



Primary Health Care Utilisation in Aged Care A Brief Report for South Australian Local Health Networks

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Reporting period 1 January 2019 – 31 December 2019

Purpose

This report was created in response to interest from Local Health Network (LHN) executives about the utilisation of primary and selected specialist health care services in residential aged care facilities in South Australian LHN catchment areas. Here, we show the variation in utilisation rates of 18 primary health care services across facilities in LHN catchment areas.

Background

This report was created using the Registry of Senior Australians (ROSA) National Historical Cohort¹. ROSA conducts research on the pathways of older Australians as they move through the aged care system with a specific focus on the quality of care received by recipients. Briefly, ROSA contains integrated national and state-based health, aged care, and social welfare information for ~3.85 million Australians who have accessed aged care between 2002-2022.

The present report focusses on the utilisation of Medicare Benefits Schedule (MBS) subsidised primary and selected specialist health care services in residential aged care (RAC) and how this utilisation varies between RAC facilities in the South Australian LHN catchment areas of Central Adelaide, Northern Adelaide, Southern Adelaide, and Regional South Australia.

The following health care services in the year after RAC entry were investigated:

Primary Health Care Service	Definition
After-hours attendances	General practitioner after-hours attendances and non-referred after-hours attendances with medical practitioners.
Comprehensive medicine review	Domiciliary and residential medication management reviews.
Focussed psychological strategies	Specific mental health care management strategies (e.g., psychoeducation, cognitive-behavioral therapy, eye-movement desensitisation reprocessing) rendered by a medical practitioner.
General or medical practitioner attendances	General practitioner attendances and non-referred attendances with medical practitioners, including services provided at a residential aged care facility.
GP health assessments	General or medical practitioner health assessments.
GP management plans	General or medical practitioner management plan attendances, team care arrangements and multidisciplinary care plans.
GP mental health	Professional attendance by a general practitioner for mental health care.
Multimorbidity medicine attendances	Consultant physician attendances to a patient with at least 2 morbidities (multiple morbidities).
Nurse practitioner attendances	Professional attendance by a participating nurse practitioner.
Optometrical services	Domiciliary and residential services provided by an optometrist.
Podiatry services	Podiatry health service provided to a patient as part of a chronic disease management plan.
Psychiatry attendances	Consultant psychiatric services.

Psychological therapy	Psychological therapy services provided by a clinical psychologist.
Specialist attendances – geriatric medicine	Services provided by a consult physician or specialist in the specialty of Geriatric Medicine.
Specialist attendances – pain and palliative care	Attendance by a recognised specialist or consultant physician in the specialty of pain or palliative medicine.
Urgent after-hours attendances	After-hours attendance by a general or medical practitioner to a patient requiring urgent assessment.
Continuity of care	Calculated by comparing the most frequently seen practitioner within the first six months of RAC entry to those seen two years prior to entry.

Service use between 01/01/2019 and 31/12/2019 was captured using MBS subsidised health services records. Each MBS service is recorded with a specific code. See **Supplementary Table 1** for the exact coding.

