



# Emergency department presentations among people from culturally and linguistically diverse backgrounds, Western Australia, 2007 - 2016

## Summary

In Western Australia (WA), in the decade between 2007 and 2016,

- Rates of all-cause emergency department (ED) presentations were 24% to 46% lower among those born overseas compared to the Australian-born population.
- Rates of ED presentations due to four of the five selected common conditions (minor single-site injury, digestive system illness, respiratory system illness and circulatory system illness) were lower among those born overseas compared to the Australian-born population. However, rates of ED presentations due to major single-site injury, which was the third-most common presenting condition, were higher in those born in main English-speaking countries than in those who were Australian-born or born in non-English-speaking countries.
- Analysis by country of birth (COB) region found that selected regions experienced higher rates of ED presentations, for all causes and the selected causes. Specifically, compared with their Australian-born counterparts,
  - Males born in Other Oceania and Antarctica experienced significantly higher rates of all-cause ED presentations.
  - Males born in Other Oceania and Antarctica experienced significantly higher rates of ED presentations related to digestive illness.
  - Both males and females born in New Zealand, Southern and Eastern Europe, and UK/Ireland, and females born in Other North-West Europe experienced significantly higher rates of ED presentations related to major single-site injuries.
  - Both males and females born in Other Oceania and Antarctica experienced significantly higher rates of ED presentations related to respiratory illness.
  - Both males and females born in the Other Oceania and Antarctica, the Middle East, and Southern and Eastern Europe, and females born in New Zealand experienced significantly higher rates of ED presentations related to circulatory illness.

## Background

Western Australia is culturally diverse with nearly one third (32.2%) of residents born overseas and with around 18% of residents speaking a language other than English at home (OMI 2017). Research into ED use among Australia's culturally and linguistically diverse (CALD) populations as a whole has been scarce, and findings have been mixed. While in Queensland, speaking a language other than English at home was found to be associated with lower ED presentation rates (Mahmoud et al. 2013), studies from Northern America and Europe have found that migrant ED use varied greatly by language sub-group and refugee status, and that overall, migrants were more likely to use ED services in place of primary and community care (Credé et al. 2018, Mahmoud & Hou 2012). It is likely that the age profile, proficiency in the language of the host country, and circumstances of migration substantially influence the ED usage of different migrant sub-groups.

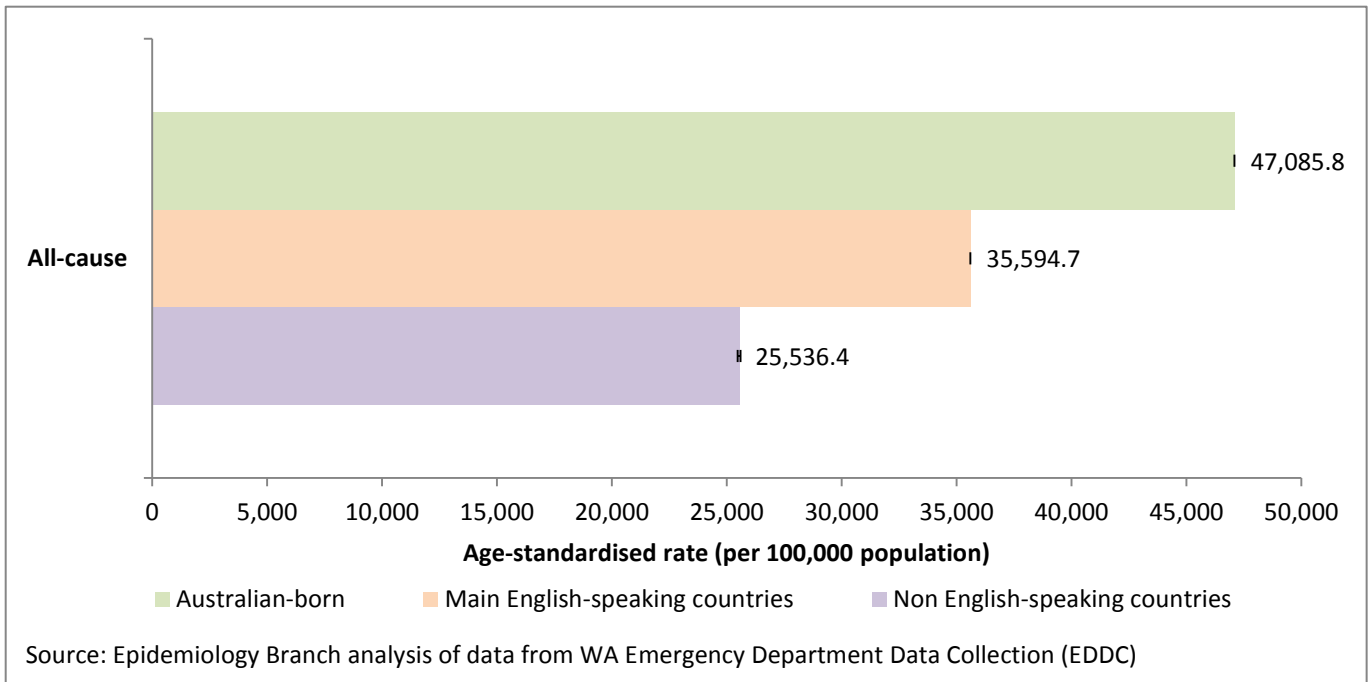
## Aims

This paper aims to describe the patterns of ED presentation rates among people from CALD backgrounds in WA, and whether they differed by broad COB group, COB region, gender and year. Details on the

definitions of CALD, broad COB groups and COB regions are provided in the overview, aims and methods paper for this series of CALD information papers (Koh et al. 2019).

