

# Health care for older people in rural and remote Australia: challenges for service provision

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Many Australians living in rural and remote areas of Australia need to travel hundreds of kilometres for health care service, or to wait for health service providers, such as the Royal Flying Doctor Service (RFDS), to visit them. The levels of acute and subacute hospital services in rural and remote areas are reported to

be inadequate,<sup>1</sup> as is, to a lesser extent, access to aged care services.<sup>2</sup> The need to travel long distances is a major barrier for people in remote locations, particularly older people, seeking health care.

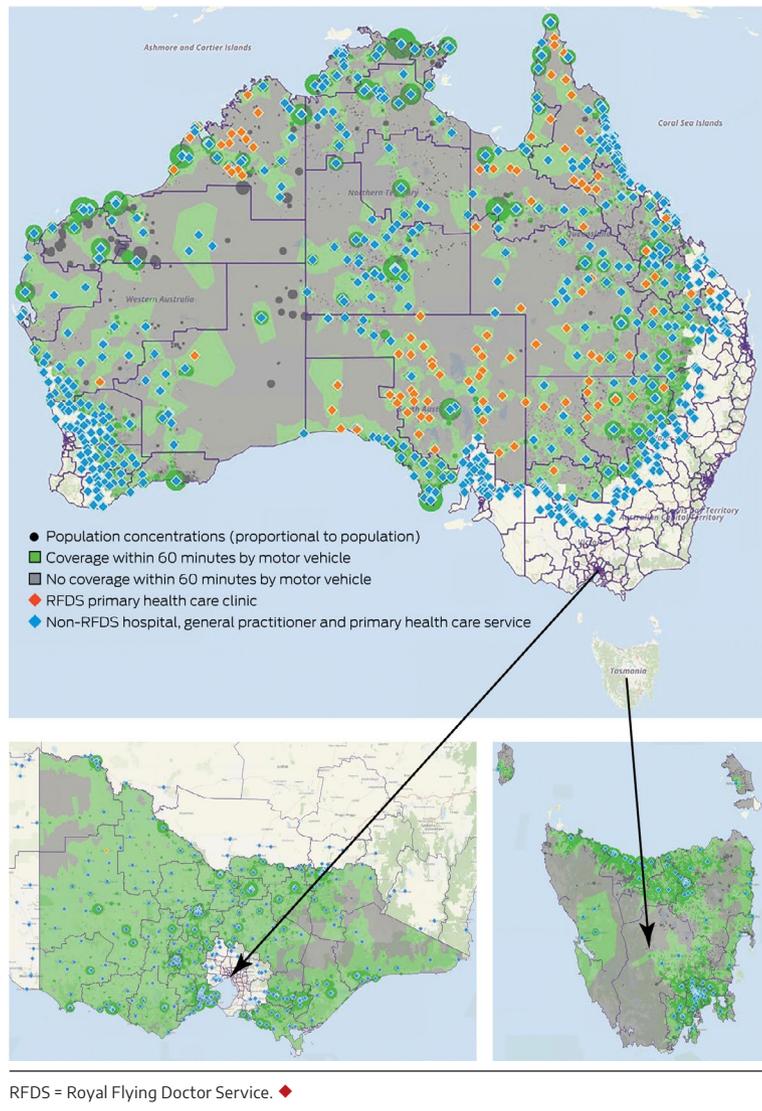
National data on health care for older Australians are available,<sup>3</sup> but we do not have a clear picture of the specific problems of

## 1 International Statistical Classification of Diseases and Related Health Problems, tenth revision (ICD-10) diagnoses for older patients transported by the Royal Flying Doctor Service, 2014–15 to 2016–17