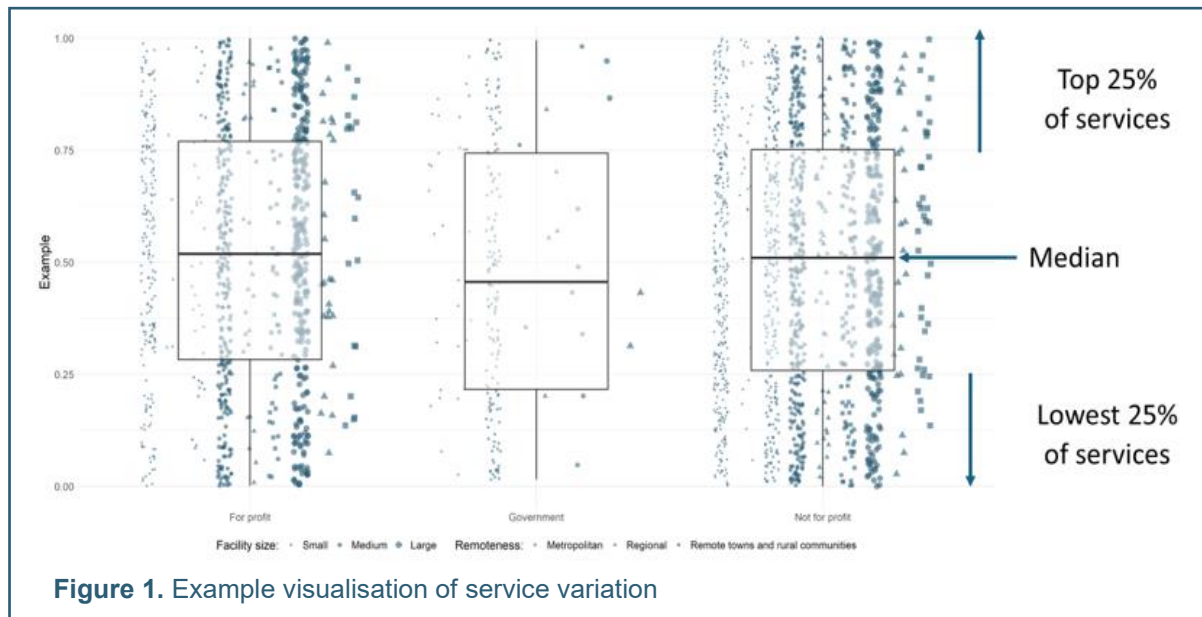
Continuity of care is a measure of the utilisation of health services delivered by a General Practitioner (GP) or Medical Practitioner (MP). Continuity of care is calculated by comparing the most frequently seen practitioner within the first six months of RAC entry to those seen two years prior to entry. Continuity of care was classified as (i) new GP (i.e., most frequently seen after entry was never seen prior to entry), (ii) known GP (i.e., most frequently seen after entry was seen at least once prior to entry), and (iii) usual GP (i.e., most frequently seen did not change from before to after entry). See **Supplementary Table 1** for coding.

Residential aged care facilities were mapped to LHN catchment areas by their postcodes. Postcodes of facilities were inferred based on most frequent resident postcode. Resident postcodes were inferred based on most frequent postcode in Pharmaceutical Benefits Scheme (PBS) records. The mapping of LHN catchment areas to postcodes was based on a recent map of LHN catchment areas². Please note that mappings may be imprecise because facility postcodes must be inferred based on Pharmaceutical Benefits Schedule data.

How to visualise the primary care service utilisation variation

Variation in primary care service utilisation in 2019 by RAC LHN catchment area was examined graphically using box-whisker plots, showing median and inter-quartile-ranges (IQR). Utilisation is expressed as the adjusted prevalence of utilisation in 100 residents. Prevalence estimates were adjusted by residents' age, sex, and number of health conditions. The size (1-49, 50-99, 100-149, 150+) and ownership (government, for profit, and not for profit) of facilities is also shown in the figures (see footnotes for scales).

Figure 1 shows a visualisation of the interpretation of box-whisker plots. Outlier facilities are shown with individual dots above or below the whiskers.



LHN catchment areas

Resident characteristics

There were **16080** non-Indigenous residents from **South Australia** included in this report. The information reported below pertain to RAC residents who spent at least one day in care between 01/01/2019 and 31/12/2019 and entered RACF after 01/01/2013. Numbers for Australia as a whole and South Australia as a whole state are provided for comparison.

Characteristics	Australia	South Australia	CALHN	NALHN	Regional LHN	SALHN
Number of facilities, N	2733	248	69	45	89	45
Number of residents, N	172786	16080	4990	3494	3885	3711
Female, N (%)	110605 (64.0)	10573 (65.8)	3354 (67.2)	2264 (64.8)	2495 (64.2)	2460 (66.3)
Median age (Interquartile range)	84 (79-89)	85 (79-89)	85 (80-89)	84 (79-88)	85 (79-89)	85 (79-89)
Living with dementia, N (%)	87442 (50.6)	8458 (52.6)	2720 (45.5)	1804 (51.6)	1950 (50.2)	1984 (53.5)
Median number of health conditions (Interquartile range)	5 (3-7)	5 (3-7)	5 (3-7)	5 (3-7)	5 (3-7)	5 (3-7)
Median number of people per facility (Interquartile range)	56 (35-87)	62 (35-89)	68 (40-101)	72 (55-102)	40 (22-59)	82 (62-104)
Median length of stay (days) in permanent residential care (Interquartile range)	592 (225-1146)	620 (243-1188)	610 (244-1176)	629 (231-1223)	624 (244-1182)	603 (252-1175)

Major findings

A total of 248 South Australian RAC facilities with 16,080 non-Indigenous residents aged 65 years and above were included.

Figures 2 through 8 show the variation in utilisation of primary care services in RAC facilities by LHN catchment area.

