

Changing disease patterns amongst  
migrants: a focus on the Australian  
National Health Priority Areas

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## **Abstract**

The broad aim of this thesis was to explore trends in migrant mortality and morbidity rates in Australia between 1981 and 2007. The focus was on conditions that are part of the National Health Priority Areas. Approximately one in four Australians was born overseas and although they generally enjoy better health than the Australian-born population, there are a number of conditions in which some migrant groups are over-represented, including diabetes and stomach cancer.

This study consisted of three parts: the first dealt with mortality trends, the second with the impact of duration of residence on mortality rates and the third with hospitalisation trends. Mortality data were obtained from the Australian Bureau of Statistics, while hospitalisation data were acquired from the Australian Institute of Health and Welfare. Directly age- and sex-standardised mortality and hospitalisation rates were computed for each of the migrant groups and conditions of interest. These rates were compared to those for the Australian-born population and time trends were examined.

While for many conditions mortality and hospitalisation rates reduced over the study period, the reverse was true for musculoskeletal conditions, melanoma, diabetes and mental health disorders, which may reflect greater exposure to risk factors or a lack of culturally appropriate support services. Furthermore, an increase in prostate cancer hospitalisations was observed, which may in part be explained by greater participation in screening. Migrants displayed lower mortality and hospitalisation rates compared to the Australian-born population and tended to retain their health advantage with increasing time spent in Australia. Migrants born in Southern Europe and Asia had the greatest health advantage, with low rates of colorectal cancer and cardiovascular disease. However, there were a number of notable exceptions such as diabetes, where individuals born in Southern Europe and Southern Asia displayed high morbidity and mortality rates, in part explained by their genetic predisposition to glucose intolerance, higher BMI and abdominal obesity. Stomach cancer was more prevalent among Southern and Eastern European and Chinese migrants. Liver and bladder cancer were also more common among migrants from Southern and Eastern Europe, Chinese Asia and South East Asia.

The main strengths of this study included the focus on the entire Australian population, which enabled the analysis of mortality and hospitalisation trends among smaller migrant groups, such as those originating from Sub-Saharan Africa. Furthermore, the study provided an important update of knowledge in this field, where few studies focusing on a range of conditions have been conducted in recent years.

The findings have implications for public health policy and practice as well as medical services, both for migrants and the Australian-born population. Migrants at risk of specific health problems should be targeted by health promotion programs that incorporate education about risk factors, screening, fitness programs and culturally appropriate treatment. For well-established migrant groups delivering programs and information is facilitated by the availability of existing ethnic community networks. However, newly established migrant groups, migrants in rural areas, refugees and humanitarian entrants are more difficult to target, due to their relative isolation. Ethnic radio, television programs, printed media, internet resources and migrant resource centres may be useful in reaching these groups. The benefits of the traditional diets and cultural norms of some migrant groups have potential policy and practice implications for the wider Australian population. For instance, modifying dietary guidelines to have a greater emphasis on aspects of the traditional Mediterranean diet may bring about positive changes in colorectal cancer and cardiovascular disease outcomes.



## **Declaration**

I, Olga Anikeeva, certify that this thesis contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text.

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## **Introduction**

The aim of this study is to investigate trends in mortality and morbidity due to the conditions that are part of the Australian National Health Priority Areas (NHPA) among migrants and the Australian born-population between 1981 and 2007. It has previously been found that migrants generally display more favourable health outcomes compared to the Australian-born population;[1-3] however, few studies have been conducted in this field in the past decade. The purpose of this study is to provide an update of knowledge in this area, while focusing on NHPA conditions, which account for approximately 80% of the total disease and injury burden in Australia.[4]

The first chapter provides an outline of the history of migration to Australia. The focus of this chapter is on the main ‘waves’ of migration that occurred since the first arrival of European settlers in 1788. The establishment of Australia’s immigration policy is also discussed, as well as the impact that policy changes had on the number of migrants arriving in Australia and their countries of origin. The chapter concludes with a discussion of Australia’s current broad immigration policy, which is focused on skill as well as humanitarian needs.

The second chapter discusses three migrant health theories, which have been used to explain the health advantages experienced by migrants worldwide, as well as the gradual convergence of mortality and morbidity rates towards those of the host country’s population. The healthy migrant effect has been used to describe the tendency for healthy individuals to migrate while those in poor health remain in their country of birth. This is due to both health selection criteria imposed by host countries and a self-selection process, where individuals in good health are more likely to be in a position to migrate for practical and economic reasons. Salmon bias refers to the tendency for terminally ill individuals to return to their country of birth to die, which may lead to an underestimation of migrant mortality in the host country. Finally, acculturation is the gradual process of adoption of the host country’s cultural, dietary and lifestyle habits among migrants and may lead to the gradual loss of the migrant health advantage in some groups.

The third chapter provides an outline of migrant health policies and sources of support that are available in Australia. The gradual expansion of the range of services offered to migrants is discussed, which parallel changes in Australia's migration policy. These services include ethnic radio and television programs, interpreter services, English language tuition, assistance with housing and employment, ethnic schools and a range of health screening and education programs. The role of both government and non-government organisations in the delivery of these services is discussed.

Chapter four is a review of the literature focusing on migrant health in Australia in the conditions that are part of the NHPA. The chapter provides brief summaries of the 67 papers published between 1980 and 2011 that were included in the review. Generally, the review suggests that migrants are in better health than the Australian-born population, with those born in Italy and Greece enjoying the greatest health advantage. However, some migrant groups appear to be over-represented in the areas of diabetes, bladder cancer and nasopharyngeal cancer.

Chapter five presents the methods, results and discussion of the part of this study focusing on migrant mortality trends. Mortality and population data for this part of the study were obtained from the Australian Bureau of Statistics (ABS) and analysed to provide average annual directly age- and sex-standardised mortality rates for the migrant groups and conditions of interest between 1981 and 2007. The results are discussed separately for each of the NHPA and the impact of important limitations, such as the broad age and country of birth groups utilised in the study, is considered.

The part of this study focusing on the impact of duration of residence on migrant mortality trends is discussed in chapter six. The data for this part of the study were obtained from the ABS. Duration of residence data were only available for the period between 1997 and 2007, which limits the capacity to comment on trends over time. Results are only presented for conditions where the number of deaths was sufficiently high to enable meaningful analysis. The implications of the results are discussed and findings are compared to the results of previous studies.

Chapter seven presents the methods, results and discussion of the part of this study focusing on migrant hospitalisation trends. Data for this part of the study were obtained from the Australian Institute of Health and Welfare (AIHW) and were only available for the period between 2001 and 2007, which limited the discussion of changes in morbidity rates over time as well as the comparison of morbidity and mortality data. Age- and sex-standardised hospitalisation rates are presented for each of the migrant groups and NHPA conditions. These findings are discussed in the context of previous studies, and a discussion of potential reasons for the observed trends and the study limitations is presented.

The final chapter brings together the findings from the three parts of this study. The focus of this chapter is on the implications of the findings for policy and practice. Recommendations that may help to improve health outcomes for at-risk migrant groups as well as the Australian-born population are provided and discussed in the context of previous health promotion programs and campaigns.