and presentation of summary statistics such as graphs and tables rather than on an analysis of the data. Another limitation in the initial project was that only 1996 Census data were available at the time. A second stage of research aimed at the collection and analysis of data related to Cultural and Linguistic Diversity (CALD) in Victoria and the Acute Hospital System began in September 2002 following consultations between the coordinator and the ACDC Advisory Group.

The aims of the project were to update the Victorian demographical data related to Culturally and Linguistically Diverse persons using the latest 2001 Census data and to expand the hospital data analysis to 21 major Victorian hospitals. Figure 1 shows a map of the data collected and presented in this report. The map allows the reader to grasp the overall structure and content of the report.

It is anticipated that the information in this report will contribute in the planning of strategies to enhance hospital systems and service provision for people from non-English speaking backgrounds in Victoria and the Victorian acute hospital system.



1Figure 1
Map of Data Related to Cultural and Linguistic Diversity in Victoria and the Acute Hospital System

Chapter Two

Victorian Ethnicity Data

Overview of State and Regional Statistics

The ethnicity data presented in this report include graphs and statistics for the State of Victoria as a whole as well as for metropolitan and rural regions. This data was drawn from the Australian Bureau of Statistics 2002 Basic Community Profiles (BCP's) for Victoria and Victorian Local Government Areas. BCP publications consist of extensive information from the 2001 Census and are in Microsoft Excel form.

The State-wide statistics include:

- Top Twenty Non-English Speaking (NES) Countries of Birth (COB) for Victoria
- Top Twenty Languages Other Than English (LOTE) Spoken in Victoria

The regional (metropolitan and rural) statistics include:

- Top Ten Countries of Birth for Each Victorian Department of Human Service (DHS) Region
- Top Ten Languages Other Than English Spoken in Each Victorian DHS Region

State-wide Statistics

NES Countries of Birth for Victoria

Table 1 shows the country of birth status of the Victorian population according to 1996 and 2001 Census statistics. The 1996 Census recorded a Victorian population of 4,354,126 persons with close to 73% of these born in Australia and 18% born in non-English speaking countries (Commonwealth of Australia, 2001). The latter figure includes 187,392 people (4.3%) 'born elsewhere overseas'. This figure is an aggregated category that includes countries of birth that were 'Inadequately described', 'At sea' and 'Not elsewhere classified' (ABS, 2002). The 'born elsewhere overseas' category has been added to all the NES figures quoted in this report.

The Victorian population according to the 2001 Census was 4,612,097 persons with 71% Australian born and nearly 17% born in non-English speaking countries. It is important to note that the 2001 Victorian profile also consisted of a very large ‘not stated’ category consisting of 254,699 people (5.52%). This category is likely to include additional people born in non-English speaking countries. Therefore, the figure for people born in a NES country for Victoria could be as high as 20% (*see note below table).

Table 1
Place of Birth of the Victorian Population

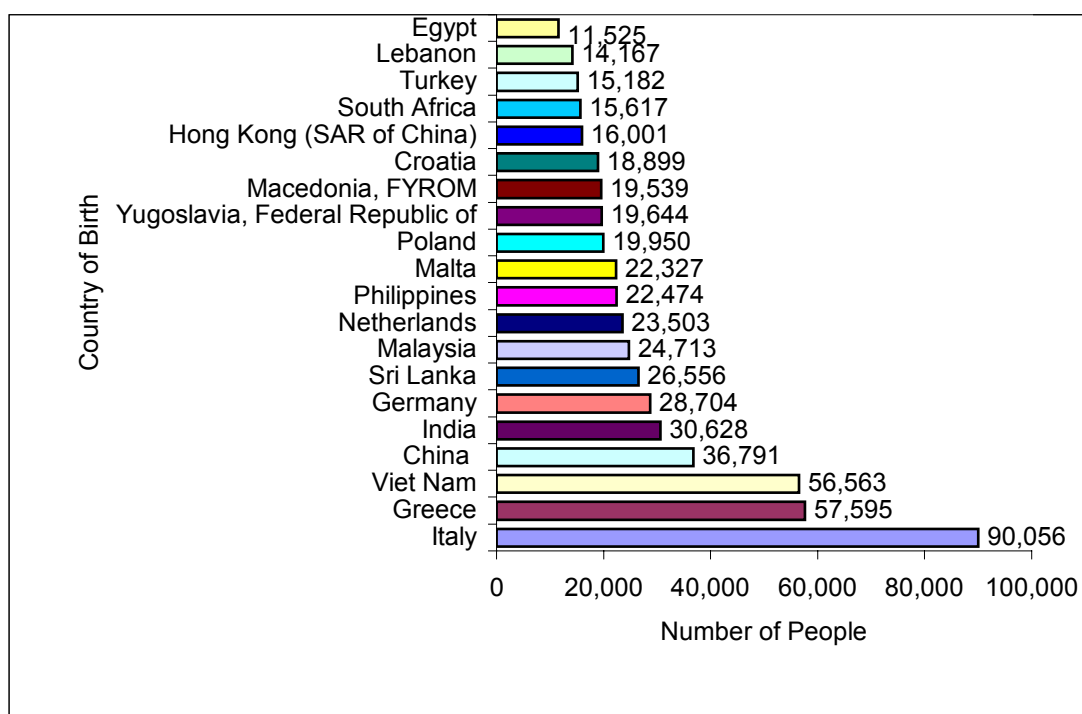
Birthplace of Victorians	1996	% of Total	2001	% of Total
Australian Born	3,168,848	72.78%	3,277,054	71.05%
Born in NES Country	786,249	18.06%	775,911	16.82%
Born in Other ES Country	253,837	5.83%	304,433	6.60%
Country of Birth Not Stated	145,192	3.33%	254,699	5.52%
Total Victorians	4,354,126	100.00%	4,612,097	100.00%

Source: Commonwealth of Australia, 2000 & 2002. Notes. *Although adding the not stated % to the % born in a NES country equals 22.34%; the total % born in a NES country cannot logically exceed the % of people speaking a language other than English (19.97%). Figures for this category also include an unspecified ‘born elsewhere overseas’ category.

Most Common Countries of Birth of Victorians

The top twenty non-English speaking countries of birth for people living in Victoria are presented in **Figure 2**. In summary, the five countries of birth with the highest numbers of people were:

- **Italy - 90,056**
- **Greece - 57,595**
- **Vietnam - 56,563**
- **China - 36,791**
- **India - 30,628**



Source: ABS BCP - Catalogue No. 2001.0 (2002).

Figure 2

Top Twenty NES Countries of Birth for Victorians

To avoid repetition throughout the report, explanatory notes related to country of birth appear in **Table 2**. These notes were derived from the Basic Community Profiles and relate to the previous Victorian country of birth graph as well as to the other Metropolitan and Rural country of birth graphs in this chapter.

Table 2

Explanatory Notes for Country of Birth Graphs

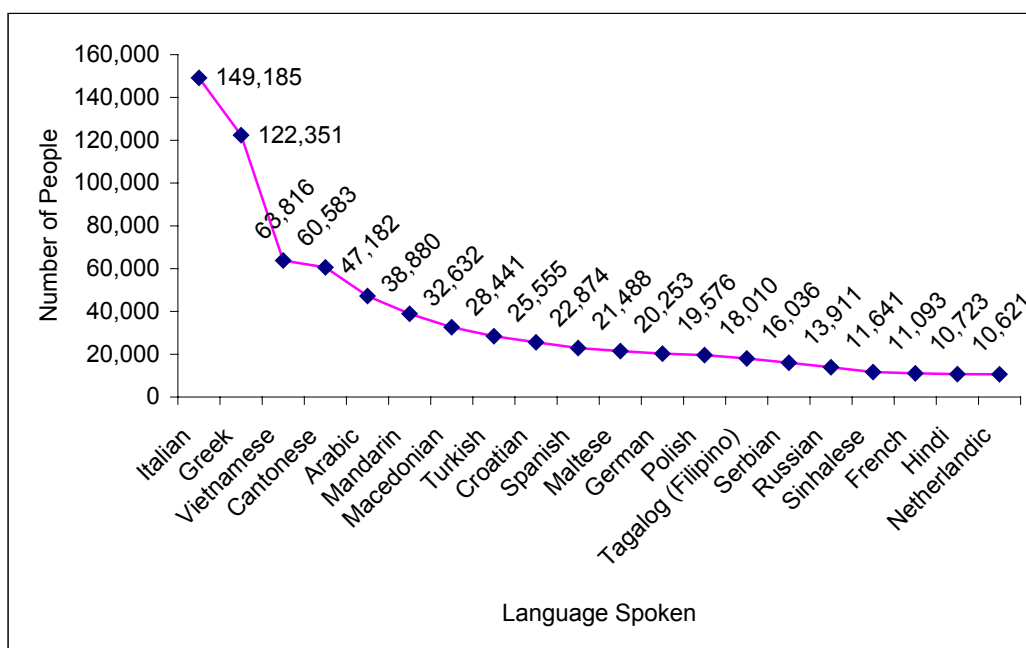
Country	Explanatory Notes
China & Hong Kong	China (excludes SARs and Taiwan Province) where SAR is an abbreviation of 'Special Administrative Region' and where SARs comprise 'Hong Kong (SAR of China)' and 'Macau (SAR of China)'.
Korea	Korea should be followed by the words Republic of (South)
Macedonia	Macedonia should be followed by the word FYROM, which is an abbreviation of 'Former Yugoslav Republic of Macedonia'.
United Kingdom	United Kingdom includes 'England', 'Scotland', 'Wales', 'Northern Ireland', 'Channel Islands', 'Isle of Man', and 'United Kingdom, nfd'.
Vietnam	Although 'Vietnam' is cited as one word by major geographical sources (e.g., Geographica, 1999), this country appeared as two words (Viet Nam) in the ABS data and was therefore not amended in the construction of graphs
Yugoslavia	Yugoslavia should be followed by the words Federal Republic of

Source: ABS BCP - Catalogue No. 2001.0 (2002).

Most Common Languages Spoken at Home in Victoria

The Basic Community Profile (BCP) for Victoria (2001) showed that 19.97% (920,820) of Victorians speak a language other than English at home. The twenty most commonly spoken languages at home in Victoria are shown in **Figure 3**. The top five languages were Italian (149,185), Greek (122,351), Vietnamese (63,816), Cantonese (60,583) and Arabic (47,182). It should be noted that Lebanese people traditionally speak Arabic.

The number of people speaking certain languages is usually greater than the number of people born in the corresponding country, for example 90,056 people were born in Italy but 149,185 people speak Italian at home. In some sense the latter figure may be a better measure of ethnicity as it may include Australian born people who have Italian parents and still identify with Italian culture.



Source: ABS BCP - Catalogue No. 2001.0 (2002).

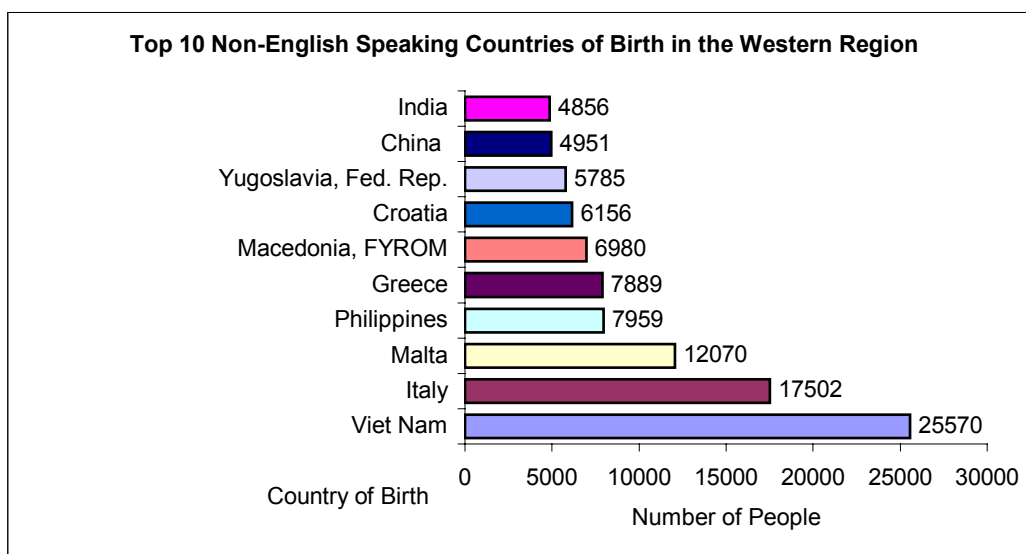
Figure 3

Most Common Languages Other than English Spoken at Home in Victoria

Country of Birth of Western Metropolitan Region Residents

Basic calculations showed that the Western Metropolitan region consisted of a total of 605,364 people with 364,198 of these people born in Australia and 165,667 (27.37%) people born overseas in a NES country at the time of the 2001 census. The latter figure includes 34,692 people ‘born elsewhere overseas’. The COB status of 42,470 (7.02%) people was unknown or ‘not stated’ according to the ABS profiles for the Western region. **Figure 5** shows the top ten NES countries of birth in the Western Metropolitan region. In summary, the top five countries of birth of people who reside in this region were:

- **Vietnam - 25,570**
- **Italy - 17,502**
- **Malta - 12,070**
- **Philippines - 7,959**
- **Greece - 7,889**



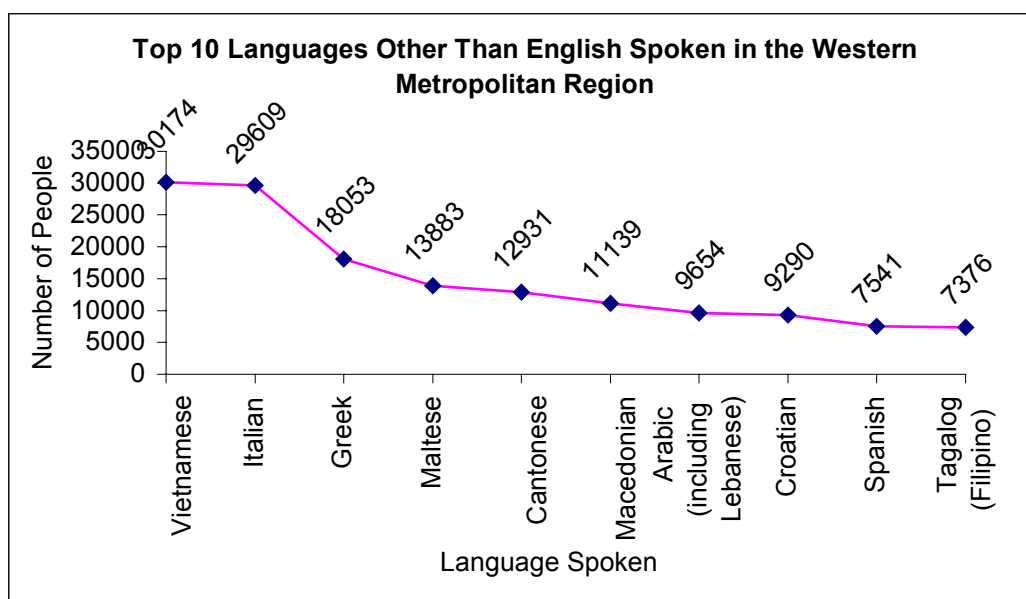
Source: ABS BCPs (2002).

Figure 5
Top Ten NES Countries of Birth in the Western Metropolitan Region

The Western region is home to about 45% of Victoria’s Vietnamese population, 19% of the Italian population, 54% of the total Maltese born population, 35% of the Philippines born population and nearly 14% of people born in Greece.

Languages Spoken in the Western Metropolitan Region

The number of people speaking a language other than English at home in the Western region was: 210,731* or 34.81% (ABS, 2002). **Figure 6** shows the major languages spoken in the Western region. The graph shows that 30,174 people in the Western region speak Vietnamese; 29,609 speak Italian; 18,053 speak Greek; 13,883 speak Maltese and 12,931 speak Cantonese. These numbers represent 4.98%, 4.89%, 2.98%, 2.29% and 2.14% (17.29% together) of the total Western metropolitan region population.