General or medical practitioner attendances were high in this cohort and varied little. The utilisation of after-hours and urgent after-hours GP attendances were still high but varied across all catchments, with lower utilisation among regional RAC facilities. Most other services had low utilisation or high variation in utilisation of service. RAC facilities in regional catchments had generally lower service utilisation than other catchment areas.

Specialist services including mental health, pain and palliative care, and geriatric specialist services had very low utilisation. Podiatry services had substantial variation in utilisation across all catchment areas. Nurse practitioners had low utilisation, but this is thought to be related to the relatively small number of practicing nurse practitioners in the aged care sector.

Continuity of care varied substantially after RAC entry, but higher continuity was observed in RAC facilities in regional LHNs.

Figure 2. Variation in utilisation of health practitioner attendances

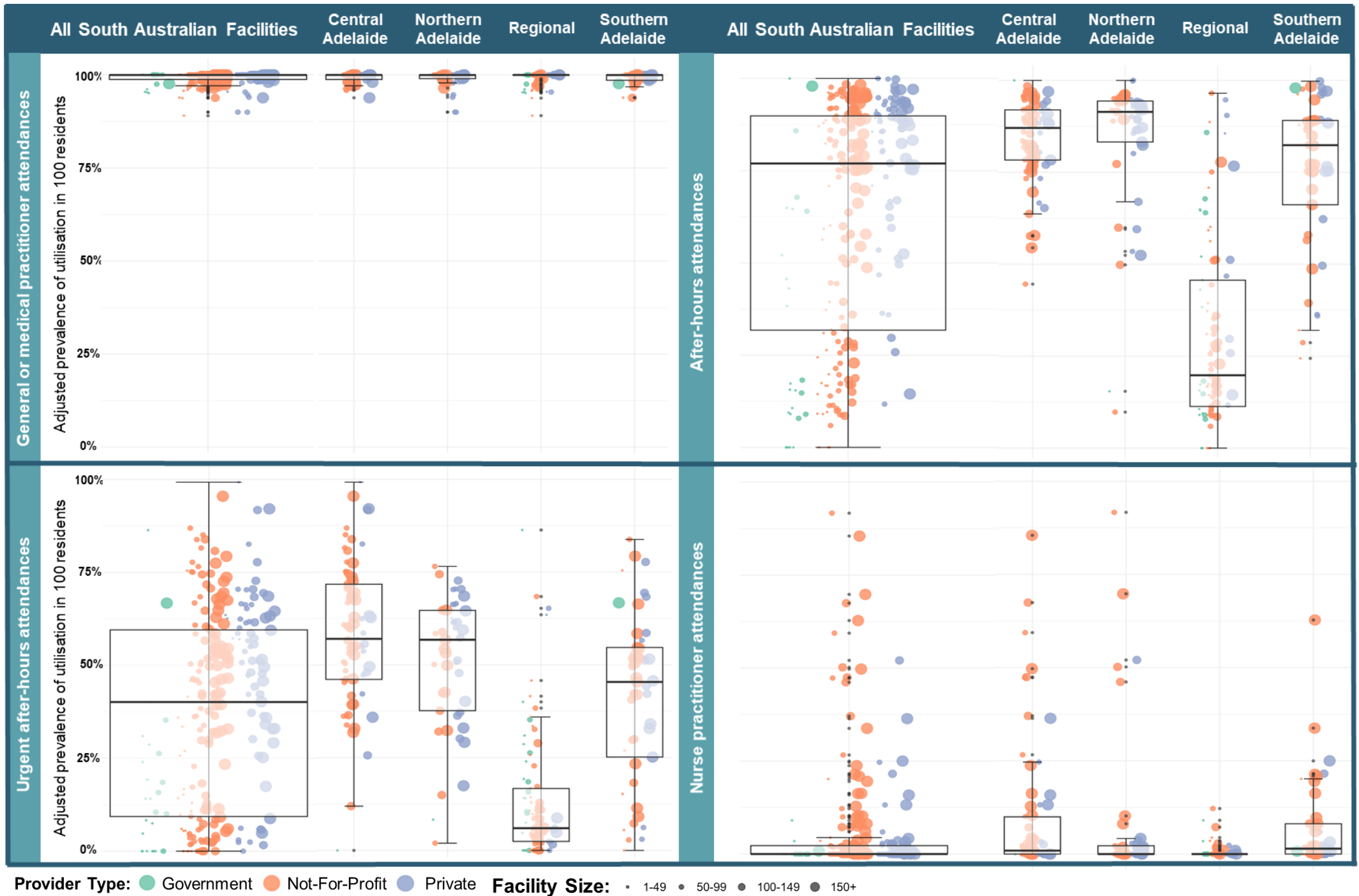


Figure 3. Variation in utilisation of mental health services



Figure 4. Variation in utilisation of GP health assessments, GP management plans, comprehensive medicine reviews and podiatry services