ICD-10 code diagnosis	Males	Females	Total
Non-Indigenous patients: retrievals	11 024	7228	18 252
I21 Acute myocardial infarction	555 (3.0%)	272 (1.5%)	827 (4.5%)
S72 Fracture of femur	230 (1.3%)	390 (2.1%)	620 (3.4%)
Z54 Convalescence	202 (1.1%)	130 (0.7%)	332 (1.8%)
I20 Angina pectoris	147 (0.8%)	66 (0.4%)	213 (1.2%)
I12 Hypertensive renal disease	120 (0.7%)	55 (0.3%)	175 (1.0%)
K92 Other diseases of digestive system	102 (0.6%)	53 (0.3%)	155 (0.8%)
K56 Paralytic ileus and intestinal obstruction without hernia	87 (0.5%)	66 (0.4%)	153 (0.8%)
I64 Stroke, not specified as haemorrhage or infarction	98 (0.5%)	55 (0.3%)	153 (0.8%)
I48 Atrial fibrillation and flutter	89 (0.5%)	44 (0.2%)	133 (0.7%)
I49 Cardiac arrhythmias	101 (0.6%)	27 (0.1%)	128 (0.7%)
J18 Pneumonia	74 (0.4%)	51 (0.3%)	125 (0.7%)
I50 Heart failure	71 (0.4%)	46 (0.3%)	117 (0.6%)
A41 Sepsis	80 (0.4%)	46 (0.3%)	126 (0.7%)
R10 Abdominal and pelvic pain	56 (0.3%)	42 (0.2%)	98 (0.5%)
I45 Conduction disorders	66 (0.4%)	31 (0.2%)	97 (0.5%)
All other diagnoses	8946 (49.0%)	5854 (32.1%)	14 800 (81.1%)
Indigenous patients: retrievals	1671	1953	3625
I21 Acute myocardial infarction	40 (1.1%)	42 (1.2%)	82 (2.3%)
J18 Pneumonia	27 (0.7%)	33 (0.9%)	60 (1.7%)
S72 Fracture of femur	9 (0.2%)	31 (0.9%)	40 (1.1%)
A41 Sepsis	19 (0.5%)	16 (0.4%)	35 (1.0%)
I64 Stroke, not specified as haemorrhage or infarction	9 (0.2%)	17 (0.5%)	26 (0.7%)
J44 Chronic obstructive pulmonary disease	13 (0.4%)	8 (0.2%)	21 (0.6%)
I20 Angina pectoris	12 (0.3%)	9 (0.2%)	21 (0.6%)
I50 Heart failure	7 (0.2%)	10 (0.3%)	17 (0.5%)
R10 Abdominal and pelvic pain	9 (0.2%)	8 (0.2%)	17 (0.5%)
Z54 Convalescence	7 (0.2%)	9 (0.2%)	16 (0.4%)
J81 Pulmonary oedema	4 (0.1%)	11 (0.3%)	15 (0.4%)
N17 Acute renal failure	6 (0.2%)	7 (0.2%)	13 (0.4%)
I24 Other acute ischaemic heart diseases	5 (0.1%)	7 (0.2%)	12 (0.3%)
K92 Other diseases of digestive system	7 (0.2%)	5 (0.1%)	12 (0.3%)
K56 Paralytic ileus and intestinal obstruction without hernia	8 (0.2%)	4 (0.1%)	12 (0.3%)
All other diagnoses	1489 (41.1%)	1736 (47.9%)	3226 (89.0%)

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**2 Hospital and primary health care clinic coverage in rural and remote Australia, by Statistical Areas Level 3 (SA3), 2016-17**



older people living in rural and remote areas who require aero-medical retrieval for treatment. We therefore briefly describe in this report the health characteristics of older Australians who have been retrieved at least once by the RFDS and the primary health care services accessible to them within 60 minutes by road.

We undertook a cross-sectional review of prospectively collected routine patient data for older Australians (Indigenous patients

aged 55 years or more; non-Indigenous patients aged 65 years or more<sup>4</sup>) retrieved by the RFDS from anywhere in Australia between 1 July 2014 and 31 June 2017. To assess population health service coverage, we entered the locations of available health services (source: Health Direct; <https://about.healthdirect.gov.au>) into the RFDS Service Planning and Operational Tool (SPOT), and then overlaid 2016 census data provided by the Australian Bureau of Statistics. The study was approved by the Australian Capital Territory Health Service Human Research Ethics Committee (reference, 2018/QA/00184).

During 2014–2017, the RFDS conducted 21 877 aero-medical retrievals of older patients (30.7% of 71 230 RFDS aero-medical retrievals); 13 673 patients (62.5%) were retrieved once, 2045 (9.4%) twice. Of 18 252 retrievals of non-Indigenous patients (83.4% of retrievals), 11 023 were of male (60%) and 7228 of female patients (40%). The most frequent reasons for retrieval were acute myocardial infarction (827 retrievals, 4.5%), fracture of the femur (620, 3.4%), convalescence (332, 1.8%), angina pectoris (213, 1.2%), and hypertensive renal disease (175, 1.0%). Of the 3625 retrievals of Indigenous Australians (16.6% of retrievals), 1671 were of male (46%) and 1953 of female patients (54%). The most frequent reasons for retrieval were acute myocardial infarction (82 retrievals, 2.3%), pneumonia (60, 1.7%), fracture of the femur (40, 1.1%), sepsis (35, 1.0%), and stroke (26, 0.7%) (Box 1).

Many rural and remote areas do not have easy access to hospitals or primary health care (Box 2). A large proportion of people in rural and remote regions need to drive for more than 60 minutes to reach health services, including hospitals, emergency departments, primary health care, and rehabilitation and management services.

The RFDS is essential for providing health care in rural and remote areas. Many older patients have no other access to care because of the small populations of their communities, the distances to larger population centres, and shortfalls in local health care provision.

This is a major problem, given that the most frequent reason for retrieval was myocardial infarction, which requires early treatment and extensive long term management and rehabilitation.<sup>5</sup>

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