Notes. Source: ABS BCPs (2002). *This figure included 21,475 people who speak an 'other' language; this includes 'Inadequately described' and 'Non-verbal so described'.

Figure 6

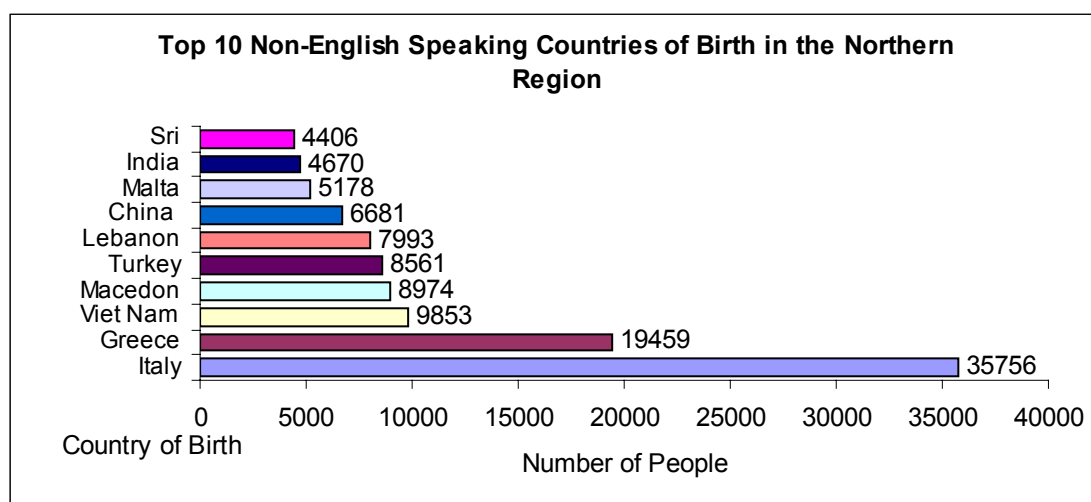
Top Ten Languages Other Than English Spoken in the Western Metropolitan Region

Country of Birth of Northern Metropolitan Region Residents

The Northern region population consisted of 736,996 people. Of these, 484,745 were Australian born and 174,953 (23.74%) were born overseas in a NES country (the latter figure includes 33,713 ‘born elsewhere overseas’). The countries of birth of a further 41,892 (5.68%) people were ‘not stated’. **Figure 7** shows the top ten NES countries of birth for the Northern Metropolitan Region. The top five countries of birth of people of the Northern region included:

- **Italy - 35,756**
- **Greece - 19,459**
- **Vietnam - 9,853**
- **Macedonia - 8,974**
- **Turkey - 8,561**

These numbers constitute close to 40%, 34%, 17%, 46% and 56% of the Victorian populations of people born in each of these countries.



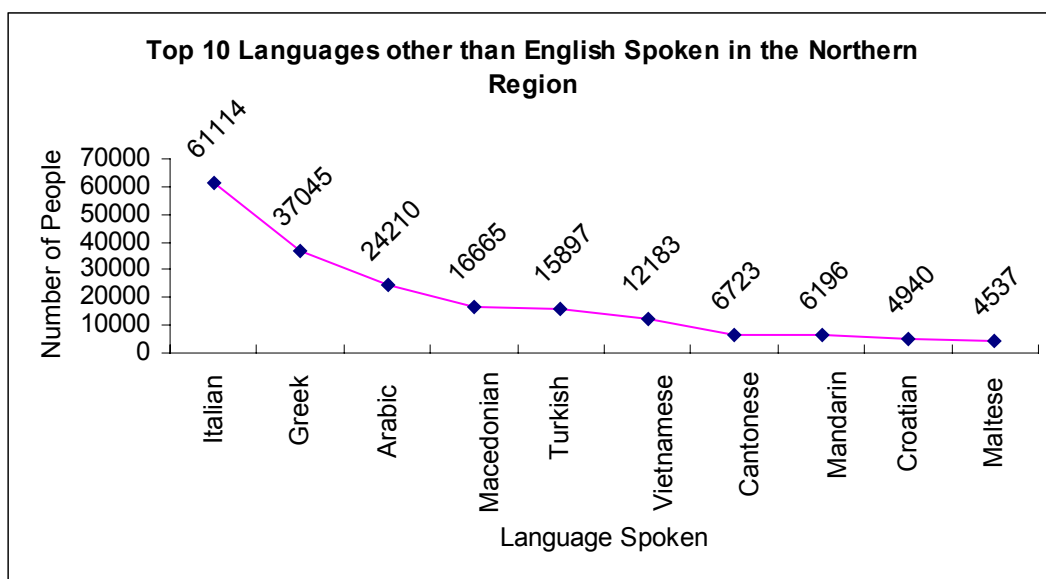
Source: ABS BCPs (2002).

Figure 7

Top Ten NES Countries of Birth in the Northern Metropolitan Region

Languages Spoken in the Northern Metropolitan Region

The number of people speaking a language other than English at home in the Northern region was: 243,202* or 33.00% (ABS, 2002). The major NES languages spoken in the Northern region are shown in **Figure 8**. The main languages included Italian with 61,114 speakers, Greek with 37,045 speakers, Arabic with 24,210 speakers, Macedonian with 16,665 speakers and Turkish with 15,897 speakers. These top five languages constitute 8.29%, 5.03%, 3.28%, 2.26% and 2.16% (totalling 21.02%) of the total Northern metropolitan region population.



Notes. Source: ABS BCPs (2002). *This figure included 20,708 people who speak an 'other' language; this includes 'Inadequately described' and 'Non-verbal so described'.

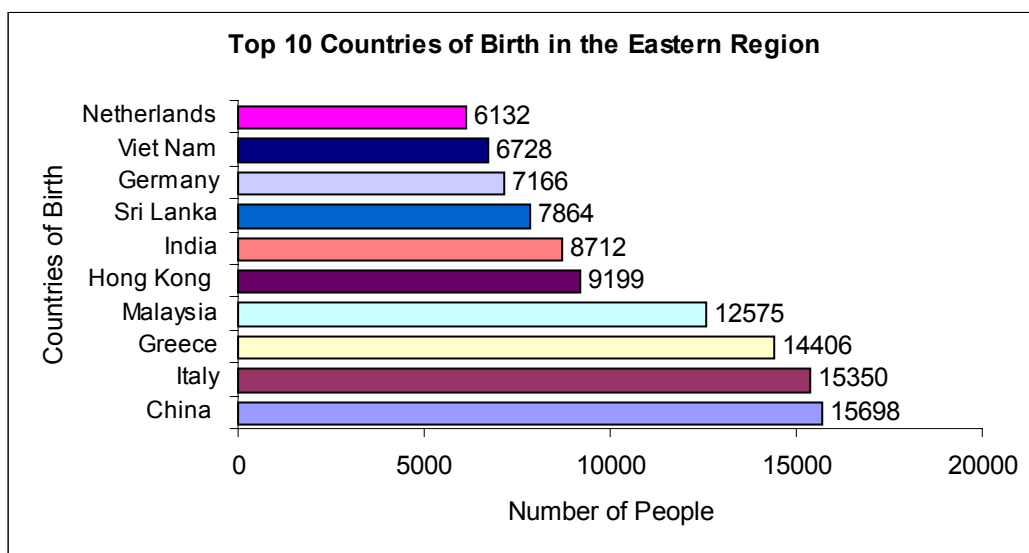
Figure 8

Top Ten Languages Other Than English Spoken in the Northern Metropolitan Region

Country of Birth of Eastern Metropolitan Region Residents

Basic calculations of 2001 census statistics revealed a total population of 890,761 persons for the Eastern metropolitan region. This figure included 641,405 Australian born persons and 169,047 (18.28%) persons born overseas in a NES country (the latter figure includes 36,670 ‘born elsewhere overseas’). The country of birth of 40,953 (4.43%) people was unknown. **Figure 9** shows the top ten NES countries of birth for this region. The top five countries of birth were:

- **China - 15,698**
- **Italy - 15,350**
- **Greece - 14,406**
- **Malaysia - 12,575**
- **Hong Kong - 9,199**



Source: ABS BCPs (2002).

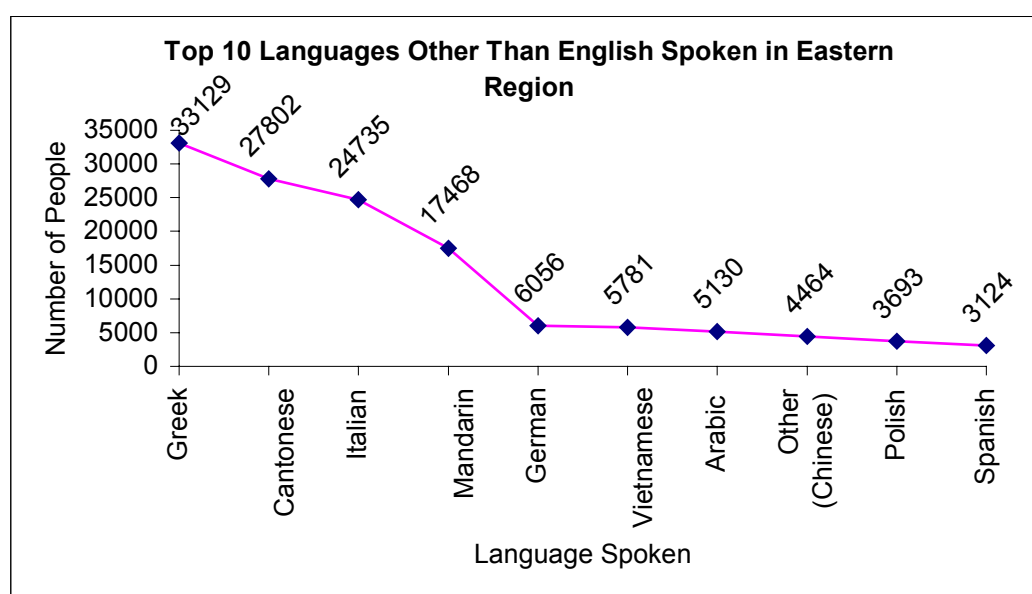
Figure 9

Top Ten NES Countries of Birth in the Eastern Metropolitan Region

Over 42% of Victoria’s Chinese population, 17% of the Italian population, 25% of the Greek population and 51% and 57% of Victorians born in Malaysia and Hong Kong live in the Eastern region.

Languages Spoken in the Eastern Metropolitan Region

The number of people speaking a language other than English at home in the Eastern region was: 188,433* or 20.37% (ABS, 2002). As shown in **Figure 10**, the main NES languages spoken in the region were Greek with 33,129 speakers, Cantonese with 27,802 speakers, Italian with 24,735 speakers, Mandarin with 17,468 speakers and German with 6,056 speakers. The numbers for these five languages make up 3.58%, 3.01%, 2.67%, 1.89% and .65% (together 11.81%) of the total Eastern region.



Notes. Source: ABS BCPs (2002). *This figure included 18,389 people who speak an 'other' language; this includes 'Inadequately described' and 'Non-verbal so described'.

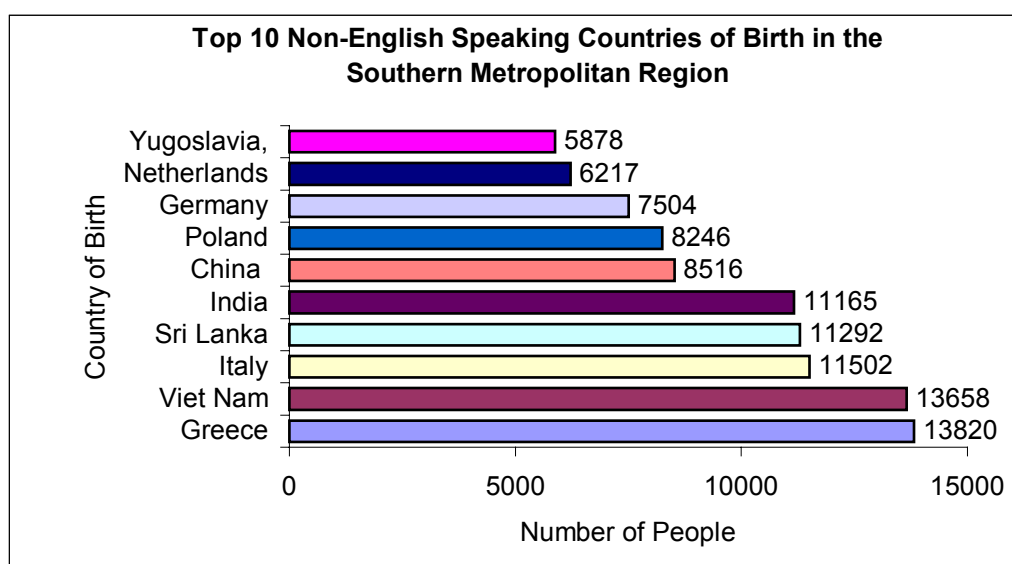
Figure 10

Top Ten Languages Other Than English Spoken in the Eastern Metropolitan Region

Country of Birth of Southern Metropolitan Region Residents

A total of 1,072,036 people resided in the Southern region at the time of the 2001 Census, with 705,191 of these people born in Australia and 203,083 born overseas in a NES country (18.94%) (the latter figure includes 68,468 ‘born elsewhere overseas’). The countries of birth of a further 64,290 people (6.00%) in the region was not known. The major NES countries of birth for the Southern Metropolitan region are shown in **Figure 11**. The five major countries included:

- **Greece - 13,820**
- **Vietnam -13,658**
- **Italy - 11,502**
- **Sri Lanka -11,292**
- **India - 11,165**



Source: ABS BCPs (2002).

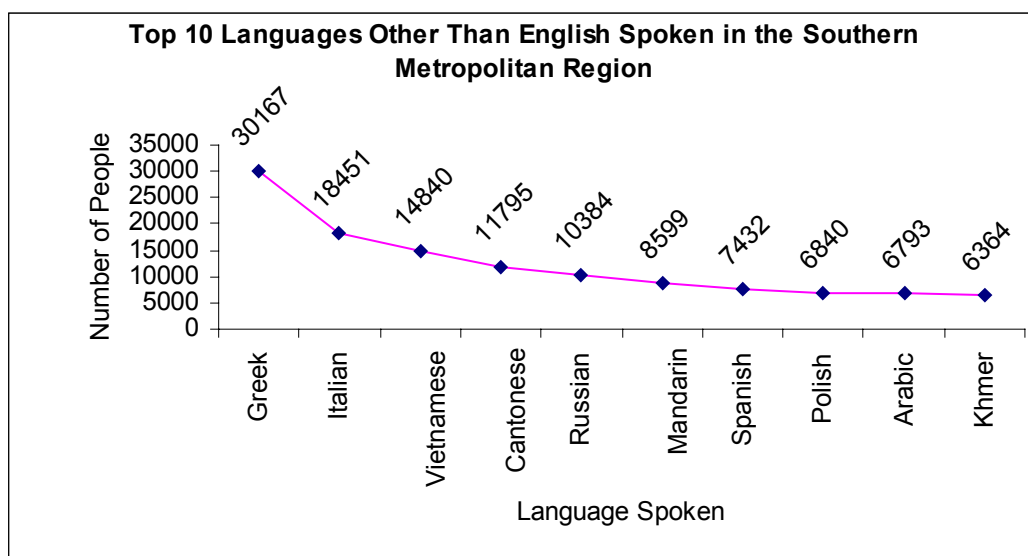
Figure 11

Top Ten NES Countries of Birth in the Southern Metropolitan Region

The Southern region is home to approximately 24% of Victoria’s Greek population as well as 24% of Victorians born in Vietnam, 13% born in Italy, 43% born in Sri Lanka and 36% born in India.