### All-cause ED presentations and ED presentations due to selected conditions by broad COB group

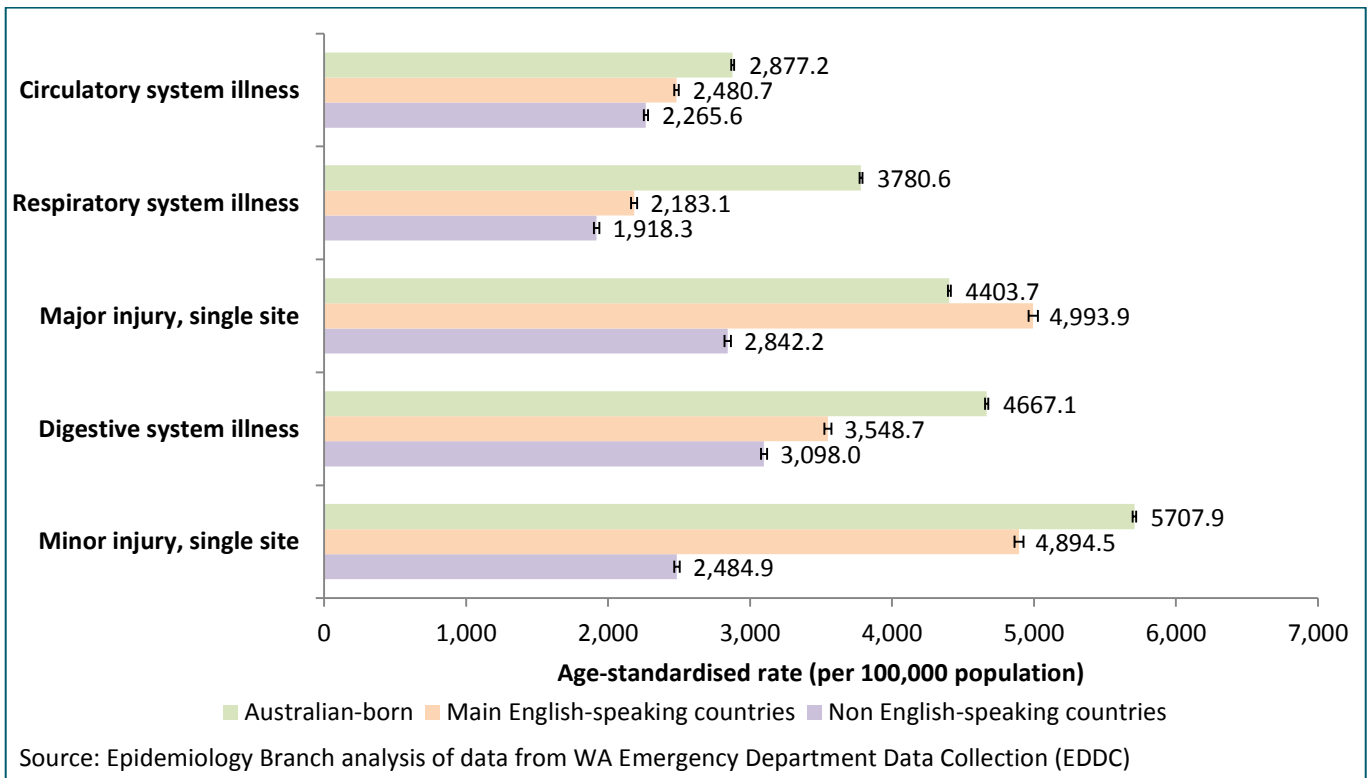
Compared with Australian-born people, those born in main English-speaking countries and those born in non-English-speaking countries had rates that were 24.4% and 45.8% lower, respectively, for all-cause ED presentations (Figure 1). Within all broad COB groups, including the Australian-born population, male rates were significantly higher than female rates, with a difference of around 4 to 5%.



**Figure 1. Rates and 95% confidence intervals of all-cause emergency department presentations by broad COB group, WA, 2007-2016**

There were five selected presenting conditions identified which made up 47% of all ED presentations, and represent the five most common presenting conditions among the overseas-born population. Compared with the Australian-born population, those born overseas experienced lower rates of ED presentations due to these conditions, with the exception of major single-site injuries, for which those born in main English-speaking countries had the highest rates (Figure 2).

