



Supporting Information

Supplementary methods and results

**This appendix was part of the submitted manuscript and has been peer reviewed.
It is posted as supplied by the authors.**

Appendix to: Pearson O, Air T, Humphrey G, et al. Aged care service use by Aboriginal and Torres Strait Islander people after aged care eligibility assessments, 2017–2019: a population-based retrospective cohort study. *Med J Aust* 2024; doi: 10.5694/mja2.52353.

Table 1. CONSolidated critERTia for strengthening the reporting of health research involving Indigenous Peoples (CONSIDER) statement guidelines

Guest Editors of the 2024 Indigenous Health Special Issue acknowledge the Indigenous expertise that informed the establishment of the CONSolidated critERTia for strengthening the reporting of health research involving Indigenous Peoples (CONSIDER) statement.

Authors should indicate how they have supported ethical publishing and reporting practices by providing the details of the research practices aligned with this publication in accordance with the CONSIDER statement. The reporting should not exceed two pages. This reporting will be published as online supplementary information. Detailed items can be accessed in the publication: <https://bmcmmedresmethodol.biomedcentral.com/articles/10.1186/s12874-019-0815-8>

Governance
<ul style="list-style-type: none"> The ROSA Aboriginal and Torres Strait Islander Advisory Committee was established in 2020 to govern research using the Aboriginal and Torres Strait Islander data in ROSA. It comprises Aboriginal and/or Torres Strait Islander leaders in aged care policy, practice and research with representation from each jurisdiction, is chaired by the first author (OP) and conducts governance according to a terms-of-reference which prescribes processes that embed the principles of Indigenous Data Sovereignty and meets three times a year. All required ethical approvals have been obtained, including from the Aboriginal Health Research Ethics Committee (Ref:04-20-895).
Prioritisation
<ul style="list-style-type: none"> ROSA's national Aboriginal and Torres Strait Islander Advisory Committee prioritises and develops the research questions, based on our Aboriginal and Torres Strait Islander Aged Care Research Framework that incorporates a collaborative process of prioritisation of research questions and feasibility within the ROSA data platform.
Relationships (Indigenous stakeholders/participants and Research Team)
<ul style="list-style-type: none"> All required ethical approvals have been obtained, including from the Aboriginal Health Research Ethics Committee (Ref:04-20-895). The ROSA Aboriginal and Torres Strait Islander Advisory Committee is involved in all stages of the research from informing and developing research questions, informing analysis plans, interpreting results, providing input into papers, informing and monitoring community engagement strategies and knowledge translation initiatives. The Committee informed the questions, of a NHMRC Ideas Grant (GNT2004089) that funds this program of research being undertaken, "Leaving No-one Behind" led by OP (first author) with the other authors either chief or associate investigators on this grant. OP is an Eastern Yalanji and Torres Strait Islander women and co-leads the Wardliparingga Aboriginal Health Equity Theme. AB is from the Yuin Nation, the inaugural theme leader of Wardliparingga, an established researcher, trained medical doctor, OP's postdoctoral supervisor and mentor over the last decade. Partnering with the Registry of Senior Australians (GC, MI, SW) has ensured that our data is being used to improve the aged care system so that Aboriginal and Torres Strait Islander people receive quality and safe aged care. Our non-Indigenous colleagues and authors on the paper are experts in establishing and maintaining this unique national registry, epidemiology, pharmacoepidemiology and statistics and have embedded the values of consumer engagement into their core business.
Methodologies
<ul style="list-style-type: none"> The study was led and co-designed by Aboriginal researchers (OP and AB) and ROSA's Aboriginal and Torres Strait Islander Advisory Committee, based on priorities established by the Committee. The study cohort focused on Aboriginal and Torres Strait Islander people aged ≥ 50 years old (in recognition of early-age onset of health conditions in Aboriginal and Torres Strait Islander people due to continued health and social inequities across the lifespan) at their first aged care eligibility assessment, with Aboriginal and Torres Strait Islander status determined from aged care assessment or service data.
Participation
<ul style="list-style-type: none"> All data used in this study includes de-identified linked aged care and health care data from existing nationally available datasets, from the Australian Institute of Health and Welfare (AIHW) approved by the University of South Australia (Ref: 200489) and AIHW (Ref: EO2018/1/418) Human Research Ethics Committees, in addition to the Aboriginal Health Research Ethics Committee (Ref:04-20-895).
Capacity
<ul style="list-style-type: none"> This research is the first study from the ROSA data platform that specifically focuses on the Aboriginal and Torres Strait Islander population accessing aged care services in Australia, that was led by Aboriginal researchers (OP and AB) and ROSA's Aboriginal and Torres Strait Islander Advisory Committee. OP is the co-lead of the Wardliparingga Aboriginal Health Equity Theme at SAHMRI, and through this work supports research being undertaken by Aboriginal and Torres Strait Islander researchers. As part of this work a national symposium was held with key policy, practice and community leaders (both Aboriginal and non-Aboriginal) to share the findings and seek direction on next steps for translation.