Languages Spoken in the Southern Metropolitan Region

The number of people speaking a language other than English at home in the Southern region was: 218,713* or 20.40% (ABS, 2002). The ten major languages spoken in the Southern region are shown in **Figure 12**. The top five languages spoken at home included: Greek (30,167 speakers), Italian (18,451 speakers), Vietnamese (14,840 speakers), Cantonese (11,795 speakers) and Russian (10,384 speakers). The percentages formed by these numbers relative to the total Southern region population were 2.81%, 1.72%, 1.38%, 1.10% and .97% (a total of 7.99%).



Source: ABS BCPs (2002). *This figure included 31,436 people who speak an 'other' language; this includes 'Inadequately described' and 'Non-verbal so described'.

Figure 12

Top Ten Languages Other Than English Spoken in the Southern Metropolitan Region

Summary of Metropolitan Data

The previous section consisted of ten graphs related to the countries of birth and languages spoken in metropolitan Victoria. The graphs are summarised in **Table 3** in rank order of which country/language had the highest number of people. For example, the Western region (see Column 6 below) had the highest number of Vietnamese born people and the highest number of Italian speakers whereas the Northern (see Column 5 below) had the highest number of Italian born people and Italian speakers.

Table 3

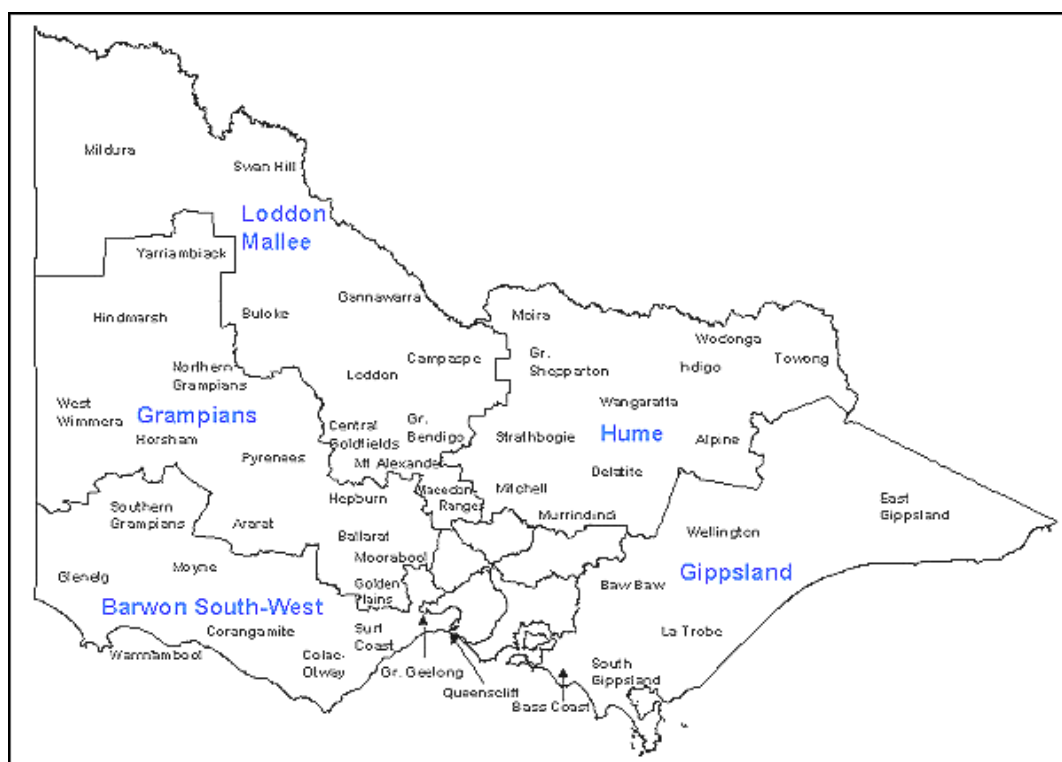
Summary of Top Five NES Countries of Birth and Languages for Victoria and Each Metropolitan Region

Country of Birth	Victoria	Eastern	Southern	Northern	Western
1	Italy	China	Greece	Italy	Viet Nam
	90,056	15,698	13,820	35,756	25,570
2	Greece	Italy	Viet Nam	Greece	Italy
	57,595	15,350	13,658	19,459	17,502
3	Viet Nam	Greece	Italy	Viet Nam	Malta
	56,563	14,406	11,502	9,853	12,070
4	China	Malaysia	Sri Lanka	Macedonia	Philippines
	36,791	12,575	11,292	8,974	7,959
5	India	Hong Kong	India	Turkey	Greece
	30,628	9,199	11,165	8,561	7,889
Language	Victoria	Eastern	Southern	Northern	Western
1	Italian	Greek	Greek	Italian	Vietnamese
	149,185	33,129	30,167	61,114	30,174
2	Greek	Cantonese	Italian	Greek	Italian
	122,351	27,802	18,451	37,045	29,609
3	Vietnamese	Italian	Vietnamese	Arabic	Greek
	63,816	24,735	14,840	24,210	18,053
4	Cantonese	Mandarin	Cantonese	Macedonian	Maltese
	60,583	17,468	11,795	16,665	13,883
5	Arabic	German	Russian	Turkish	Cantonese
	47,182	6,056	10,384	15,897	12,931

Source: ABS BCPs (2002).

Statistics for Each Rural Region

The DHS regions in rural Victoria include the Loddon Mallee, Grampians, Barwon South Western, Hume and Gippsland regions. A map showing the geographical location of these regions appears below in **Figure 13**. Graphs related to country of birth and language spoken at home for the five rural DHS regions are also presented in this section. The source of the data for these was once again the 2001 ABS Census of Population and Housing.



Source: Department of Human Services, 2001

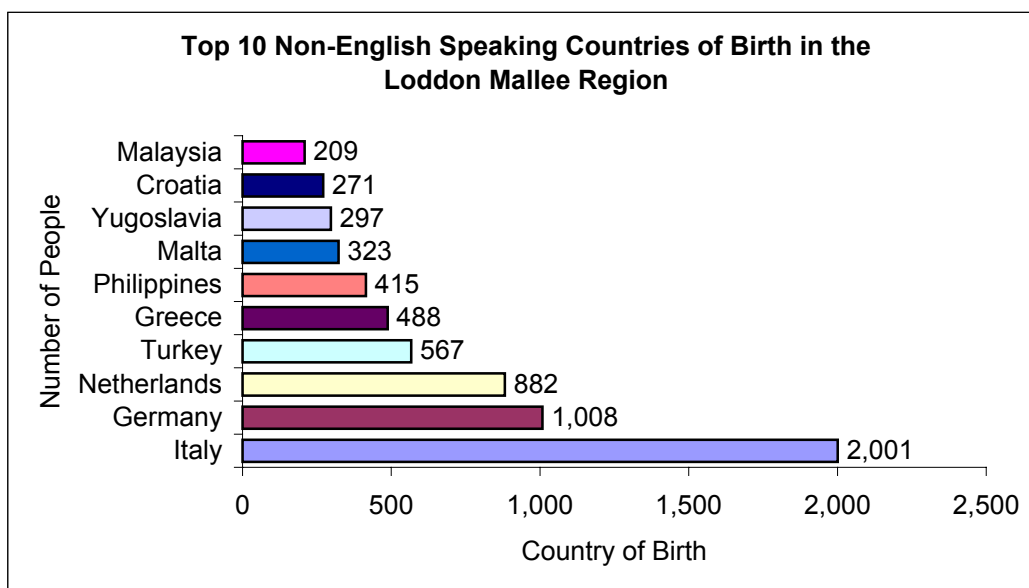
Figure 13

Local Government Areas and DHS Regions in Rural Victoria

Country of Birth of Loddon/Mallee Region Residents

A total of 279,647 people resided in the Loddon/Mallee region at the time of the 2001 Census, with 244,097 of these people born in Australia and 10,355 born overseas in a NES country (3.70%) (the latter figure includes 2,446 people ‘born elsewhere overseas’). The countries of birth of 14,175 people (5.07%) were unknown for this region. The top ten NES countries of birth for Loddon/Mallee region residents are shown in **Figure 14**. The top five of these were:

- **Italy – 2,001**
- **Germany – 1,008**
- **Netherlands - 882**
- **Turkey - 567**
- **Greece - 488**



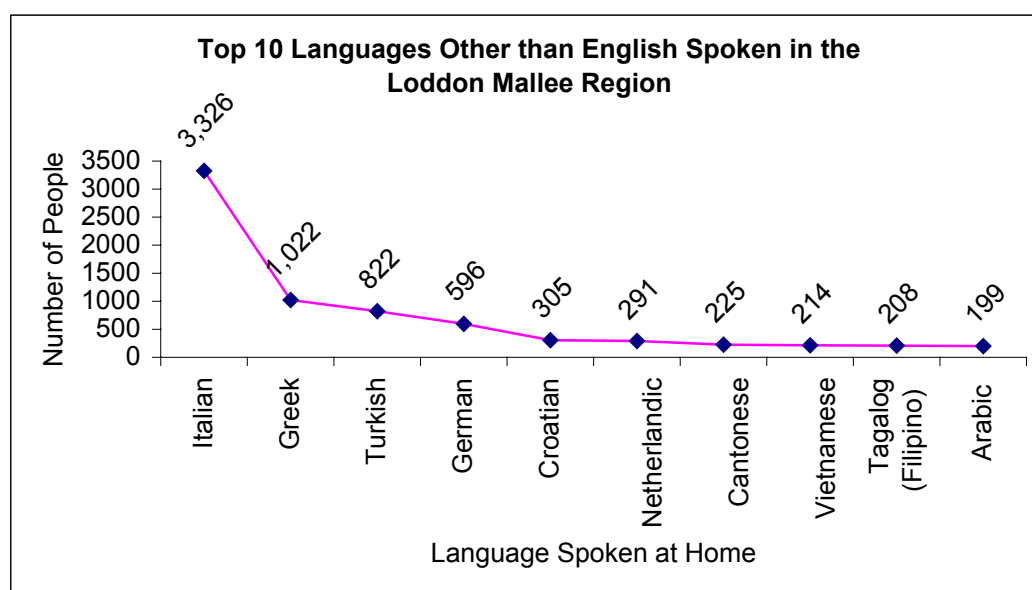
Source: ABS BCPs (2002).

Figure 14

Top Ten NES Countries of Birth in the Loddon/Mallee Region

Languages Spoken in the Loddon/Mallee Region

Figure 15 shows the languages other than English spoken in the Loddon/Mallee region. According to the census figures approximately 10,674 people speak a language other than English at home (*see note below graph) (3.82%) in this region. The region is home to a high number of Italian speakers (3,326) and other major languages include Greek (1,022), Turkish (822) German (596) and Croatian (305).



Source: ABS BCPs (2002). *This figure included 1,795 people who speak an 'other' language; this includes 'Inadequately described' and 'Non-verbal so described'.

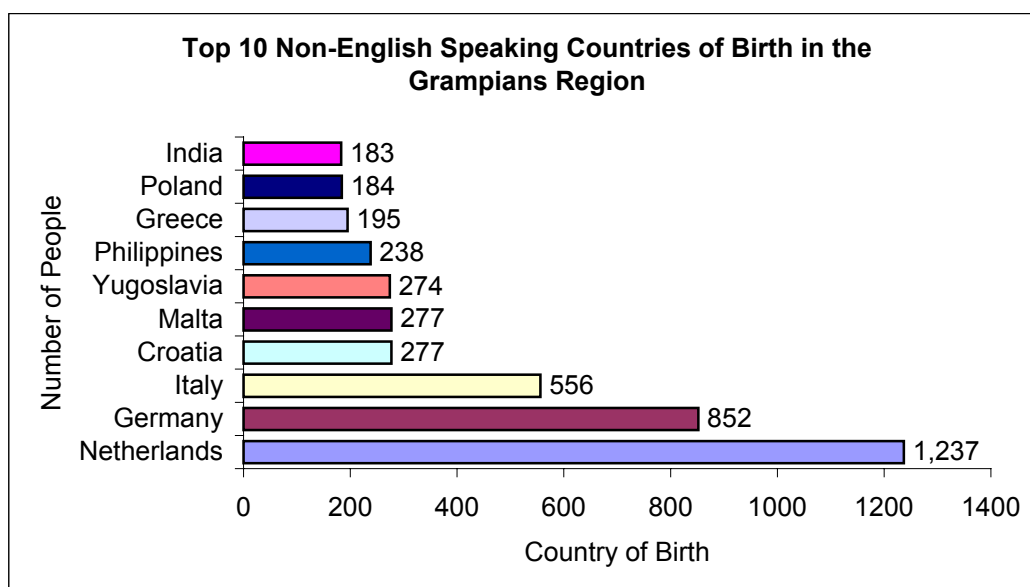
Figure 15

Top Ten Languages Other Than English Spoken in the Loddon/Mallee Region

Country of Birth of Grampians Region Residents

A total of 198,080 people resided in Grampians region at the time of the 2001 Census, with 173,218 of these people born in Australia and 6,770 born overseas in a NES country (3.42%) (this statistic includes 1,654 people 'born elsewhere overseas'). The countries of birth of 9,567 people (4.83%) were unknown or 'not stated'. **Figure 16** shows the top ten non-English speaking countries of birth for the Grampians region. This includes:

- Netherlands - 1,237
- Germany - 852
- Italy - 556
- Croatia - 277
- Malta - 277

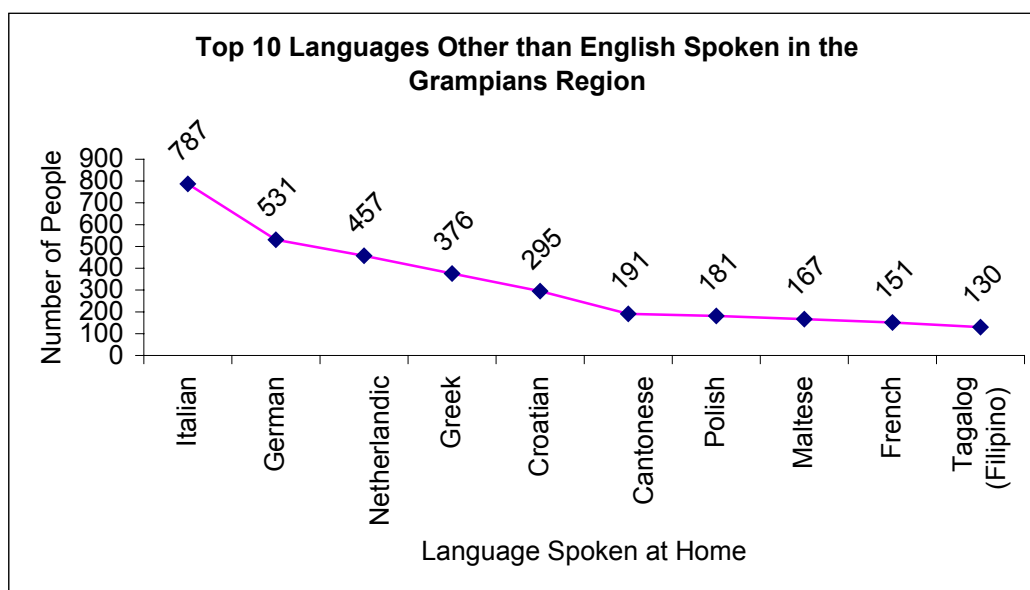


Source: ABS BCPs (2002).

Figure 16
Top Ten NES Countries of Birth in the Grampians Region

Languages Spoken in the Grampians Region

The top ten languages other than English spoken in the Grampians region are shown in **Figure 17**. According to the 2001 census 5,304 people speak a language other than English at home (2.68%) in this region. Italian speakers constitute the greatest number of non-English speakers in this region, with 787 speakers followed by smaller numbers of German (531), Netherlandic (457), Greek (376) and Croatian (295).