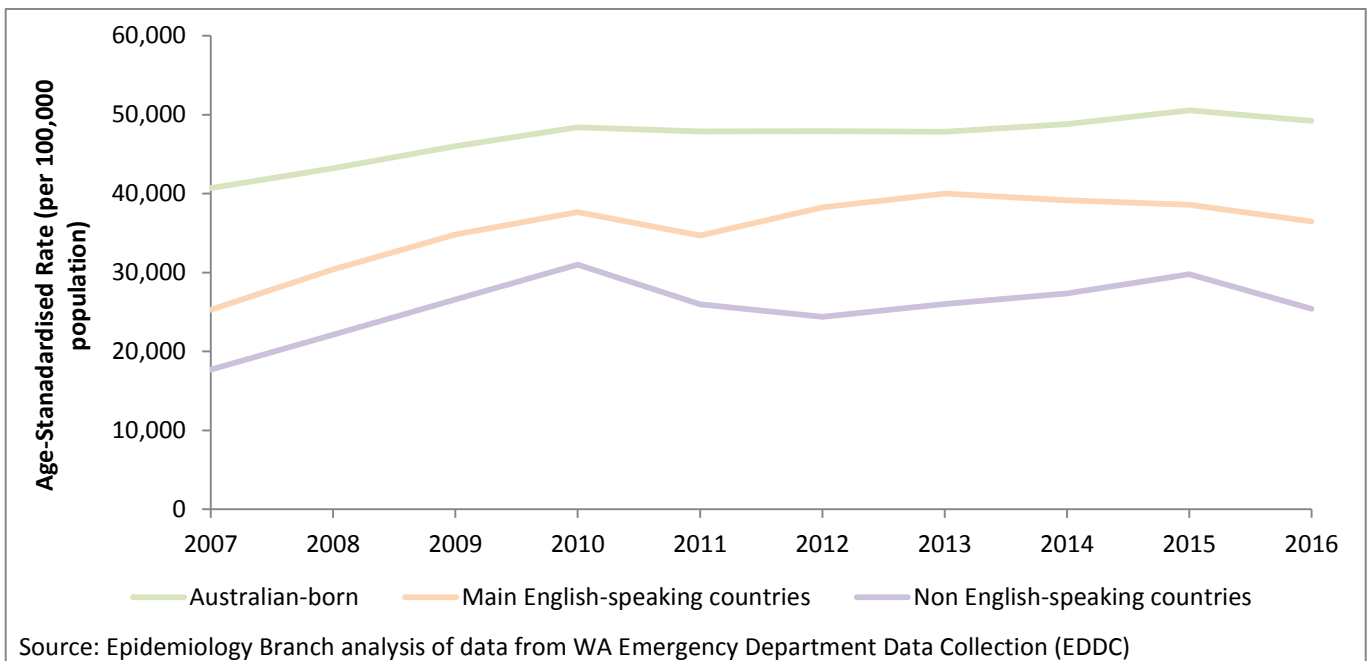
The most common presenting conditions for people born in main English-speaking countries were injury-related (major and minor single-site injuries), while the most common presenting condition for people born in non-English-speaking countries was digestive system illness (Figure 2).



**Figure 2. Rates and 95% confidence intervals of emergency department presentations due to the top five presenting conditions by broad COB group, WA, 2007-2016**

### All-cause emergency department presentations by broad COB group and year

Among those born in Australia and those born in main English-speaking countries, rates of all-cause ED presentations increased between 2007 and 2010 and stayed relatively stable in the years between 2010 and 2016. Among those born in non-English-speaking countries, rates of all-cause ED presentations increased between 2007 and 2010 and fluctuated in the years between 2010 and 2016 (Figure 3).

