Horizontal equity in the Australian healthcare system:
Exploring the unknowns and updating the knowns

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A thesis submitted in fulfilment of the requirements for the degree of
Doctor of Philosophy in Health Economics

Centre for Health Economics Research and Evaluation (CHERE)
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Submitted March 2019
Certificate of Authorship/Originality

I, Mohammad Habibullah Pulok, declare that this thesis is submitted in fulfilment of the requirements for the award of Doctor of Philosophy in Health Economics in the UTS Business School at the University of Technology Sydney.

This thesis is wholly my own work unless otherwise referenced or acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

This document has not been submitted for qualifications at any other academic institution.

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Date: 19 March 2019

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Ethical approval

Ethics approval has been sought and obtained from the University of Technology Sydney Human Research Ethics Committee (UTS HREC). The ethics application number of this PhD research is UTS HREC ETH17-1317.
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<th>Description</th>
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<tbody>
<tr>
<td>AATISH</td>
<td>Australian Aboriginal and Torres Strait Islander Health Survey</td>
</tr>
<tr>
<td>ABS</td>
<td>Australian Bureau of Statistics</td>
</tr>
<tr>
<td>AIHW</td>
<td>Australian Institute of Health and Welfare</td>
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<tr>
<td>BTOS</td>
<td>Broad type of services</td>
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<tr>
<td>CC</td>
<td>Concentration curve</td>
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<tr>
<td>CI</td>
<td>Concentration index</td>
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<tr>
<td>EI</td>
<td>Erreygers's index</td>
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<tr>
<td>FFS</td>
<td>Fee-for-service</td>
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<tr>
<td>GCI</td>
<td>Generalised concentration index</td>
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<tr>
<td>GDP</td>
<td>Gross domestic product</td>
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<tr>
<td>GP</td>
<td>General practitioner</td>
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<td>HI</td>
<td>Horizontal Inequity</td>
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<tr>
<td>HILDA</td>
<td>Household, Income and Labour Dynamics in Australia</td>
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<tr>
<td>LTC</td>
<td>Long-term conditions</td>
</tr>
<tr>
<td>MBS</td>
<td>Medicare Benefit Schedule</td>
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<tr>
<td>NB</td>
<td>Negative binomial</td>
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<tr>
<td>NHS</td>
<td>National Health Survey</td>
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<tr>
<td>OECD</td>
<td>Organisation for Economic Cooperation and Development</td>
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<tr>
<td>OLS</td>
<td>Ordinary least square</td>
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<tr>
<td>OOP</td>
<td>Out-of-pocket</td>
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<tr>
<td>OR</td>
<td>Odds ratio</td>
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<tr>
<td>PBS</td>
<td>Pharmaceutical Benefits Scheme</td>
</tr>
<tr>
<td>PHI</td>
<td>Private health insurance</td>
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<tr>
<td>PHN</td>
<td>Primary health network</td>
</tr>
<tr>
<td>SAH</td>
<td>Self-assessed health</td>
</tr>
<tr>
<td>SDG</td>
<td>Sustainable development goal</td>
</tr>
<tr>
<td>SE</td>
<td>Standard error</td>
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<tr>
<td>SES</td>
<td>Socioeconomic status</td>
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<tr>
<td>UHC</td>
<td>Universal health coverage</td>
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<tr>
<td>Abbreviation</td>
<td>Full Form</td>
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</tr>
<tr>
<td>UK</td>
<td>United Kingdom</td>
</tr>
<tr>
<td>USA</td>
<td>United States of America</td>
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<tr>
<td>WHO</td>
<td>World Health Organisation</td>
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<tr>
<td>WI</td>
<td>Wagstaff index</td>
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Abstract

Australia has a tax-funded universal health insurance system known as Medicare, which aims to ensure universal and equitable use of healthcare services. This thesis assesses the fairness of the Australian healthcare system in delivering healthcare services during the period of encouraging greater private healthcare financing. This thesis first measures the degree of horizontal inequity (unequal care for equal need) in eight indicators of healthcare use between 2011-12 and 2014-15. Secondly, it examines inequity in GP and specialist visit by making a distinction between the probability of visit and the conditional visit. Thirdly, this thesis investigates how co-payment is related to area-level socioeconomic inequality in Medicare-funded specialist care by using national administrative data. Finally, it measures and explains inequity in use of healthcare services within the non-remote Indigenous Australians.

The overall finding is that there was pro-rich inequity in use of out-of-hospital services while the utilisation of hospital-related services was almost equitable. There was a small degree of pro-rich inequity in the probability of GP visits, but significant pro-poor inequity in conditional visits to GP. On the contrary, there was considerable inequity in the probability of visiting a specialist favouring richer people. The distribution of conditional visits for this care was almost equitable, but it appears to be pro-rich when higher users were excluded from the analysis. Income, private health insurance, and education significantly accounted for pro-rich inequity while the contribution of concession card to inequity was pro-poor. The analysis of Medicare Benefit Schedule (MBS) data shows that inequality in specialist services was favourable to the individuals living in socioeconomically advantaged areas. Most importantly, this inequality was higher for visits with co-payment while there was almost no inequality in visits without co-payment. Finally, there was no evidence of inequity in the utilisation of GP services and inpatient admission within the Indigenous Australians. However, wealthier Indigenous Australians were higher users of specialist services than their poorer counterparts despite having similar levels of need. Pro-rich inequity in specialist services suggests the need for policy discussions to reform Medicare safety net arrangements so that poorer people have a chance to access larger benefits. Policy reforms should ensure that Medicare serves financially vulnerable and sicker people equitably.