Source: ABS BCPs (2002). * This figure included 850 people who speak an 'other' language; this includes 'Inadequately described' and 'Non-verbal so described'.

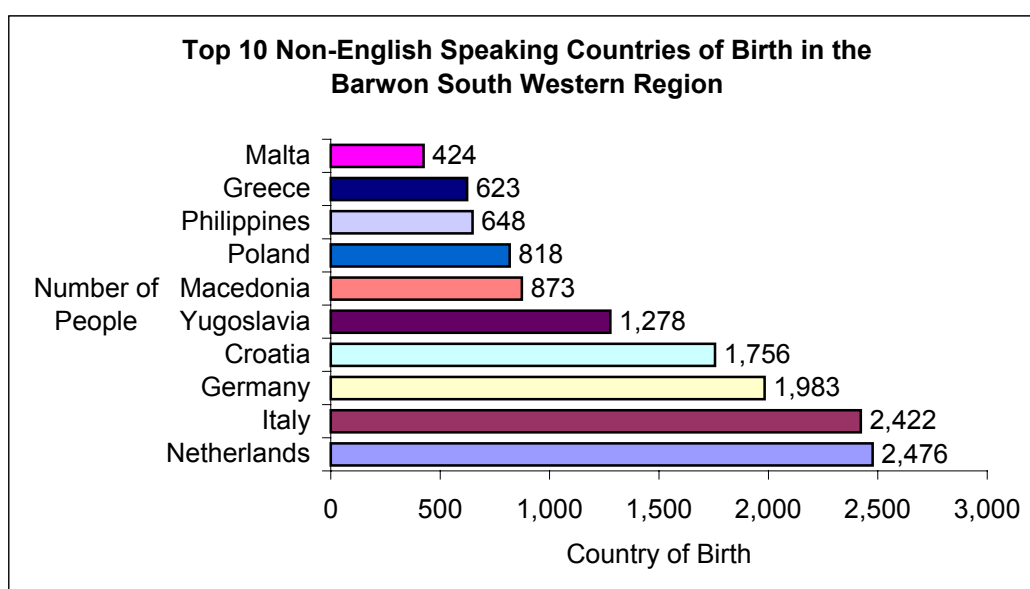
Figure 17

Top Ten Languages Other Than English Spoken in the Grampians Region

Country of Birth of Barwon Region Residents

The census showed that 321,897 people reside in the Barwon region with 267,145 of these people born in Australia and 20,602* (6.40%) born in a NES country. The countries of birth of 15,513 people (4.82%) in the region were unknown. **Figure 18** shows the top ten countries of birth for residents in this region. In summary, the top five countries for Barwon were:

- Netherlands - 2,476
- Italy - 2,422
- Germany – 1,983
- Croatia – 1,756
- Yugoslavia – 1,278

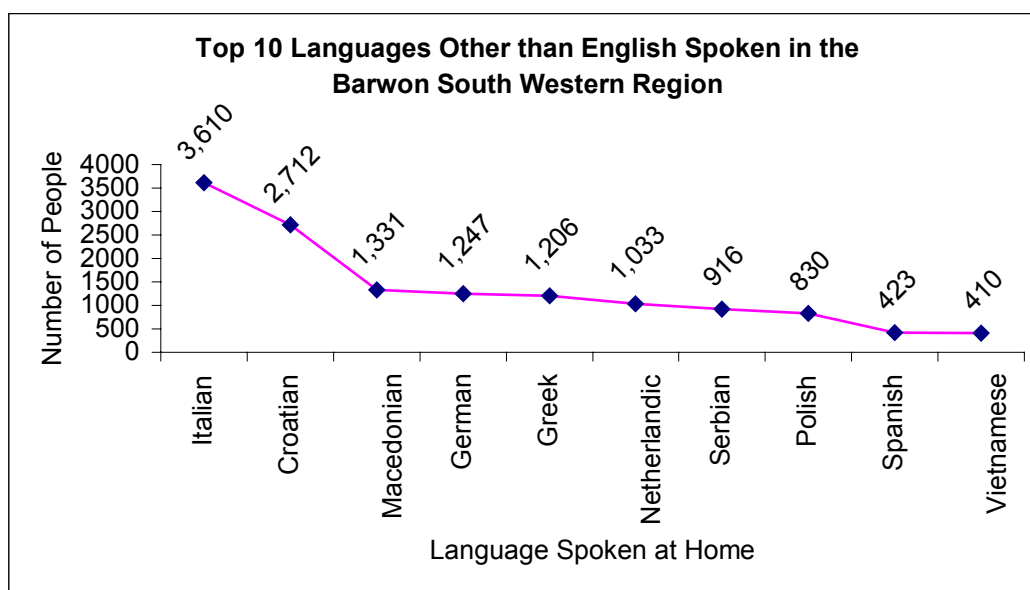


Source: ABS BCPs (2002). *This figure included 4,529 people born elsewhere overseas.

Figure 18
Top Ten NES Countries of Birth in the Barwon Region

Languages Spoken in the Barwon Region

The number of people who speak a language other than English in the Barwon region was 20,661* (6.42%). As may be seen in **Figure 19**, the top five languages spoken in the Barwon region include Italian with 3,610 speakers followed by Croatian (2,712), Macedonian (1,331), German (1,247) and Greek (1,206).



Source: ABS BCPs (2002). *This figure included 2,784 people who speak an 'other' language; this includes 'Inadequately described' and 'Non-verbal so described'.

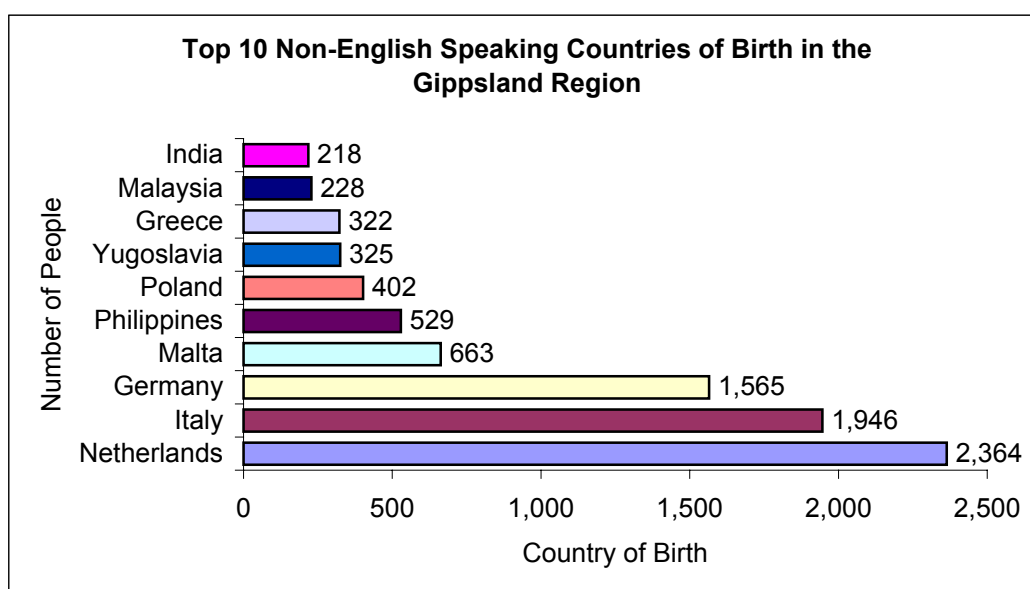
Figure 19

Top Ten Languages Other Than English Spoken in the Barwon South Western Region

Country of Birth of Gippsland Region Residents

The census statistics showed that 226,896 people reside in the Gippsland region with 187,830 of these people born in Australia and 12,294* (5.42%) born in a NES country. The birthplaces of a further 12,781 (5.63%) people were not known. **Figure 20** shows the top ten countries of birth for the Gippsland region with the top five of these listed below:

- **Netherlands - 2,364**
- **Italy - 1,946**
- **Germany - 1,565**
- **Malta - 663**
- **Philippines - 529**



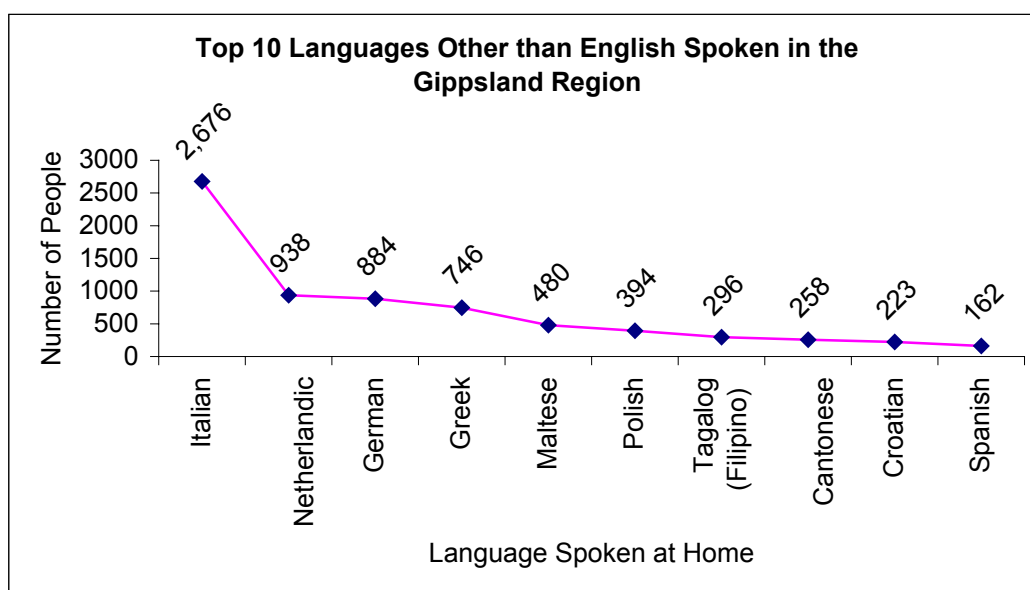
Notes. Source: ABS BCPs (2002). *This figure included 2,381 people born elsewhere overseas.

Figure 20

Top Ten NES Countries of Birth in the Gippsland Region

Languages Spoken in the Gippsland Region

The census showed that 9,667 (4.26%) people in the Gippsland region speak a language other than English in the Gippsland region. **Figure 21** shows the top ten NES languages spoken in this region. As may be seen in the graph, the Italian language has the greatest number of speakers (2,676), followed by Netherlandic with 938 speakers, German with 884 speakers, Greek with 746 and Maltese with 480 speakers.



Notes. Source: ABS BCPs (2002). *This figure included 1,202 people who speak an 'other' language; this includes 'Inadequately described' and 'Non-verbal so described'.

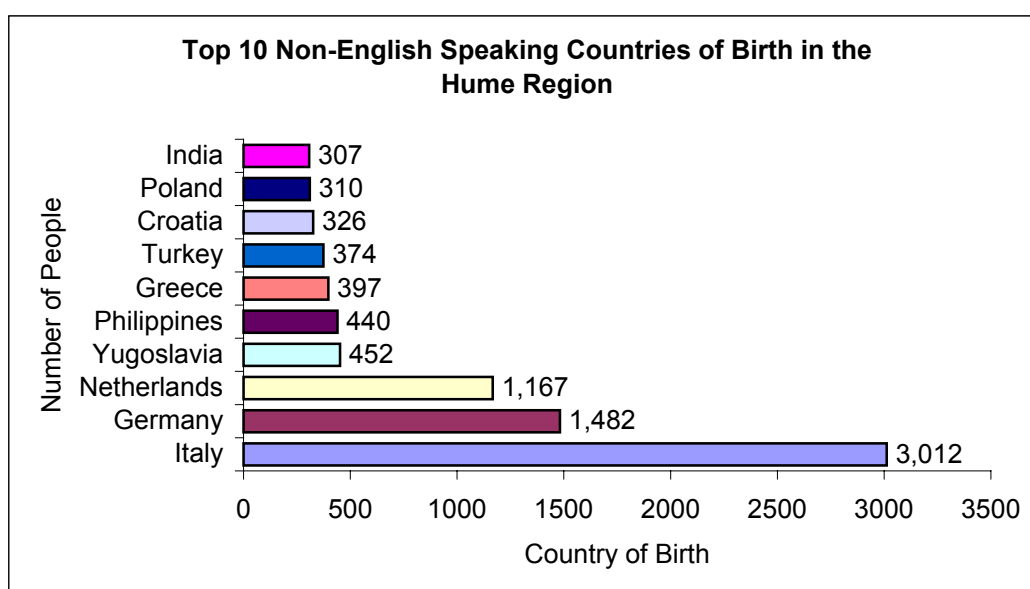
Figure 21

Top Ten Languages Other Than English Spoken in the Gippsland Region

Country of Birth of Hume Region Residents

The census showed that 245,567 people reside in the Hume region with 208,646 of these people born in Australia and 13,115* (5.34% of the population) born in a NES country. The birthplaces of another 13,024 people (5.30%) in the region were unknown. **Figure 22** shows the top ten non-English speaking countries of birth for the Hume region with the top five summarised below. This region included:

- **Italy - 3,012**
- **Germany – 1,482**
- **Netherlands - 1,167**
- **Yugoslavia - 452**
- **Philippines - 440**



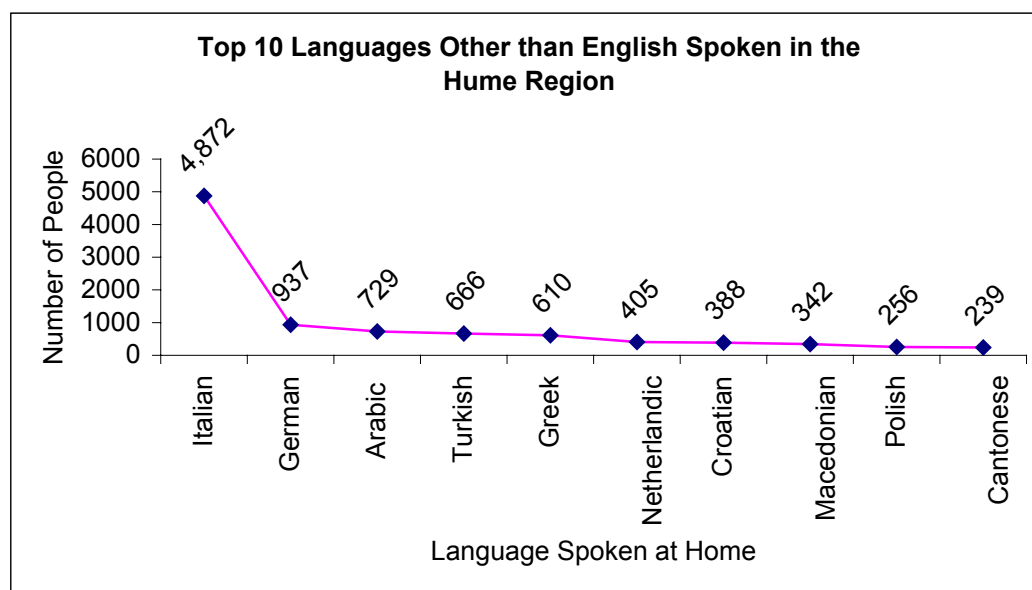
Notes. Source: ABS BCPs (2002). *This figure included 3,323 people born elsewhere overseas.

Figure 22

Top Ten NES Countries of Birth in the Hume Region

Languages Spoken in the Hume Region

The census showed that 13,400 (5.46%) people in the Hume region speak a language other than English. **Figure 23** shows the top ten NES languages spoken in the Hume region. As may be seen in the graph, the Italian language has a high number of speakers with 4,872 people, followed by German with over 937 speakers, Arabic with 729 and Turkish and Greek with over 600 speakers respectively.



Notes. Source: ABS BCPs (2002). *This figure included 1,975 people who speak an 'other' language; this includes 'Inadequately described' and 'Non-verbal so described'.