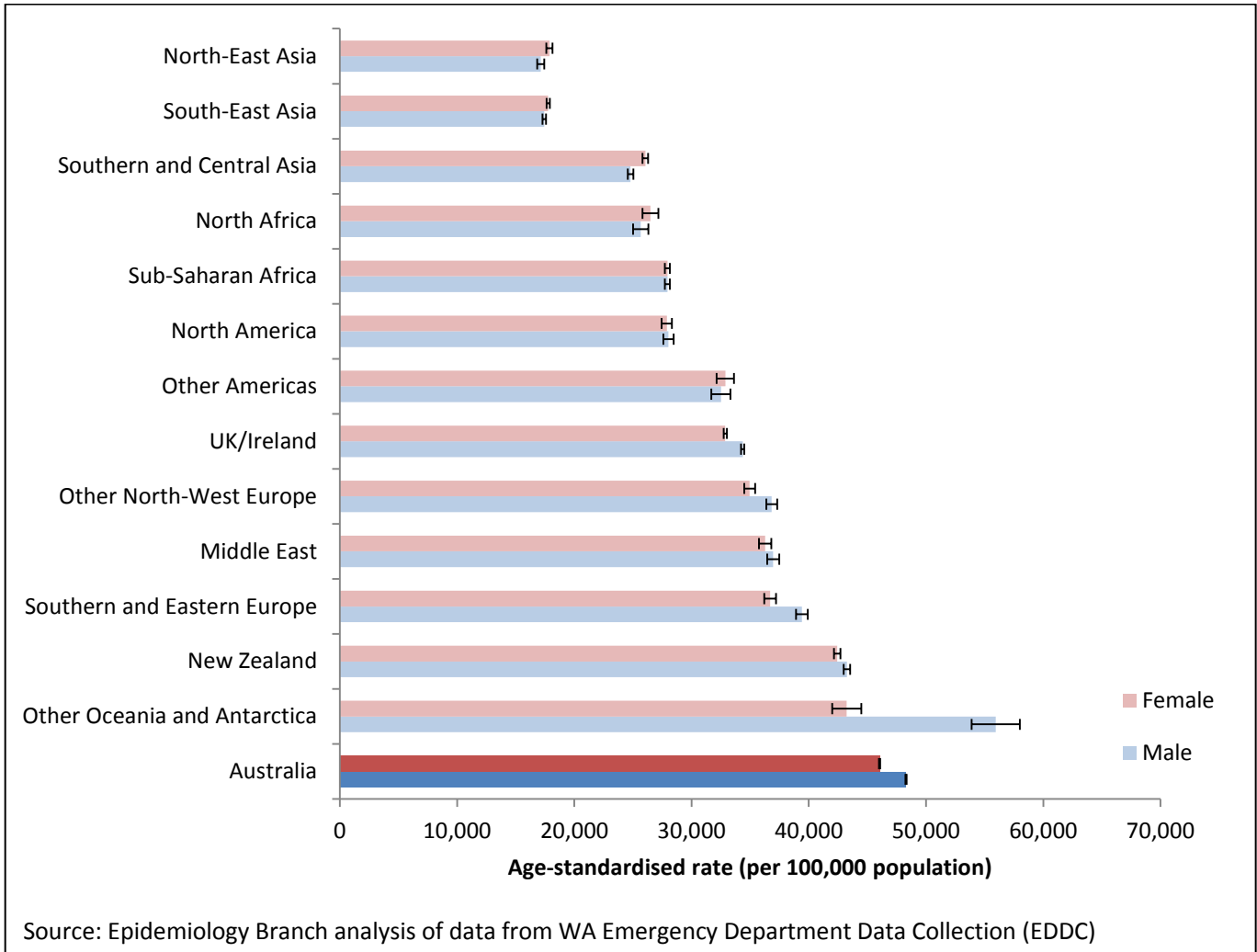


**Figure 3. Rates of emergency department presentations by broad COB group and year, WA, 2007-2016**

## All-cause ED presentations by COB region and gender

Compared with their Australian-born counterparts, males born in Other Oceania and Antarctica experienced significantly higher rates of all-cause ED presentations, whereas both males and females those born in other regions had significantly lower rates (Figure 4).

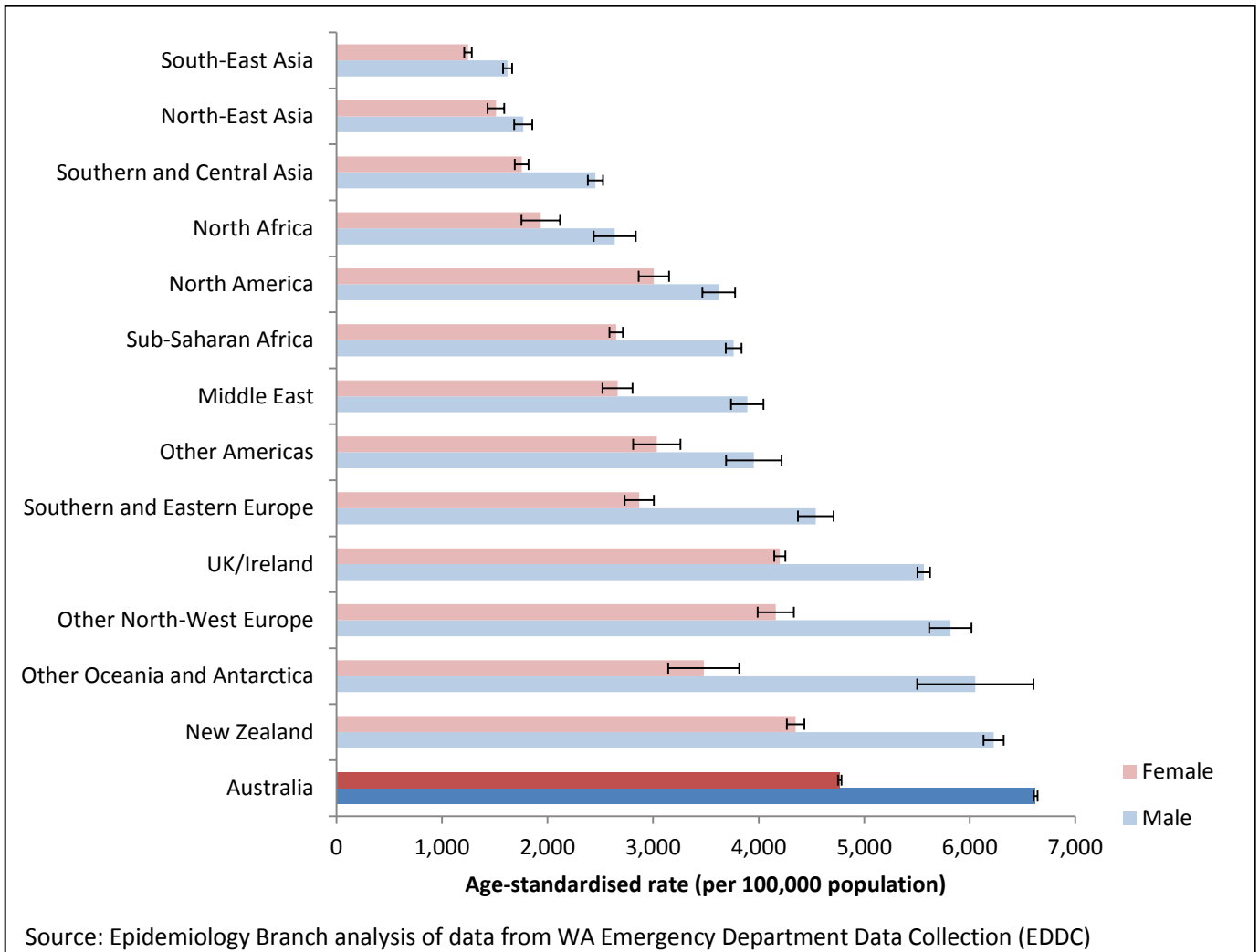
Presentation rates for females born in Asia were significantly higher than the male rates, while the male rates in other COB regions were similar to or higher than the female rates. Both males and females born in North-East Asia and South-East Asia had much lower rates compared to other regions.