Analysis and interpretation

- All results were informed and interpreted within the context of Aboriginal and Torres Strait Islander perspectives that includes equity, social, cultural and spiritual considerations, led by OP and ROSA's Aboriginal and Torres Strait Islander Advisory Committee.

Dissemination

- In addition to academic journal publication (and associated media releases and public forums (e.g., Australian Ageing Agenda)), the findings will be presented via our key stakeholder groups to facilitate dissemination to Aboriginal and Torres Strait Islander research leaders, community groups and policy advocates. This will be facilitated through ROSA's Aboriginal and Torres Strait Islander Advisory Committee, Wardliparingga Aboriginal Health Equity Theme at SAHMRI. Our research team has presented findings to the National Aboriginal and Torres Strait Islander Ageing and Aged Care Council (NATSIAACC).
- These findings will help to facilitate evidence-based recommendations for policy changes to improve access to community informed culturally appropriate aged and health care services for our older Aboriginal and Torres Strait Islander population, that includes consideration of social, cultural and spiritual wellbeing.

Table 2. Identification of health conditions using Rx-Risk and aged care assessment data.^a

Health Condition	Rx-Risk-V Category	Aged Care Eligibility Assessment Health Condition Codes
Alcohol dependency	Alcohol dependency (Rx-Risk_1)	n/a
Allergies	Allergies (Rx-Risk_2)	n/a
Anxiety	Anxiety (Rx-Risk_5)	0560-0564,0586
Arthritis/Pain	Gout (Rx-Risk_17), Inflammation/pain (Rx-Risk_30), Pain (Rx-Risk_36)	1301, 1302, 1304, 1307, 1308, 1704
Benign prostatic hyperplasia	Benign prostatic hyperplasia (Rx-Risk_7)	n/a
Cardiovascular disease	Anticoagulants (Rx-Risk_3), Antiplatelets (Rx-Risk_4), Arrhythmia (Rx-Risk_6), Congestive heart failure (Rx-Risk_10), Hypertension (Rx-Risk_23), Ischaemic heart disease: angina (Rx-Risk_27), Ischaemic heart disease: hypertension (Rx-Risk_28)	0900 to 0907, 0920, 0921, 0925,0926
Cerebrovascular	n/a	0910-0916, 0605
Chronic respiratory disease	Chronic airways disease (Rx-Risk_9)	1004, 1005
Depression / mood affective disorders	Depression (Rx-Risk_12), Bipolar disorder (Rx-Risk_8)	0552
Dementia	Dementia (Rx-Risk_11)	0500-0504, 0510-0516,0520-0526, 0530-0532,0584
Diabetes	Diabetes (Rx-Risk_13)	0402,0403,0404
Epilepsy	Epilepsy (Rx-Risk_14)	0604
Eye disorders	Glaucoma (Rx-Risk_15)	0701-0705,0799
Gastrointestinal disorders	Gastro-oesophageal reflux disease (Rx-Risk_16), Irritable bowel syndrome (Rx-Risk_26)	1101, 1102,1199
Hearing disorders	n/a	0801, 0802, 0899
Hepatitis B, Hepatitis C	Hepatitis B (Rx-Risk_18), Hepatitis C (Rx-Risk_19)	0105
HIV	HIV (Rx-Risk_20)	0103
Hyperkalemia	Hyperkalemia (Rx-Risk_21)	n/a
Hyperlipidemia	Hyperlipidemia (Rx-Risk_22)	0408
Incontinence	Incontinence (Rx-Risk_29)	1403, 1707, 1708
Kidney disease	Renal disease (Rx-Risk_42)	1401
Liver disorders	Liver failure (Rx-Risk_31)	1103
Malignancies	Malignancies (Rx-Risk_32)	0201-0217, 0299
Malnutrition	Malnutrition (Rx-Risk_33)	0405, 0406
Migraine	Migraine (Rx-Risk_34)	n/a
Osteoporosis	Osteoporosis (Rx-Risk_35)	1306
Pancreatic insufficiency	Pancreatic insufficiency (Rx-Risk_37)	n/a
Parkinson's disease	Parkinson's disease (Rx-Risk_38)	0604
Psoriasis	Psoriasis (Rx-Risk_39)	n/a
Psychosis	Psychotic illness (Rx-Risk_40)	0550, 0551, 0553
Pressure injuries	n/a	1201, 1299
Pulmonary hypertension	Pulmonary hypertension (Rx-Risk_41)	n/a
Steroid-responsive disease	Steroid-responsive disease (Rx-Risk_44)	n/a
Thyroid disorders	Hyperthyroidism (Rx-Risk_24), Hypothyroidism (Rx-Risk_25)	0401
Transplant	Transplant (Rx-Risk_45)	n/a
Tuberculosis	Tuberculosis (Rx-Risk_46)	0101