Figure 23

Top Ten Languages Other Than English Spoken in the Hume Region

Summary of Rural Data

The ten graphs related to the countries of birth and languages spoken in rural Victoria are summarised in **Table 4**. The table is ranked in order of which country and language had the highest number of people. Overall, Italy, Netherlands, Germany, Yugoslavia and Croatia were the top NES countries of birth in the rural regions of Victoria and Italian, German, Greek, Croatian and Netherlandic were the top NES languages spoken in the rural regions.

Table 4

Summary of Top Five NES Countries of Birth and Languages for Victoria and Each Rural Region

Country of Birth	Victoria	Barwon	Gippsland	Grampians	Hume	Loddon Mallee
1	Italy	Netherlands	Italian	Netherlands	Italy	Italy
	90,056	2,476	2,676	1,237	3,012	2,001
2	Greece	Italy	Netherlandic	Germany	Germany	Germany
	57,595	2,422	938	852	1482	1,008
3	Viet Nam	Germany	German	Italy	Netherlands	Netherlands
	56,563	1,983	884	556	1167	882
4	China	Croatia	Greek	Croatia	Yugoslavia	Turkey
	36,791	1,756	746	277	452	567
5	India	Yugoslavia	Maltese	Malta	Philippines	Greece
	30,628	1,278	480	277	440	488
Language Spoken	Victoria	Barwon	Gippsland	Grampians	Hume	Loddon Mallee
1	Italian	Italian	Italian	Italian	Italian	Italian
	149,185	3,610	2,676	787	4,872	3,326
2	Greek	Croatian	Netherlandic	German	German	Greek
	122,351	2,712	938	531	937	1,022
3	Vietnamese	Macedonian	German	Netherlandic	Arabic	Turkish
	63,816	1,331	884	457	729	822
4	Cantonese	German	Greek	Greek	Turkish	German
	60,583	1,247	746	376	666	596
5	Arabic	Greek	Maltese	Croatian	Greek	Croatian
	47,182	1,206	480	295	610	305

Source: ABS BCPs (2002).

Chapter Three

Victorian Hospital Data

Overview of Hospital Data

A compact disc (CD) consisting of data on Victorian hospitals was prepared for the CEH by the Information Analysis Unit of the DHS. It consisted of two state-wide numerical databases known as the Victorian Emergency Minimum Dataset (VEMD) and the Victoria Admitted Episodes Dataset (VAED). Table 5 shows the 21 hospitals that were of interest in the present project. As may be seen in the table, these hospitals have been grouped according to DHS classifications, with five hospitals classified as A1, nine as A2 and four as B1. Although the Children's hospital is an A1 hospital and the Mercy and Royal Women's are A2 hospitals these hospitals were excluded from the general analysis/comparison of data and treated separately, due to the high numbers of admissions born in Australia (babies and children) who may have parents born overseas.

Table 5

*Selected Metropolitan and Regional Hospitals in Victoria with Classifications**

Hospitals Classified as A1 (5)	Hospitals Classified as A2 (9)
Monash Medical Centre Royal Melbourne Hospital St Vincent's Hospital The Alfred Hospital Austin Medical Centre	Barwon Health Box Hill Hospital Dandenong Hospital Frankston Hospital Peter MacCallum Cancer Institute Sunshine Hospital The Northern Hospital The Royal Victorian Eye and Ear Western Hospital
Hospitals Classified as B1 (4)	Hospitals for Women & Children (HWC) (3)
Ballarat Health Services Bendigo Health Care Group Goulburn Valley Health Latrobe Regional Hospital	Mercy Hospital for Women Royal Children's Hospital Royal Women's Hospital

Notes. Hospital Classifications: Group A1 - Large Teaching Hospitals. Group A2 - Other Teaching Hospitals and Geelong & Specialist Hospitals. Group B Large Regional Base & Suburban (DHS, 2002).

The VEMD and VAED Datasets

The VEMD and VAED datasets supplied by the DHS (2002), consisted of over a million rows of information each. The data relating to each of the 21 hospitals were extracted from these larger datasets and entered into separate files. This process resulted in the creation of over 50 separate files. Formulas for summarising the data were also produced and entered into each file. Summary tables and graphs for the VEMD and VAED are presented and discussed in the sections that follow. All VEMD and VAED data presented in this report refer to a one-year period for the 2000-2001 financial year.

The Victorian Emergency Minimum Dataset

“The Victorian Emergency Minimum Dataset contains de-identified demographic, administrative and clinical data detailing presentations at Victorian public hospitals with 24-hour Emergency Departments” (DHS, 2003, web page 1). According to the DHS (2000) the VEMD was an initiative of the DHS in collaboration with the Victorian Emergency Department’s Association, the Australasian College for Emergency Medicine Victoria Faculty, the Emergency Nurse’s Association, and Monash University Accident Research Centre. The Department became fully involved in the collection and coordination of the VEMD in 1995, at the request of the participating hospitals (DHS, 2000, p.5). The VEMD manual (2000) shows that fifty data items related to emergency presentations are collected. A list of the data items collected by the VEMD may be seen in **Appendix A**.

The data supplied for the present project consisted of information relating to the sex, age group, country of birth, preferred language and statistical local area of each patient attending emergency departments of Victorian hospitals. However, only country of birth and language preference are presented in this report. It is possible for an individual to be represented on the database more than once if he or she has had more than one emergency in that year. This also applies to the admissions data. A major limitation is that country of birth and language preference is not self reported like the census data but recorded by hospital staff. This means that there may be inconsistencies in how this information is collected across hospitals. Uncertainties

about how the information is collected from patients with low English proficiency or in emergency situations also exist.

Emergency Presentations in A1 Hospitals

General numerical data relating to the country of birth and language preference of patients treated for emergencies at the five A1 hospitals are summarised in **Table 6**. This table has been sorted by the greatest number of total emergency presentations. The figures ranged from 48, 879 emergency presentations for Monash (Clayton) to 30,465 for St Vincent's. The hospitals with the highest percentage of people born in a non-English speaking country were the Royal Melbourne and St Vincent's with 34.56% and 30.53%, respectively. The two highest recorded preferences for a language other than English (see final column) were at the Austin 30.44% (of number born in NES country) and St Vincent's (27.92%).

Table 6

VEMD: Total Emergency Presentations, Country of Birth and Recorded Language Preference in A1 Hospitals

Hospital Details	Number of Emergency Presentations	Australian Born	Recorded Number and % Born in NES Country		Preference for English	Recorded Number and %* with Preference for LOTE	
Monash	48,879	32,206	11,413	23.35%	44,964	2,014	17.65%
Royal Melbourne	43,956	22,124	15,189	34.56%	39,517	3,768	24.81%
The Alfred	37,475	22,682	8,990	23.99%	36,221	1,164	12.95%
Austin	35,606	25,233	7,694	21.61%	33,054	2,342	30.44%
St Vincent's	30,465	18,155	9,301	30.53%	1,943*	2,597	27.92%

Notes. Source: DHS (2002). *This low number for St Vincent's appears because 25,753 people were recorded as not stating their language preference.

It may be noticed that LOTE figures are considerably lower than the NES COB figures. This may indicate that a high number of people born overseas speak English, or more likely, that language preference is often inaccurately collected. While hospital data systems have the capacity to collect data on whether or not an interpreter is needed, this data is often incorrectly taken and is not extracted by the DHS.

Emergency Presentations in A2 Hospitals

Information regarding the numbers, country of birth and language preference for people treated for emergency presentations in A2 hospitals are presented in **Table 7**. As shown in the table, the hospitals that recorded the highest number of emergencies were the Northern (42,198), Western (39,682) and Barwon (36,230).

Table 7

VEMD: Total Emergency Presentations, Country of Birth and Language Preference in A2 Hospitals

Hospital Name	Number of Emergency Presentations	Australian Born	Recorded Number and % Born in NES Country		Preference for English	Recorded Number and % with Preference for LOTE	
			Recorded Number	%		Recorded Number	%
Northern	42,198	26,942	12,153	28.80%	28,361	3,154	25.95%
Western	39,682	19,729	15,078	38.00%	35,997	3,224	21.38%
Barwon	36,230	29,947	3,584	9.89%	26,315	9,234*	257.65%
Box Hill	35,063	23,893	7,469	21.30%	31,010	3,318	44.42%
Eye and Ear	34,517	20,163	11,481	33.26%	33,062	1,139	9.92%
Sunshine	26,974	24,095	2,316	8.59%	25,857	1,099	47.45%
Dandenong	20,589	13,430	5,319	25.83%	19,296	936	17.60%
Frankston	19,847	15,631	1,563	7.88%	19,760	73	4.67%

Notes. Source: DHS (2002). The VEMD did not consist of data for the Peter MacCallum Cancer Institute. * Figures for Barwon are obvious data entry errors due to 8,228 people recorded as preferring the Czechoslovakian language when only 3,584 patients were from NESBs overall.

The hospitals with the greatest number of people born in a NES country revealed a slightly different order. The Western hospital recorded the greatest number of NES COB emergencies with 38.00% and this was followed by the Eye and Ear with 33.26% and the Northern with 28.80%.

The hospitals with the greatest number of people with a recorded preference for a LOTE were Sunshine (47.45%), Box Hill (44.42%) and the Northern (25.95%). It should be noted that Barwon shows that 257.65% of patients born in NES country preferred a LOTE, however, this is an obvious error in data entry.

Table 7 shows a large difference in NES numbers between the Western and Sunshine hospitals, even though these hospitals are both situated in the culturally diverse Western region. Further calculations to determine the reason for this, revealed that 81% of all emergency presentations in the Sunshine hospital were less than 10 years old (see **Table 7**). Even so, given the high proportion of people born in a NES country in the Western region, it is likely that many of these children’s “parents” were born in a NES COB.

Emergency Presentations in B1 Hospitals

Table 8 shows the number of emergency presentations together with COB and preference for a LOTE in the B1 hospitals. The table shows that Bendigo had the highest number of emergency presentations with 30,700 people while the second greatest was Goulburn with 25,735 people. The hospitals with the greatest percentage of emergency presentations associated with a NES country of birth were Goulburn and Latrobe, with 7.93% and 7.02%, respectively, while preference for a language other than English was recorded as less than 10% for all of these B1 hospitals.

Table 8

VEMD: Total Emergency Presentations, Country of Birth and Recorded Language Preference in B1 Hospitals

Hospital Details	Number of Emergency Presentations	Australian Born	Recorded Number and Percentage Born in NES Country		Preference for English	Recorded Number and Percentage with Preference for LOTE	
			Number	Percentage		Number	Percentage
Bendigo HCG	30,700	28,747	742	2.42%	30,532	65	8.76%
Goulburn	25,735	22,596	2,042	7.93%	0*	0*	0.00%
Ballarat Health	15,607	14,372	561	3.59%	15,539	53	9.45%
Latrobe	13,622	11,903	956	7.02%	13,592	19	1.03%

Notes. Source: DHS (2002). *Language preference was not recorded for Goulburn on the VEMD.

Emergency Presentations in Women's and Children's Hospitals

Figures for the hospitals for women and children may be seen in **Table 9**. The total number of emergency presentations in these hospitals were highest in the Royal Children's followed by the Royal Women's and the Mercy (see **Table 9**). The percentage of NES COB emergency presentations in these three hospitals were: 3.75%, 35.48% and 29.49%. The preference for a language other than English was 264.29%, 39.37%, and 47.47%, respectively. As can be expected, the recorded number with preference for a LOTE in the Children's hospital (264.29%) far higher than NES COB emergency presentations (3.75%). This suggests that there may be a high need for interpreting and culturally appropriate services for the parents of some children.

Table 9

VEMD: Total Emergency Presentations, Country of Birth and Recorded Language Preference in Women's and Children's Hospitals

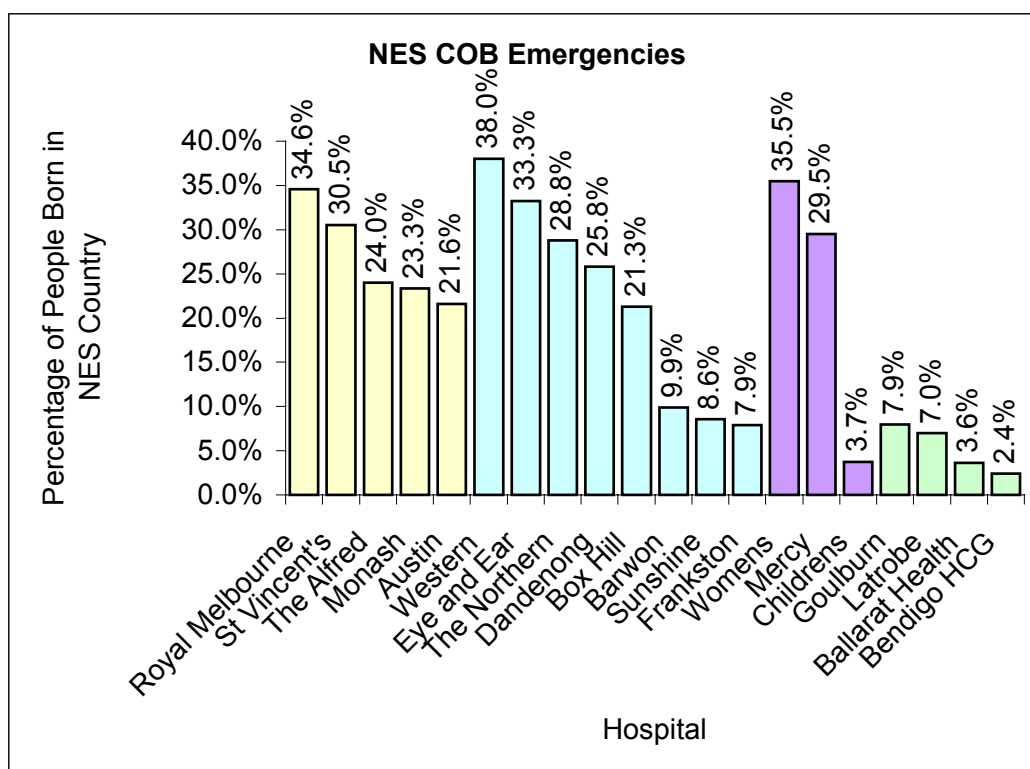
Hospital Details	Number of Emergency Presentations	Australian Born	Recorded Number and % Born in NES Country		Preference for English	Recorded Number and % with Preference for LOTE	
Royal Children's	53,433	50,548	2002	3.75%	7,749	5,291	264.29%
Royal Women's	23,856	14,054	8,464	35.48%	20,410	3,332	39.37%
Mercy	10,072	6,564	2,970	29.49%	8,661	1,410	47.47%

Notes. Source: DHS (2002).

Summary of Emergency Presentations from NES Countries

The percentages from Tables 6-9 above were sorted to show the greatest percentage of people born in a NES country for the selected hospitals (see excel file named Hospital Totals for VEMD). The graph below (Figure 24) was constructed from this data. The hospitals with the highest percentage of emergency presentations from a NES COB were the:

- **Western - 38.0%**
- **Royal Women's - 35.5%**
- **Royal Melbourne - 34.6%**
- **Eye and Ear - 33.3%**
- **St Vincent's Hospital - 30.5%**



Notes. Source: DHS (2002). Colour coded groups from left to right 1st: A1 hospitals; 2nd: A2; 3rd: Hospitals for Women & Children and 4th: B1. No emergency data recorded for the Peter MacCallum Cancer Institute.