**Figure 4. Rates and 95% confidence intervals of all-cause ED presentations by COB region and gender, WA, 2007-2016**

## ED presentations due to minor single-site injury by COB region and gender

Both males and females born overseas experienced significantly lower rates of ED presentations due to minor single-site injury, compared with their Australian-born counterparts (Figure 5). Presentation rates for males were significantly higher than females in populations from every COB region.

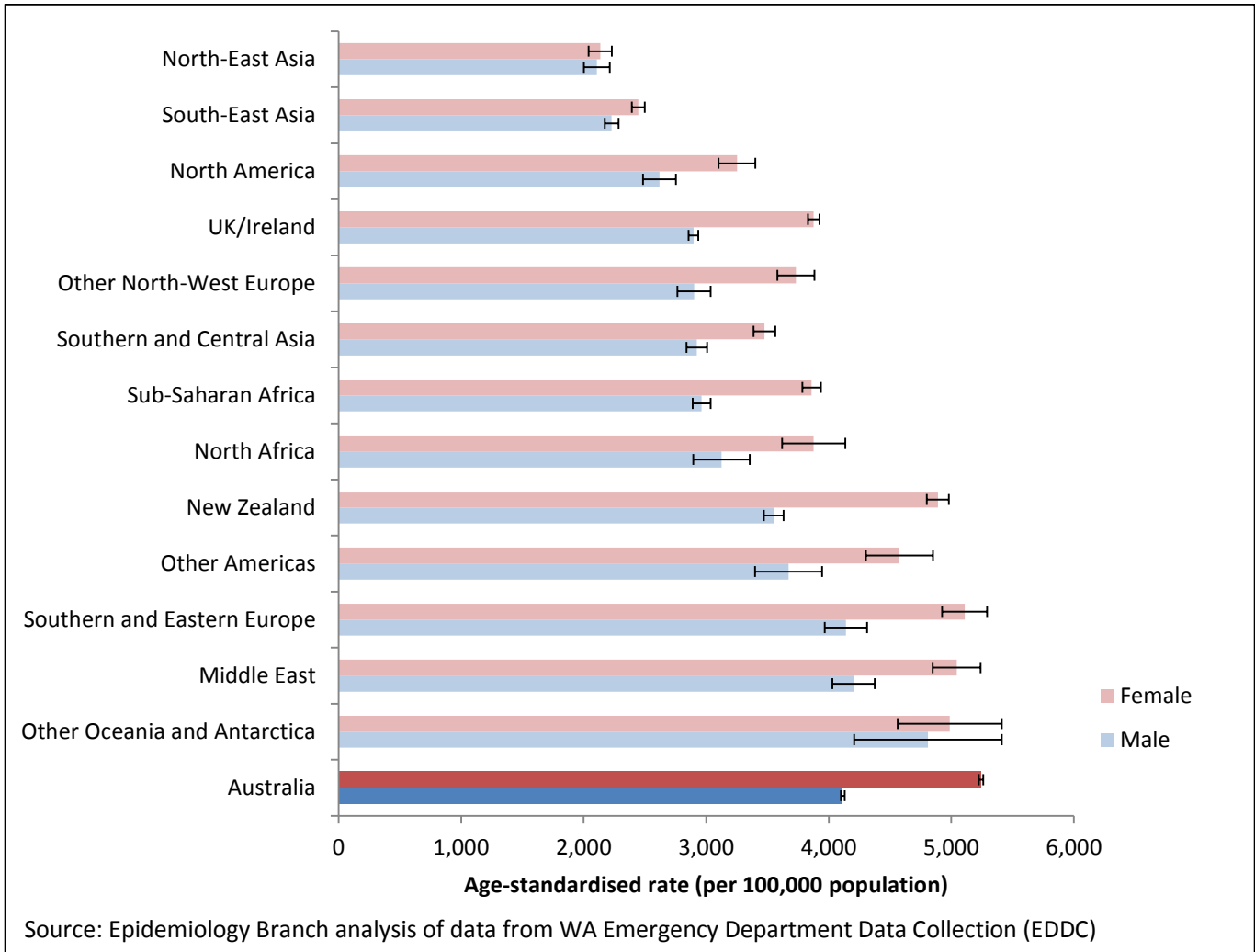


**Figure 5. Rates and 95% confidence intervals of ED presentations due to minor single-site injury by COB region and gender, WA, 2007-2016**

## ED presentations due to digestive illness by COB region and gender

Compared with their Australian-born counterparts, males born in Other Oceania and Antarctica experienced significantly higher rates of ED presentations