^an/a: not available as a health condition within the data.

Rx-Risk pharmaceutical based comorbidity index (Pratt N, Kerr M, Barratt J, et al. The validity of the Rx-Risk Comorbidity Index using medicines mapped to the Anatomical Therapeutic Chemical (ATC) Classification System. *BMJ Open* 2018;8: e021122.

Figure 1. Aboriginal and Torres Strait Islander people assessed for aged care service 1 Jan 2017 - 31 Dec 2019

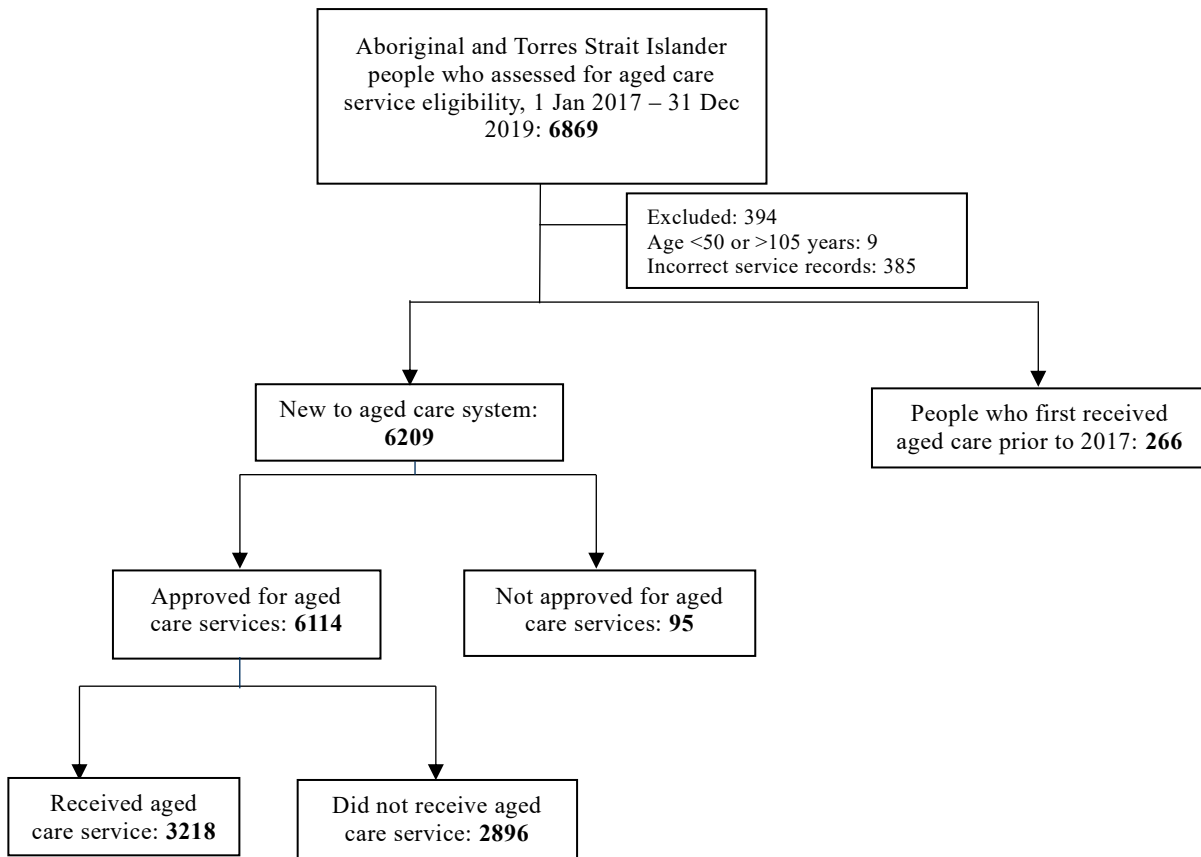


Table 3. Aged care services approved at aged care eligibility assessment for individuals who did not access services during the study period (N=2991)*

Approval	N (%)
Permanent residential aged care	1195 (40.0%)
Home care package	2486 (83.1%)
Level 1/2	1315 (44.0%)
Level 3/4	1171 (39.2%)
Respite	1851 (61.9%)
Transition	59 (2.0%)
CHSP recommended	2282 (76.3%)
NATSIFAC Program	102 (3.4%)
Multi-purpose service ^a	11 (0.4%)
No approval	95 (3.2%)

*Individuals may be approved for multiple services at aged care eligibility assessment.

^aMulti-purpose services provides integrated health and aged care services to individuals in regional and remote communities that are unable to support both a separate aged care service and health service.

CHSP= Commonwealth Home Support Programme; HCP=home care package; NATSIFAC=National Aboriginal and Torres Strait Islander Flexible Aged Care; PRAC=permanent residential aged care

Table 4. Top 10 most common health condition (N = 6208)

Conditions	N	%
Anxiety	1136	18.30
Malignancies	1178	18.98
Kidney disease	1329	21.41
Depression	2416	38.92
Chronic lower respiratory	2933	47.25
Diabetes	2939	47.34
Gastrointestinal	3274	52.74