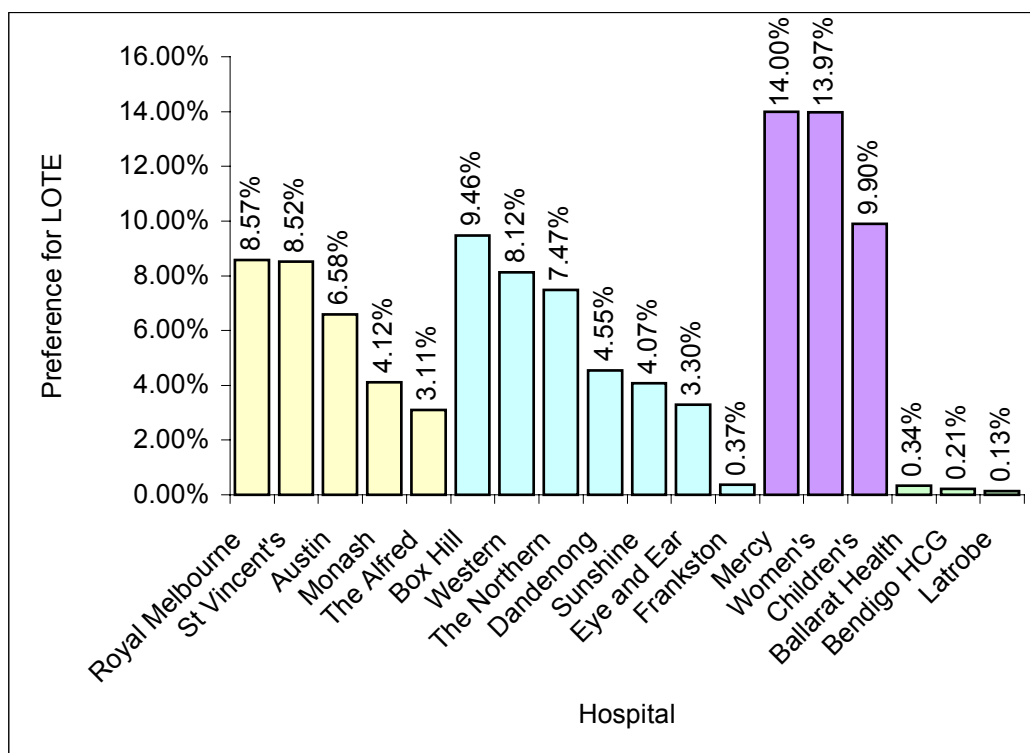
Figure 24

Summary of NES COB Emergency Presentations in Selected Victorian Hospitals

Summary of Emergency Presentations and Preference for LOTE

A summary graph similar to the previous one was also constructed for the LOTE data from Tables 6-9. As may be seen in Figure 25, the hospitals with the highest percentage of emergency presentations with a preference for a language other than English were the:

- **Mercy - 14.00%**
- **Royal Women's - 13.97%**
- **Royal Children's - 9.90%**
- **Box Hill - 9.46%**
- **Royal Melbourne - 8.57%**



Notes. Source: DHS (2002). Colour coded groups from left to right 1st: A1 hospitals; 2nd: A2; 3rd: B1. 4th: Hospitals for Women & Children. Goulburn and Barwon have been omitted due to errors. No emergency data recorded for the Peter MacCallum Cancer Institute.

Figure 25

Summary of LOTE Emergency Presentations in Selected Victorian Hospitals

Emergency Presentations and Top Five Countries of Birth in A1 Hospitals

Information regarding hospital access by particular cultural groups (e.g., Italian, Greek, German) can further assist the development of culturally appropriate services in the acute sector. **Table 10** shows the five NES countries of birth that were the most prevalent in the A1 hospitals. Figures for the top five countries of birth in each hospital are shown with the second last column on the right showing the percentage that these five countries of birth together make up in relation to the NES numbers in that hospital. For example, the top five countries of birth for the Alfred hospital were Greece, Russia, Poland, Italy and Germany. The number of emergency presentations (3,787) from these five countries constituted 42.12% of the total number of overseas born emergency presentations in that hospital.

Table 10

VEMD: Emergency Presentations and Top Five NES Countries of Birth in A1 Hospitals

Hospital	Country of Birth and Number of Emergency Presentations					Total	% of NES COB	C.1.
Alfred	Greece	Russia	Poland	Italy	Germany			
	1355	825	744	516	347	3787	42.12%	12.35
Austin	Italy	Greece	FYROM	Lebanon	China			
	2136	1373	419	294	255	4477	58.19%	5.53
Monash	Greece	Italy	Vietnam	China	Sri Lanka			
	1977	1103	674	613	583	4950	43.37%	14.90
Royal Melbourne	Italy	Greece	Lebanon	Turkey	China			
	3532	1730	860	840	605	7567	49.82%	15.30
St Vincent's	Italy	Greece	Vietnam	China	Lebanon			
	2108	1679	575	349	299	5010	53.87%	7.97

Source: DHS (2002).

In some sense, it may be easier to plan services for hospitals with high percentages of a few cultural groups. Some hospitals with a **lower** percentage in the second last column may represent greater complexity, diversity or cultural variation. Obviously, hospitals with high numbers of NESB patients as well as greater diversity are the most complex.

The Complexity Indicator (C.I.) in the final column of the table was developed by the present author to reflect this complexity. The formula for the C.I. is: Unexplained/Explained*NES Total/1000 – where, ‘unexplained’ is the number of NES COB emergencies not in the top five; ‘explained’ is the number NES COB emergencies in the top five and ‘NES Total’ is the total number of NES COB emergency presentations. The Royal Melbourne, Monash and Alfred have the highest complexity using this measure.

Emergency Presentations and Top Five Countries of Birth in A2 Hospitals

The top five countries of birth in A2 hospitals are shown in **Table 11**. In summary, the top five countries of birth in these hospitals constituted approximately 29-61% of the total NES COB in these hospitals. For example, Sri Lanka, Italy, India, Mauritius and Greece make up 29.54% of the NES countries of birth in the Dandenong hospital while people born in Italy, Greece, Macedonia, Turkey and Lebanon constitute 61.76% of NES countries of birth in the Northern hospital.

Table 11

VEMD: Emergency Presentations and Top Five NES Countries of Birth in A2 Hospitals

Hospital	Country of Birth and Number of Emergency Presentations					Total	% of NES COB	C.I.
	Greece	China	Italy	Hong	India			
Box Hill	1045	904	825	336	274	3384	45.31%	9.02
	Italy	Vietnam	Malta	Macedonia	Greece			
Western	1818	1814	1575	1218	947	7372	48.89%	15.76
	Italy	Greece	China	Vietnam	Malta			
Eye & Ear	2115	1908	622	481	439	5565	48.47%	12.21
	Italy	Greece	Macedonia	Turkey	Lebanon			
Northern	2893	1651	1282	972	708	7506	61.76%	7.52
	Vietnam	Philippines	Macedonia	Malta	Croatia			
Sunshine	544	185	138	110	88	1065	45.98%	2.72
	Italy	Netherlands	Germany	Southern	Croatia			
Barwon	476	363	346	320	257	1762	49.16%	3.71
	Sri Lanka	Italy	India	Mauritius	Greece			
Dandenong	482	312	266	265	246	1571	29.54%	12.69
	Netherlands	Italy	Germany	Greece	Croatia			
Frankston	210	156	132	78	64	640	40.95%	2.25

Source: DHS (2002).

Note the high complexity at the Western and Dandenong hospitals with the Western having high NES numbers as well as much diversity and the Dandenong hospital, which shows that over seventy percent of NESB patients are not from the top five countries.

Emergency Presentations and Top Five Countries of Birth in B1 Hospitals

Table 12 shows the top five countries of birth in the B1 hospitals. People born in Germany, Netherlands, Italy, Greece and Philippines made up just over 44% of people born in a non-English speaking country in the Bendigo hospital while people born in Italy, Iraq, Turkey, Greece and Netherlands made up nearly 60% of people born in NES country in the Goulburn hospital. The diversity as shown by the complexity indicator is very low for the B1 hospitals.

Table 12

VEMD: Emergency Presentations and Top Five NES Countries of Birth in B1 Hospitals

Hospital	Country of Birth and Number of Emergency Presentations					Total	% of NES COB	C.I.
Ballarat	Netherlands	Germany	Italy	Croatia	Philippines			
	93	85	46	25	21	270	48.13%	0.60
Bendigo	Germany	Netherlands	Italy	Greece	Philippines			
	102	88	62	46	33	331	44.61%	0.92
Goulburn	Italy	Iraq	Turkey	Greece	Netherlands			
	436	301	271	106	106	1220	59.75%	1.38
Latrobe	Netherlands	Italy	Germany	Malta	Poland			
	335	278	177	148	98	1036	56.21%	1.44

Source: DHS (2002).

Emergency Presentations and Top Five Countries of Birth in Women's and Children's Hospitals

The top five countries of birth in the Women's and Children's hospitals may be seen in **Table 13**. The percentages made up by these top five countries range from just over 24% in the Children's to nearly 46% in the Mercy. People born in Vietnam, China, Turkey and Lebanon are among the top five in all three hospitals and other top countries of birth included Indonesia, Somalia and Philippines. The Royal Women's had the greatest numbers of NESB patients as well as the greatest C.I. score. One can

note quite a sharp difference in the C.I. score between the Mercy and Royal Women's hospital. This indicates that the Women's hospital may be more accessible or appropriate for women of certain cultures or religions, particularly for Muslim women as implied by the higher numbers born in countries where the Muslim faith is predominant (Lebanon, Turkey and Somalia).

Table 13

VEMD: Emergency Presentations and Top Five Countries of Birth in Women's and Children's Hospitals

Hospital	Country of Birth and Number of Emergency Presentations					Total	NESB %	C.I.
Mercy	Vietnam	China	Turkey	Lebanon	Indonesia			
	659	360	117	113	108	1357	45.69%	3.53
Royal Children's	China	Somalia	Philippines	Turkey	Vietnam			
	147	101	90	79	72	489	24.43%	6.19
Royal Women's	Lebanon	China	Vietnam	Turkey	Somalia			
	892	686	643	619	453	3293	38.91%	13.29

Source: DHS (2002).

Emergency Presentations and Top Five Language Preferences in A1 Hospitals

Similar tables to the previous ones were constructed for the top five language preferences in each hospital. **Table 14** shows that the recorded preference for a LOTE in A1 hospitals ranged from just over 10% at the Alfred hospital to almost 24% in the Austin hospital.

The table shows that a high number of people preferred the Italian language at the Austin and Royal Melbourne hospitals; Monash and St Vincent's had the highest number of persons who preferred Greek; and the Alfred had the highest number of persons with a preference for the Russian language. The percentages in the second last column represent the proportion of people who were recorded as preferring a LOTE divided by the total number of people born in a NES country. However, the top five language groups at each of these hospitals forms a higher percentage when divided by (looked at in relation to) the total number of people who preferred a LOTE. Thus, for example, Greek, Vietnamese, Italian, Mandarin and Cantonese represented 63.66% of the total LOTE preference at the Monash while Russian, Greek, Italian, Cantonese and Polish accounted for 80.61% of the LOTE preference at the Alfred. Complexity

Indicator scores have not been calculated for the language figures but it can be seen that the top five language groups in each hospital form high percentages.

Table 14

VEMD: Emergency Presentations and Top Five Language Preferences in A1 Hospitals

Hospital	Recorded Language Preference					Total	% of NES COB	% of LOTE
	Italian	Greek	Macedonian	Arabic	Cantonese			
Austin	890	555	177	143	81	1846	23.99%	77.01%
	Greek	Vietnamese	Italian	Mandarin	Cantonese			
Monash	588	311	269	105	104	1377	12.07%	63.66%
	Italian	Greek	Arabic	Turkish	Cantonese			
Royal Melbourne	1328	768	403	329	183	3011	19.82%	79.49%
	Greek	Italian	Vietnamese	Cantonese	Turkish			
St Vincent's	903	847	237	133	72	2192	23.57%	79.19%
	Russian	Greek	Italian	Cantonese	Polish			
Alfred	456	340	75	39	34	944	10.50%	80.61%

Source: DHS (2002).

Emergency Presentations and Top Five Language Preferences in A2 Hospitals

Language preferences for the A2 hospitals appear in **Table 15**. The recorded preference for a LOTE in these hospitals ranged from a low 1.79% at the Frankston hospital to a high 40.59% in the Sunshine hospital. Greek was the most preferred language at the Box Hill and Eye and Ear hospitals; Vietnamese at the Western and Sunshine hospitals and Italian at the Northern and Dandenong hospitals.

A discrepancy can be noted for the Barwon hospital, which shows a large number of people who have a preference for Czechoslovakian. This appears to be an error based on the language coding used by this hospital. When excluding Czechoslovakian, the other languages at this hospital (Croatian, Italian, Macedonian and Spanish) constitute 13.53% of the preference for a LOTE. The top five language preferences shown account for 32.68% of the total preference for a LOTE in the Dandenong hospital to a high 87.83% in the Northern hospital.

Table 15

VEMD: Emergency Presentations and Top Five NES Language Preferences in A2 Hospitals

Hospital	Recorded Language Preference					Total	% of NES COB	% of LOTE
	Greek	Cantonese	Mandarin	Italian	Vietnamese			
Box Hill	793	520	505	432	101	2351	31.48%	61.93%
	Vietnamese	Italian	Greek	Macedonian	Cantonese			
Western	813	498	314	259	180	2064	13.69%	63.76%
	Greek	Italian	Cantonese	Vietnamese	Mandarin			
Eye & Ear	250	203	130	105	84	772	6.72%	67.25%
	Italian	Greek	Macedonian	Arabic	Turkish			
Northern	1175	571	399	324	316	2785	22.92%	87.83%
	Vietnamese	Macedonian	Cantonese	Turkish	Spanish			
Sunshine	787	46	43	34	30	940	40.59%	84.46%
	Czech	Croatian	Italian	Macedonian	Spanish			
Barwon	8228	152	145	113	75	8713	243.11%	92.41%
	Italian	Croatian	Greek	Arabic	Serbian			
Dandenong	93	67	67	54	51	332	6.24%	32.68%
	Fijian	Polish	Italian	Mandarin	Serbian			
Frankston	11	5	4	4	4	28	1.79%	33.73%

Source: DHS (2002).

Emergency Presentations and Top Five Language Preferences in B1 Hospitals

Language preferences for the B1 hospitals are shown in **Table 16**. The Goulburn hospital has been omitted from the table because the VEMD showed that a large number of patients (25,735) treated at the Goulburn hospital did not state their language preference. This is either an error or otherwise suggests that the Goulburn does not collect language information from patients. Another discrepancy can be noted for the Latrobe hospital, which shows a large number of people who speak Czechoslovakian. Once again, this appears to be due to data entry errors.

Overall the B1 hospitals show extremely low numbers of people who preferred a language other than English (around 5-6%) of the total number of NESB persons. The top five languages at the Ballarat and Bendigo hospitals constitute percentages of 47.54% and 51.81% in relation to the total number of people who preferred a LOTE at each of the hospitals.

Table 16

VEMD: Emergency Presentations and Top Five NES Language Preferences in B1 Hospitals

Hospital	Recorded Language Preference					Total	% of NES COB	LOTE %
	Polish	Arabic	French	German	Estonian			
Ballarat	13	5	4	4	3	29	5.17%	47.54%
	Italian	Danish	Fijian	Greek	German			
Bendigo	15	11	7	6	4	43	5.80%	51.81%
	Czech	Hindi	Hmong	Gilbertese	Gujarati			
Latrobe	2120	8	5	3	3	2139	223.74%	99.53%

Source: DHS (2002).

Emergency Presentations and Top Five Language Preferences in Women's and Children's Hospitals

The top five preferred languages other than English at the women's and children's hospitals are shown in **Table 17**. The table shows that Vietnamese was the highest preferred language at the Mercy hospital and that Arabic was the highest preferred language at both the Children's and Women's. It may be recalled that the total NES COB for the Children's hospital was only 2,002. The high percentage formed by the top five language preferences (189.31%*) at the Children's hospital most likely reflects a high number of mothers (or fathers) preferring a LOTE whose children are Australian born patients at the hospital. The number of people preferring the five languages form percentages of approximately 60%-67% in relation to the total preference for a LOTE at these hospitals.