related to digestive illness, whereas males from all other regions experienced rates that were similar to or lower than Australian-born males (Figure 6). Females born in Other Oceania and Antarctica, the Middle East and Southern and Eastern Europe experienced similar rates to Australian-born females, while females born in other regions had significantly lower rates.

Presentation rates for females were significantly higher than males in populations from almost every COB region, except for females born in Other Oceania and Antarctica and North-East Asia who had similar rates to their male counterparts. This contrasts with presentations for minor single-site injuries, which are much more common for males.

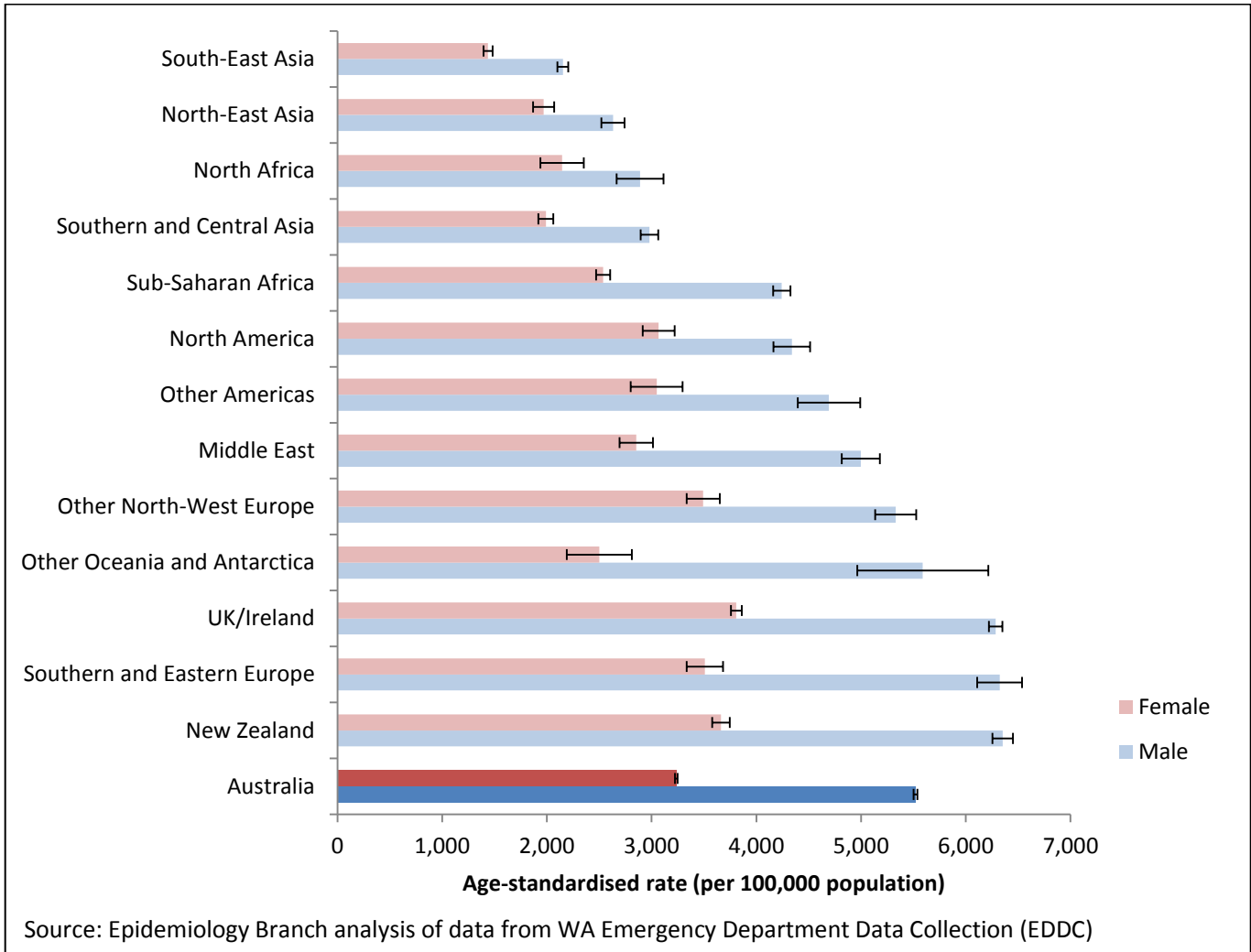


**Figure 6. Rates and 95% confidence intervals of ED presentations due to digestive illness by COB region and gender, WA, 2007-2016**