Hyperlipidaemia	3584	57.73
Arthritis	4257	68.57
Cardiovascular disease	5076	81.77

Table 5. Number of other medical conditions of Aboriginal and Torres Strait Islander people by top 10 most common health conditions (N = 6208)

Condition	Total N	0-2 other conditions		3-4 other conditions		5-6 other conditions		7-8 other conditions		9+ other conditions	
	N	N	%	N	%	N	%	N	%	N	%
CVD	5076	135	2.66	1609	31.70	1714	33.77	1135	22.36	483	9.52
Arthritis/Pain	4257	105	2.47	1154	27.11	1489	34.98	1033	24.27	476	11.18
Hyperlipidaemia	3584	23	0.64	909	25.36	1294	36.10	915	25.53	443	12.36
Gastrointestinal	3274	28	0.86	662	20.22	1194	36.47	949	28.99	441	13.47
Chronic respiratory	2933	73	2.49	682	23.25	957	32.63	811	27.65	410	13.98
Diabetes	2939	51	1.74	819	27.87	996	33.89	715	24.33	358	12.18
Depression	2416	29	1.20	401	16.60	816	33.77	758	31.37	412	17.05
Kidney disease	1329	26	1.96	355	26.71	436	32.81	336	25.28	176	13.24
Malignancies	1178	36	3.06	271	23.01	404	34.30	299	25.38	168	14.26
Anxiety	1136	7	0.62	173	15.23	359	31.60	383	33.66	214	18.84

Table 6. Top 10 activity limitations (N = 6207)

Activity Limitation	Total N	Without help		With some help		Completely unable	
	N	N	%	N	%	N	%
Eating	6207	4999	80.54	1135	18.29	73	1.18
Dressing	6207	3393	54.66	2517	40.55	296	4.77
Handle money/bills	6207	2847	45.87	2494	40.18	866	13.95
Walk	6207	2415	38.91	3428	55.23	364	5.86
Bath/shower	6207	2326	37.47	3530	56.87	351	5.65
Take medicine	6207	2283	36.78	3555	57.27	369	5.94
Meals	6207	1015	16.35	3457	55.70	1735	27.95
Get places	6207	880	14.18	4872	78.49	455	7.33
Shopping	6207	529	8.52	3974	64.02	1704	27.45
Housework	6207	160	2.58	3447	55.53	2600	41.89