Table 17

VEMD: Emergency Presentations and Top Five NES Language Preferences in Women's and Children's Hospitals

Hospital	Recorded Language Preference					Total	% of NES COB	% of LOTE
	Vietnamese	Mandarin	Arabic	Bulgarian	Turkish			
Mercy	460	170	145	101	64	940	31.65%	67.34%
	Arabic	Vietnamese	Turkish	Cantonese	Mandarin			
Royal Children's	1160	928	662	547	493	3790	189.31%*	60.16%
	Arabic	Turkish	Vietnamese	Mandarin	Somali			
Royal Women's	971	388	383	283	241	2266	26.77%	66.24%

Source: DHS (2002).

The Victorian Admitted Episodes Dataset

According to Gill (2001) the Department of Human Services maintains morbidity data on all admitted patient episodes of care provided in Victoria in order to fund public hospitals equitably under the casemix system and to support health services planning, policy formulation and epidemiological research. The collection of admissions data must comply with the Victorian Health Act 1958 Annual Reporting Act 1983, the National Health Information Agreement and the Australian Health Care Agreement Gill (2001). The VAED manual (2001) reveals that seventy data items related to patient admissions are collected. A list of these items may be seen in **Appendix B**. As mentioned previously, the VAED consists of information on patient country of birth but not on language preference. This section therefore presents tables and graphs on patient country of birth only.

Admissions and Country of Birth in A1 Hospitals

Table 18 is a general table showing the total number of admissions and the number and percentages of persons born in Australia and in a non-English speaking country. The hospitals are listed in order of the greatest number of admissions (first column). As indicated, the figures ranged from 70,909 admissions at the Royal Melbourne to 42,978 at the Austin.

Table 18

VAED: Admitted Episodes and Country of Birth in A1 Hospitals

Hospital	Number of Admissions	Australian Born Admissions	Born in NES Country	% Australian Born Admissions	% Born in NES Country
Royal Melbourne	70,909	32,395	30,249	45.69%	42.66%
Monash	53,020	32,252	14,42	60.83%	27.99%
The Alfred	50,710	27,995	16,670	55.21%	32.87%
St Vincent's	45,036	23,678	17,474	52.58%	38.80%
Austin	42,978	25,195	13,623	58.62%	31.70%

Source: DHS (2002).

The final right column in **Table 18** shows the percentage of admitted episodes for people born in a NES country. The A1 hospital with the highest percentage of people

born in a non-English speaking country was the Royal Melbourne with 42.66% while the lowest was the Monash with 27.99%.

Admissions and Country of Birth in A2 Hospitals

The total number of admissions and the number and percentages of persons born in Australia and in a non-English speaking country for A2 hospitals are shown in **Table 19**. The admissions ranged from a high of 36,935 in the Frankston hospital to a low of 12,119 admissions in the Eye and Ear hospital. Hospitals with high percentages of people born in non-English speaking country included the Western (44.36%), the Eye and Ear (37.67%), the Northern (33.81%) and the Peter MacCallum Cancer Institute (28.28%). As with the emergency data, a large difference in NES admissions between the Western and Sunshine hospitals may be seen in **Table 19**.

Table 19

VAED: Admitted Episodes and Country of Birth in A2 Hospitals

Hospital	Number of Admissions	Australian Born Admissions	% Born in NES Country	% Australian Born Admissions	% Born in NES Country
Frankston	36,935	27,212	3,636	73.68%	9.84%
Barwon	36,527	27,393	5,472	74.99%	14.98%
Box Hill	35,904	23,382	8,186	65.12%	22.80%
Western	34,412	14,751	15,264	42.87%	44.36%
Dandenong	29,706	18,651	7,771	62.79%	26.16%
The Northern	25,893	14,989	8,754	57.89%	33.81%
Sunshine	18,681	13,365	4,452	71.54%	23.83%
Peter MacCallum	13,132	8,004	3,714	60.95%	28.28%
Eye and Ear	12,119	6,459	4,565	53.30%	37.67%

Source: DHS (2002).

Admissions and Country of Birth in B1 Hospitals

The total number of admissions and the number and percentages of persons born in Australia and in a NES country for B1 hospitals are shown in **Table 20**. Admissions at these hospitals ranged from a high of 23,581 in the Ballarat hospital to a low of 18,612 admissions in the Goulburn hospital. Low percentages of people born in non-English speaking country ranging from 3.33% to 10.85% made up the admitted episodes at these hospitals.

Table 20*VAED: Admitted Episodes and Country of Birth in BI Hospitals*

Hospital	Number of Admissions	Australian Born Admissions	% Born in NES Country	% Australian Born Admissions	% Born in NES Country
Ballarat	23,581	20,636	1,482	87.51%	6.28%
Latrobe	22,590	18,445	2,451	81.65%	10.85%
Bendigo	21,430	19,877	713	92.75%	3.33%
Goulburn	18,612	15,770	1,861	84.73%	10.00%

Source: DHS (2002).

Admissions and Country of Birth in Women's and Children's Hospitals

Table 21 shows the total number of admissions and the number and percentage of persons born in Australia and in a NES country for the Children's, Women's and Mercy hospitals. The table shows admissions of 28,927, 27,513 and 19,635 at these hospitals, with NES percentages of 3.93%, 25.01% and 16.93%, respectively. The final column shows the percentage of NES COB admissions when persons under ten are removed from the figures, thus, 32.58% of patients over the age of ten at the Women's and 26.36% of patients over the age of ten at the Mercy were born in NES countries.

Table 21*VAED: Admitted Episodes and Country of Birth in Women's and Children's Hospitals*

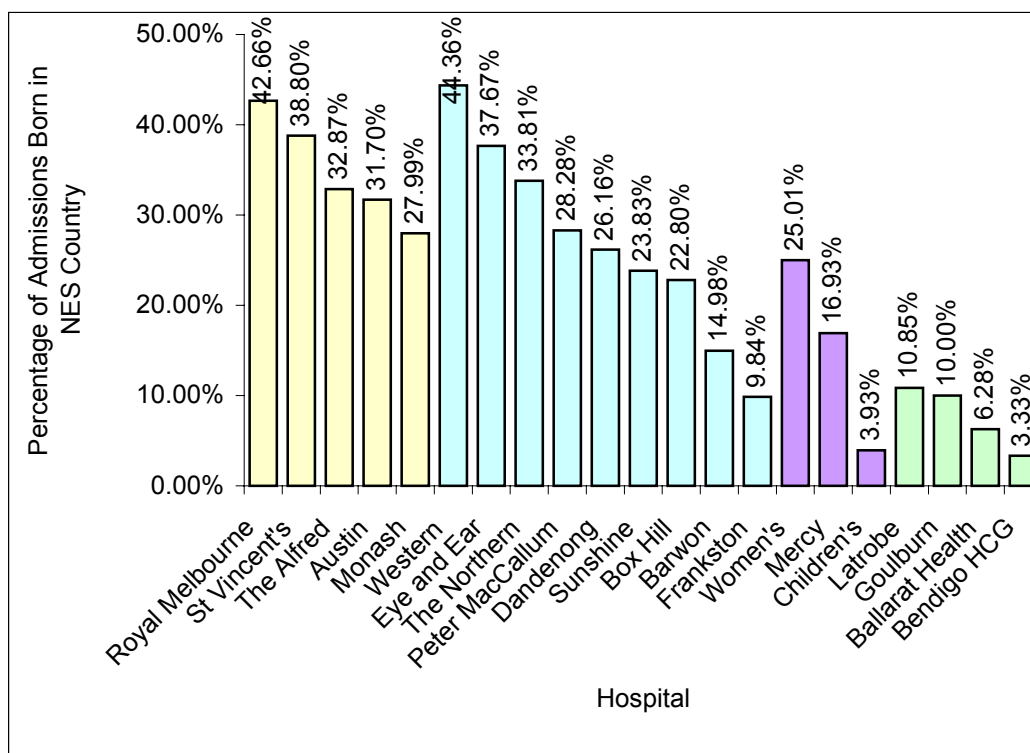
Hospital	Number of Admissions	Australian Born Admissions	Born in NES Country	% Australian Born Admissions	% Born in NES Country	% NES COB over 10 years
Royal Children's	28,927	27,191	1,137	94.00%	3.93%	
Royal Women's	27,513	19,430	6,881	70.62%	25.01%	32.58%
Mercy	19,635	15,488	3,324	78.88%	16.93%	26.36%

Source: DHS (2002).

Summary of Admissions from NES Countries

The percentages from **Tables 18-21** were sorted to show the greatest percentage of people born in a NES country for the selected hospitals (see excel file named Hospital Totals for VAED). **Figure 26** was constructed from this data. The hospitals with the highest percentage of admissions from a NES COB were the:

- **Western - 44.36%**
- **Royal Melbourne - 42.66%**
- **St Vincent's - 38.80%**
- **Eye and Ear - 37.67%**
- **The Northern - 33.81%**



Note. Source: DHS (2002). Colour coded groups from left to right 1st: A1 hospitals; 2nd: A2; 3rd: B1 & 4th: Hospitals for Women & Children.

Figure 26

Summary of NES COB Admissions in Selected Victorian Hospitals

Admissions and Top Five Countries of Birth in A1 Hospitals

Table 22 shows which five NES countries of birth had the most admissions at the selected A1 hospitals. As may be seen, Italy was the top country of birth for admitted episodes at the Royal Melbourne, Austin, St Vincent's, Northern and Western hospitals. Note that this was a very similar pattern to the VEMD. Box Hill, Monash and the Alfred had the highest number of persons born in Greece, Frankston and Maroondah had the greatest number of people born in the Netherlands and Sunshine had the highest number of admitted episodes for persons born in Vietnam. Overall, the top countries of birth for admitted episodes showed similar patterns to the VEMD for many of the hospitals listed.

Table 22

VAED: Admitted Episodes and Top Five NES Countries of Birth in A1 Hospitals

Hospital	Country of Birth and Number of Admissions					Total	% of NES COB	C.I.
Alfred	Greece	Russian Federation	Poland	Italy	Germany			
	3017	1751	1444	1234	661	8107	48.63%	17.61
Monash	Greece	Italy	Vietnam	Sri Lanka	India			
	2317	1437	1333	639	589	6315	42.55%	20.04
Royal Melbourne	Italy	Greece	FYROM	Malta	Lebanon			
	6929	3446	1835	1792	1550	15552	51.41%	28.59
Austin	Italy	Greece	Lebanon	Macedonia	Serbia & Montenegro			
	4404	3126	589	518	514	9151	67.17%	6.66
St Vincent's	Italy	Greece	Vietnam	China	Malta			
	4499	3308	945	870	833	10455	59.83%	11.73

Source: DHS (2002).

The second last column on the right shows the contribution of the five countries to the total overseas born admissions in that hospital. The highest percentage was at the Austin where the five countries of birth: Italy, Greece, Lebanon, Macedonia (Former Yugoslav Republic of) and Serbia and Montenegro (Former Yugoslav Republic of) accounted for 67.17% of the total NES COB admissions in this hospital. St Vincent's was also high where the five countries of birth: Italy, Greece, Vietnam, China and Malta accounted for 59.83% of the total overseas born numbers admitted. Complexity Indicator (C.I.) statistics were also calculated for the admissions and top five countries

of birth. It may be recalled that hospitals with high numbers of NESB patients as well as greater diversity (many cultural groups) are considered the most complex using this measure. The C.I. statistic in the last column (see **Table 22**) shows very high complexity for the Royal Melbourne, followed by the Monash and Alfred hospitals.

Admissions and Top Five Countries of Birth in A2 Hospitals

The top five countries of birth for admitted episodes in A2 hospitals are shown in **Table 23**. The NES percentages at these hospitals ranged between 30.23%-60.52%, with the highest concentrations of COB at the Northern and Barwon hospitals.

Table 23

VAED: Admitted Episodes and Top Five NES Countries of Birth in A2 Hospitals

A2 Hospital	Country of Birth and Number of Admissions					Total	NESB %	C.I.
Box Hill	Greece	Italy	China	Germany	Malaysia			
	1133	1008	851	339	315	3646	44.54%	10.19
Western	Italy	Malta	Vietnam	Macedonia	Greece			
	2187	1735	1731	1090	971	7714	50.54%	14.94
Eye & Ear	Italy	Greece	Vietnam	China	Malta			
	959	674	278	222	175	2308	50.56%	4.46
Northern	Italy	Greece	Macedonia	Turkey	Lebanon			
	2256	1304	798	510	430	5298	60.52%	5.71
Sunshine	Vietnam	Philippines	Macedonia	Italy	Malta			
	1372	295	260	238	211	2376	53.37%	3.89
Peter Mac	Italy	Greece	Vietnam	Germany	Netherlands			
	763	476	229	207	164	1839	49.52%	3.79
Barwon	Southern Europe	Italy	Netherlands	Germany	Latvia			
	936	829	500	389	282	2936	53.65%	4.73
Dandenong	Sri Lanka	Italy	India	Mauritius	Greece			
	691	537	389	373	359	2349	30.23%	17.94
Frankston	Netherlands	Malta	Italy	Germany	South Africa			
	728	386	293	283	229	1919	52.78%	3.25

Source: DHS (2002).

Italy, Greece, Macedonia (Former Yugoslav Republic of), Turkey and Lebanon made up 60.52% of NES COB admissions at the Northern while Southern Europe, Italy, Netherlands, Germany and Latvia constituted 53.65% of NES COB admissions at the Barwon. The Dandenong, Western and Box Hill hospitals revealed the highest C.I. scores.

Earlier it was noted that the difference in NES numbers between the Western and Sunshine hospitals was due to the distribution of older and younger people at these hospitals. This is further reflected in **Table 23** (see Western hospital) with higher numbers of people from the earlier migrating countries (those who migrated during the 1950-60's) of Italy, Malta, Macedonia (Former Yugoslav Republic of) and Greece.

Admissions and Top Five Countries of Birth in B1 Hospitals

Table 24 shows the top five countries of birth for admissions in the B1 hospitals. The NES percentages formed by the top five countries at these hospitals ranged between 61.01%-67.17%. The highest percentages were at the Goulburn where Italy, Turkey, Ukraine, Philippines and Netherlands accounted for more than 67 percent of the total NES born population in that hospital and Latrobe where Italy, Netherlands, Germany, Malta and Lithuania formed almost 64 % of the NES numbers at the Latrobe.

Table 24

VAED: Admitted Episodes and Top Five NES Countries of Birth in B1 Hospitals

B1 Hospital	Country of Birth and Number of Admissions					Total	% of NES COB	C.1.
Ballarat	Germany	Netherlands	Italy	Argentina	Poland			
	416	353	57	56	53	935	63.09%	0.87
Goulburn	Italy	Turkey	Ukraine	Philippines	Netherlands			
	625	188	169	152	116	1250	67.17%	0.91
Bendigo	Malaysia	Netherlands	Germany	Italy	Philippines			
	191	80	74	66	24	435	61.01%	0.46
Latrobe	Italy	Netherlands	Germany	Malta	Lithuania			
	581	412	230	179	166	1568	63.97%	1.38

Source: DHS (2002).

Admissions and Top Five Countries of Birth in Women and Children's Hospitals

Table 25 shows the top five countries of birth admitted in the Women and Children's hospitals. The NES percentages at these three hospitals ranged between 25.68%-40.97%. However, due to the large number of children and newborns at the Children's, Women's and Mercy hospitals, these data do not paint an accurate picture of NESB needs in these hospitals. As stated elsewhere many of the young patients at these hospitals may be the children of NES background parents who may need an interpreter or other culturally specific service. The C.I. statistic is highest for the Women's hospital.