## ED presentations due to major single-site injury by COB region and gender

Compared with their Australian-born counterparts, both males and females born in New Zealand, Southern and Eastern Europe and UK/Ireland, as well as females born in Other North-West Europe, experienced significantly higher rates of ED presentations related to major single-site injuries, while the rates for those born in other regions were similar or lower than the Australian-born rates (Figure 7).

In populations from all COB regions, presentation rates for males were significantly higher than for females. This pattern is similar to that of minor single-site injuries.

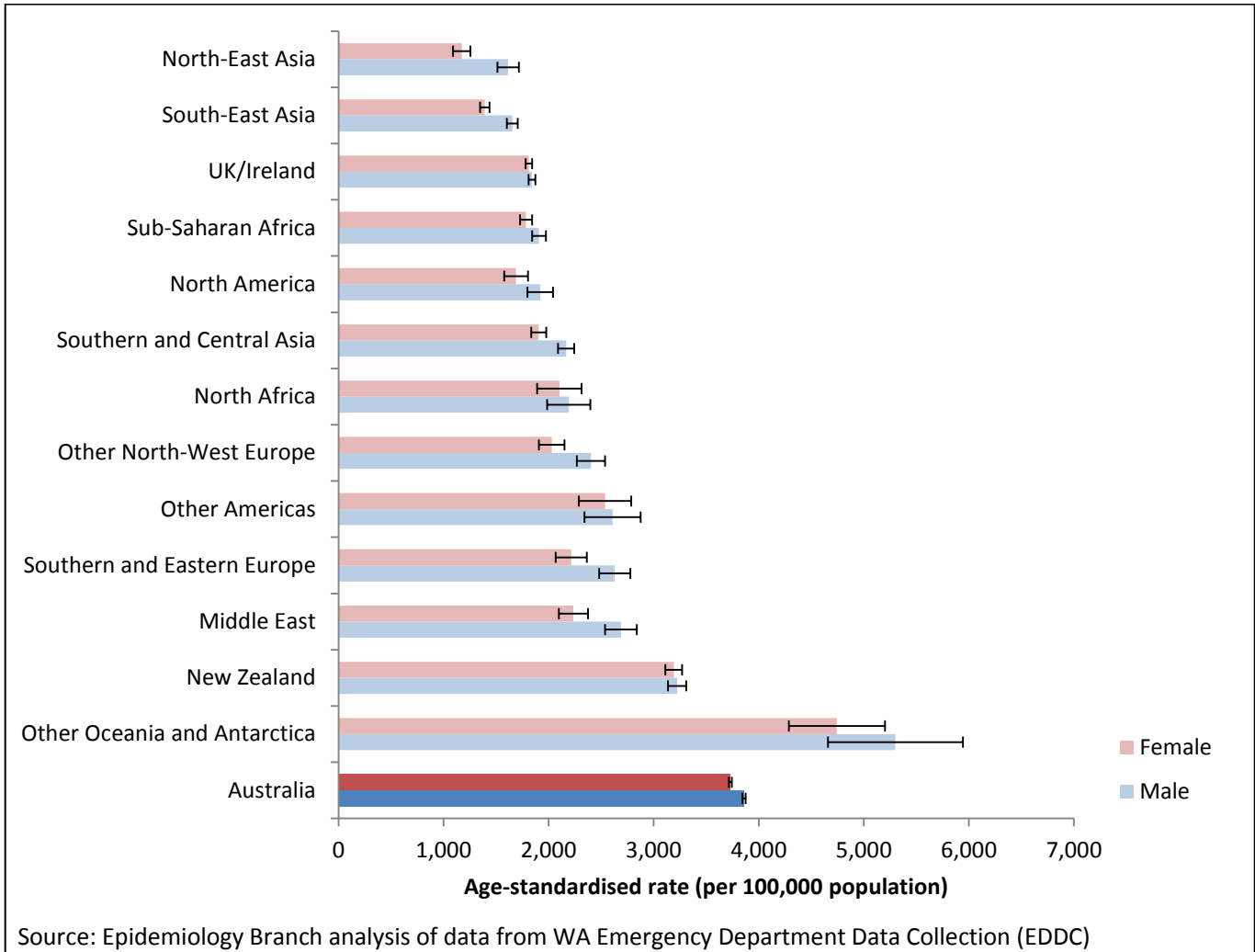


**Figure 7. Rates and 95% confidence intervals of ED presentations due to major single-site injury by COB region and gender, WA, 2007-2016**

## ED presentations due to respiratory illness by COB region and gender

Compared with their Australian-born counterparts, both males and females born in Other Oceania and Antarctica experienced significantly higher rates of ED presentations related to respiratory illness, while the rates for those born in other regions were lower than the Australian-born rates (Figure 8).

Presentation rates for males were significantly higher than females in the Australian-born populations, as well as populations born in the Middle East, Southern and Eastern Europe, Other North-West Europe and all Asian regions.



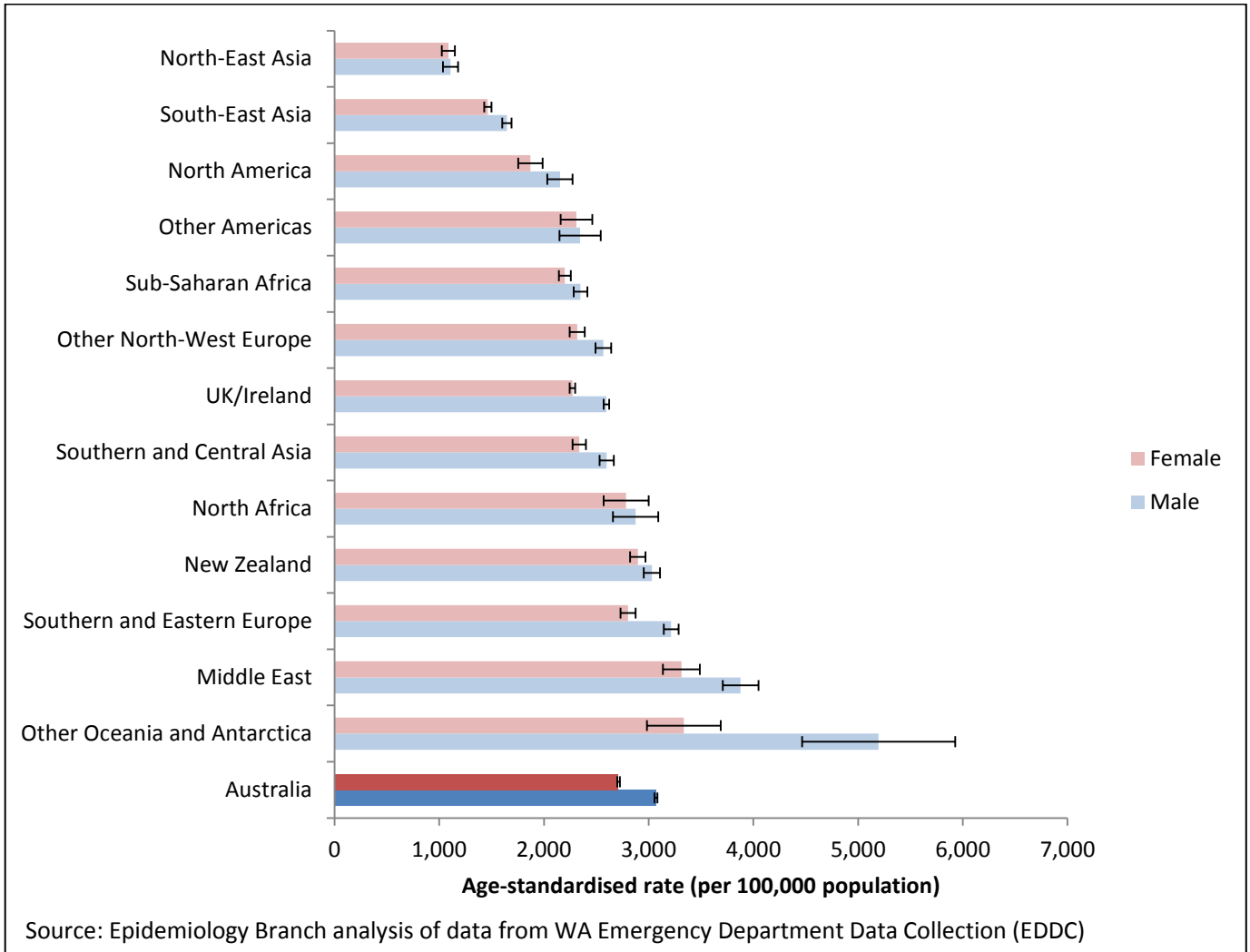
**Figure 8. Rates and 95% confidence intervals of ED presentations due to respiratory illness by COB region and gender, WA, 2007-2016**



## ED presentations due to circulatory illness by COB region and gender

Compared with their Australian-born counterparts, both males and females born in the Other Oceania and Antarctica, the Middle East and Southern and Eastern Europe, as well as females born in New Zealand, experienced significantly higher rates of ED presentations related to circulatory illness (Figure 9).

Presentation rates for males were higher than females in the Australian-born populations, as well as for most regions except New Zealand, North Africa, North-East Asia and Other Americas, where both genders had similar rates.



**Figure 9. Rates and 95% confidence intervals of ED presentations due to circulatory illness by COB region and gender, WA, 2007-2016**

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## For more information

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## Suggested citation

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