Table 25

VAED: Admitted Episodes and Top Five NES Countries of Birth in Women and Children's Hospitals

Hospital	Country of Birth and Number of Admissions					Total	% of NES COB	C.I.
Children's	Philippines	Indonesia	Fiji	Sri Lanka	China			
	70	69	59	51	43	292	25.68%	3.29
Women's	Lebanon	Vietnam	China	Turkey	Italy			
	601	537	503	479	389	2509	36.46%	11.99
Mercy	Vietnam	China	Italy	Greece	Indonesia			
	560	347	170	143	142	1362	40.97%	4.79

Source: DHS (2002).

Comparisons between Rural Hospitals and Regions

VEMD and Rural Regions

Table 26 shows the number and percentage of people born in a NES country for the hospitals and DHS regions of interest for the VEMD. In summary, this table shows that the percentage of NES COB emergency presentations for Ballarat Health was 1.00% lower than the percentage of people born in a NES country in the region surrounding the hospital (Grampians). The NES emergency presentations in the Goulburn hospital were also 1.75% lower than the surrounding Hume region. The Latrobe and Bendigo hospitals both show percentages of people born in NES countries that are greater than the regions in which the hospitals are located. Latrobe hospital was 1.60% higher than the Gippsland region while Bendigo was 4.23% higher than the percentage of people born in a NES country in the surrounding Loddon Mallee region.

Table 26

Comparison between Number and Percentage of People Born in NES Country in Selected Hospitals for Rural Regions and VEMD

DHS Region	Number and % Born in NES Country in Region		Hospital	Number and % of Emergency Presentations Born in NES Country		Difference
	Number	%		Number	%	
Grampians	6,770	3.42%	Ballarat Health	742	2.42%	-1.00%
Loddon Mallee	10,355	3.70%	Bendigo HCG	2,042	7.93%	4.23%
Hume	13,115	5.34%	Goulburn	561	3.59%	-1.75%
Gippsland	12,294	5.42%	Latrobe	956	7.02%	1.60%

Source: DHS (2002); ABS (2001).

VAED and Rural Regions

The number and percentage of people born in a NES country for hospital admissions (VAED) and DHS regions of interest appear in **Table 27**. The table shows that the percentage of people (admissions) born in a NES country for Bendigo was .37%, only slightly lower than the percentage of people of NES born people in the surrounding region of Loddon Mallee. The other three hospitals: Ballarat Health, Goulburn and Latrobe were all higher in NES admissions than the NES percentages in the

surrounding regions of Grampians (2.86% higher), Hume (4.66% higher) and Gippsland (5.43% higher).

Table 27

Comparison between Number and Percentage of People Born in NES Country in Selected Hospitals for Rural Regions and VAED

DHS Region	Number and % Born in NES Country in Region		Hospital	Number and % of Admissions Born in NES Country		Difference
	Number	%		Number	%	
Grampians	6,770	3.42%	Ballarat Health	1,482	6.28%	2.86%
Loddon Mallee	10,355	3.70%	Bendigo HCG	713	3.33%	-0.37%
Hume	13,115	5.34%	Goulburn	1,861	10.00%	4.66%
Gippsland	12,294	5.42%	Latrobe	2,451	10.85%	5.43%

Source: DHS (2002).

Comparisons between hospital and regional percentages may assist hospitals to determine whether their service is accessible to NES people in the region. That is, if hospital figures are lower than the regional figures it may indicate that NES born people are not accessing the hospital. Conversely, when hospital figures are higher than the regional figures it may indicate that NES born people are over represented due to causes such as poorer health, older age or less access to primary health care. However, these figures should be interpreted cautiously because they could reflect errors in recording NES numbers by hospitals. Also, whilst there is a close correspondence in years between the hospital and regional data collection periods the figures could be affected by movements, births and deaths within the region. People also travel away from their geographic locality for particular or specialist services at other hospitals.

Chapter Four

Discussion and Conclusion

Summary of Project

This project was designed to inform the broader ACDC project about the numbers of culturally and linguistically diverse persons in Victoria and the acute hospital system. The latest ABS census statistics (basic community profiles) were utilised to create summary graphs related to country of birth and languages spoken by people living in Victoria and in each of the nine DHS regions. Summary graphs and tables were also constructed from the Victorian Emergency Minimum Dataset and Victorian Admitted Episodes Dataset for major metropolitan and rural hospitals. The data from the census revealed that 16.82% of Victorians were born in a non-English speaking country and that 19.97% speak a language other than English at home.

A summary of the numbers pertaining to countries of birth in Victoria and the DHS regions appears in **Table 28**. The first column shows the total population in each region and in Victoria with the second and third columns showing the number and percentages of people born in NES Country. The fifth column shows the percentage of NESB people in relation to the total Victorian population.

The numbers varied in each region with the Southern metropolitan region having the highest raw numbers of people born in a NES country and the Grampians having the least number of people born in a NES country. It should also be noted that some regions (e.g., Western) region have lower numbers of people from NES countries but higher rates or percentages. Thus in the West, 27 people out of every 100 were born in a non-English speaking country.

While the aim of this project was to look at the DHS regions, it should be highlighted that the concentration of people from a NES country is even greater in some local government areas. For example, 44.36% of the Greater Dandenong population were born in a NES country, while Brimbank has 39.67% and Maribyrnong has 34.77% of its population born in a NES country.

Table 28

Summary of Population and NESB Numbers and Percentages in Each DHS Region and Victoria

DHS Region	Total Population	NES COB No.	NES COB %	NES COB % Victoria
Southern	1,072,036	203,083	18.94%	4.40%
Northern	736,996	174,953	23.74%	3.79%
Eastern	924,874	169,047	18.28%	3.67%
Western	605,364	165,667	27.37%	3.59%
Barwon	321,897	20,602	6.40%	0.45%
Hume	245,567	13,115	5.34%	0.28%
Gippsland	226,896	12,294	5.42%	0.27%
Loddon Mallee	279,647	10,355	3.70%	0.22%
Grampians	198,080	6,770	3.42%	0.15%
Victorian Total	4,611,357*	775,886	16.82%	16.82%

Notes. *The BCP for the state of Victoria records a higher figure of 4,612,097 (a difference of 740). This appears to be due to the fact that the DHS regions encompass 78 LGAs rather than 79. The 79th LGA is known as 'Unincorporated' (ABS, 2002). This LGA covers some remote rural areas and islands and consisted of approximately 700-800 people according to the 2001 BCP for this LGA (ABS, 2002). The figure 4,611,357* was used to calculate the Victorian % (last column).

A similar summary of numbers pertaining to languages spoken at home in Victoria and the DHS regions appears in **Table 29**. The Northern metropolitan region had the highest number of people who speak a LOTE at home while the Grampians had the least number of people who speak a LOTE. The Western region had the highest percentage of people speaking a LOTE with 34.81%.

Table 29

Summary of Population and LOTE Numbers and Percentages in Each DHS Region and Victoria

DHS Region	Total Population	LOTE No.	LOTE %	LOTE % Victoria
Southern	1,072,037	218,713	20.40%	4.74%
Northern	736,998	243,202	33.00%	5.27%
Eastern	924,871	188,433	20.37%	4.09%
Western	605,363	210,731	34.81%	4.57%
Barwon	321,922	20,661	6.42%	0.45%
Hume	245,540	13,400	5.46%	0.29%
Gippsland	226,893	9,667	4.26%	0.21%
Loddon Mallee	279,634	10,674	3.82%	0.23%
Grampians	198,078	5,304	2.68%	0.12%
Victorian Total	4,611,336*	920,785	19.97%	19.97%

Notes. Slight variations in the Total Population (1st column) between Tables 28 & 29 reflect the number of people who answered/did not answer the associated census questions. The figure 4,611,336* was used to calculate the Victorian % (last column).

The number and percentage of admissions and emergency presentations in the hospitals of interest are summarised in **Table 30**. In summary, the NES COB admissions and emergency presentations in these hospitals are quite high at 172,521 (25.82%) and 129,287 (20.70%), respectively. These percentages are higher than the NES COB percentage for the state as a whole, which on the whole indicates a strong access of these hospitals by people born in a non-English speaking country. However, these figures vary widely across individual hospitals. For example, NES COB emergency presentations (as recorded in the VEMD) varied between 2.42% (Bendigo) and 38.00% (Western); while admissions (VAED) varied between 3.33% (Bendigo) and a very high 44.36% (Western). It is expected that hospitals in the upper range will have a greater need for support such as funding, cultural services and training.

Table 30

Summary of NESB Admissions and Emergency Presentations in Selected Hospitals and Victoria

Admissions and Emergency Presentations	Number	Percentage
Australian Born Admissions	432,558	64.73%
NES COB Admissions	172,521	25.82%
<i>Total Admissions</i>	<i>668,250</i>	<i>100.00%</i>
Australian Born Emergency Presentations	443,014	70.94%
NES COB Emergency Presentations	129,287	20.70%
LOTE Emergency Presentations (recorded)	44,232	7.08%
<i>Total Emergency Presentations</i>	<i>624,506</i>	<i>100.00%</i>
Victorian State-wide Data	Number	Percentage
Australian Born Victorians	3,277,054	71.05%
NES COB Victorians	775,911	16.82%
LOTE Victorians	920,820	19.97%
Low English Proficiency	147,016	13.61%
<i>Total Victorians</i>	<i>4,612,097</i>	<i>100.00%</i>

Source: ABS BCP - Victoria; Catalogue No. 2001.0. (2002). Source: DHS (2002).

The recorded percentage of people (7.08%) preferring a LOTE in emergency situations in the hospitals of interest is extremely low in comparison with the percentage of people who speak a language other than English in Victoria (19.97%). However, more importantly, it is also low in comparison to the percentage (13.61%) of people in Victoria who may have low English proficiency (see the second last row in **Table 30**). The Low English Proficiency measure was obtained by dividing the

number of people who had indicated (during the 2001, census) that they 'do not speak' English 'well' or 'not at all' by the total number of arrivals to Australia (now Victorian residents) from prior to 1986 to 2001. Thus 13.61% (147,016) of the 1,080,356 arrivals indicated that they did not speak English well or at all.

The (low proficiency) percentage is higher (18.95%) when looked at in relation to the NES COB figures for Victoria and lower (3.18%) when looked at in relation to the total number of Victorians. Given that the NES COB emergencies are quite high and that about 18.95% of Victorians born in a NES country may have low English proficiency, the recorded percentage of people (7.08%) preferring a LOTE in emergency situations could be due to an underestimation in reporting by some hospitals.

Implications and Limitations

It is anticipated that the basic statistical information presented in this report will assist in the planning and provision of services to NESB people in the acute hospital system, especially in those hospitals analysed in the present report. Services for NESB people may consist of a range of resources, programs and activities. These can include: interpreters, bi-lingual doctors, nurses, social workers and psychologists, culturally appropriate foods and practices, translated information, support programs, health promotion and cross-cultural training for hospital staff.

However, while numerical data can serve as the basis for enhancement of the hospital system, a concerted effort from many people is needed. The improvement or implementation of services to culturally and linguistically diverse persons in hospitals also calls for a diversity co-ordinator to be based at the hospital and that adequate organisational support (e.g., from CEH, other community and ethno-specific organisations) and funding is provided to hospitals. NESB patients should be included in consumer participation strategies.

A limitation of the census data used in this project is that numbers recorded in the Basic Community Profiles refer to visitors in the region as well as to permanent residents. Therefore, NESB numbers should be regarded as an estimate rather than an

exact figure. In any case, culture is not static and is likely to alter from year to year in Victoria and the acute hospital system as older immigrants die and new immigrants arrive. This emphasises the need for ongoing analysis of ethnicity data. Another limitation of the DHS regional data presented in this report is that only the top 10 COB and languages spoken could be shown. Naturally, health planning should give consideration smaller and emerging cultural and language groups as well as the top ten.

One of the limitations of the VAED and VEMD data were the data entry errors and omissions. Since these data sources represent a great many opportunities for enhancing the acute sector, particular care and training in relation to the data should be undertaken in future years.

Emerging Issues

A number of issues that need to be addressed have emerged during the exploration of data in this report. The list is not exhaustive and the careful reader and experienced health planner may suggest others that have not been thought of here. In this context, it is recommended that:

- Hospitals with high NES COB, LOTE figures and C.I. scores be adequately supported and funded
- The collection of Country of Birth data and Language preference (VAED¹ and VEMD) be continuously improved and utilised for hospital planning purposes
- The examination and management of ethnicity related data from the VAED and VEMD be an ongoing priority for hospital planning
- Hospitals and DHS to improve systems for appropriate utilisation of language services
- Training on data collection/accuracy/utilisation be provided to hospitals

¹ Language data for VAED collected since 2003-07-23

Concluding Comments

The enhancement of services to NESB patients should be managed in consultation with multiple stakeholders in an ongoing process. However, in order to be successful, this process should also be guided by an evidence base of hospital and regional data relating to cultural and linguistic diversity. With these two points in mind, the ACDC project looks forward to the further development and implementation of a framework for enhancing access and services delivery for people from Non-English speaking backgrounds within the acute health sector.

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Appendix A: Data Items Contained in the VEMD

(Alphabetical Order)

Activity When Injured	Injury Cause
Ambulance Case Number	Inpatient Bed Request
Arrival Date	Inpatient Bed Request Date
Arrival Time	Inpatient Bed Request Time
Arrival Transport Mode	Locality
Body Region	Medicare Number
Campus Code	Medicare Suffix
Compensable Status	Nature of Main Injury
Country of Birth	Ongoing Care Communication
Date of Birth	Patient Identifier
Departure Date	Place Where Injury Occurred
Departure Status	Postcode
Departure Time	Preferred Language
Departure Transport Mode	Procedure
Description of Injury Event	Reason for Transfer
Diagnosis - Additional Diagnoses 1 and 2	Referred By
Diagnosis - Primary Diagnosis	Referred to on Departure
DVA Number	Sex
Escort Source	Transfer Destination
First Seen By Doctor Date	Transfer Source
First Seen By Doctor Time	Triage Category
First Seen By Treating Nurse Date	Triage Date
First Seen By Treating Nurse Time	Triage Time
Human Intent	Type of Visit
Indigenous Status	Unique Key

Source: Department of Human Services (2000).

Appendix B: Data Items Contained in the VAED

(Alphabetical Order)

Accommodation Type (a)	Indigenous Status
Accommodation Type on Separation (b)	Intended Duration of Stay
Account Class (a)	Intention to Re-Admit
Account Class on Separation (b)	Leave Days Financial Year-To-Date [Normal]
Account Classes mapped to AIMS Trailer Record fields -Private Hospitals and Day Procedure Centres	Leave Days Month-To-Date [Normal]
Account Classes mapped to AIMS Trailer Record fields -Public Hospitals	Leave Days Total [Normal]
Admission Date	Level of Insurance
Admission Source	Locality
Admission Time	Marital Status
Admission Type	Medicare Number
Admission Weight	Medicare Suffix
Admission/Re-Admission to Rehabilitation	Mental Health Legal Status
Barthel Index Score on Admission (a)	Onset Date
Barthel Index Score on Separation (b)	Patient Days Financial Year-To-Date
Care Type	Patient Days Month-To-Date
Carer Availability	Patient Days Total
Clinical Sub-Program	Patient Identifier
Contract Leave Days Financial Year-To-Date	Postcode
Contract Leave Days Month-To-Date	Procedure Codes
Contract Leave Days Total	Program Funding Source
Contract Role	Qualification Status
Contract Type	Reason for Critical Care Transfer
Contract/Spoke Identifier	RUG ADL on Admission (a)
Country of Birth	RUG ADL on Separation (b)
Criterion For Admission	Separation Date
Date of Birth	Separation Referral
Diagnosis Codes	Separation Time
Duration of Mechanical Ventilation in ICU	Separation Type
Duration of Stay in Cardiac/Coronary Care Unit	Sex
Duration of Stay in Intensive Care Unit	Site Identifier
DVA Number	Source of Referral to Palliative Care
Funding Arrangement	Surname
Given Name(s)	Transfer Destination
Health Insurance Fund	Transfer Source
Hospital Generated DRG	Unique Key

Source: Department of Human Services (2001).