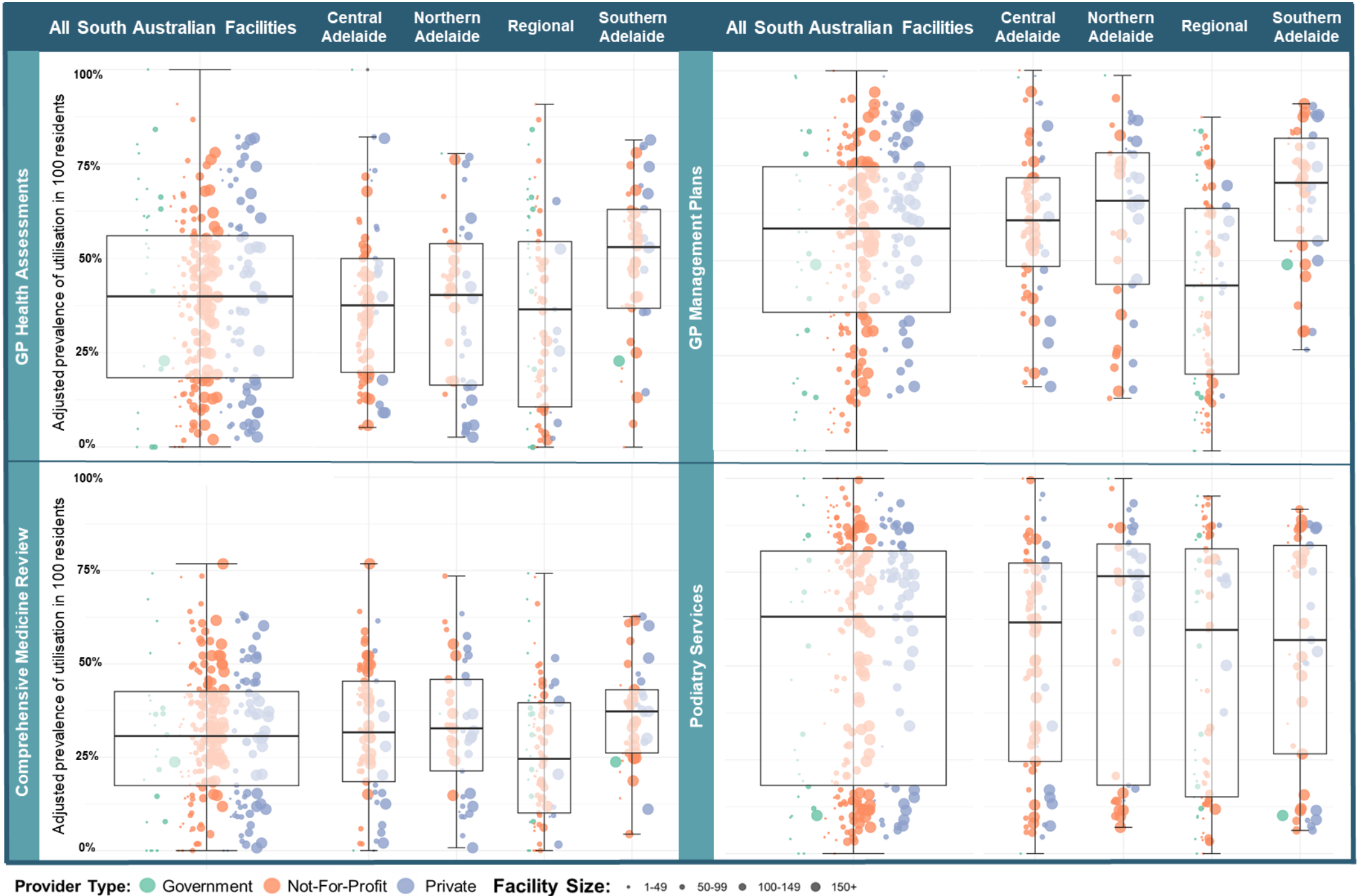
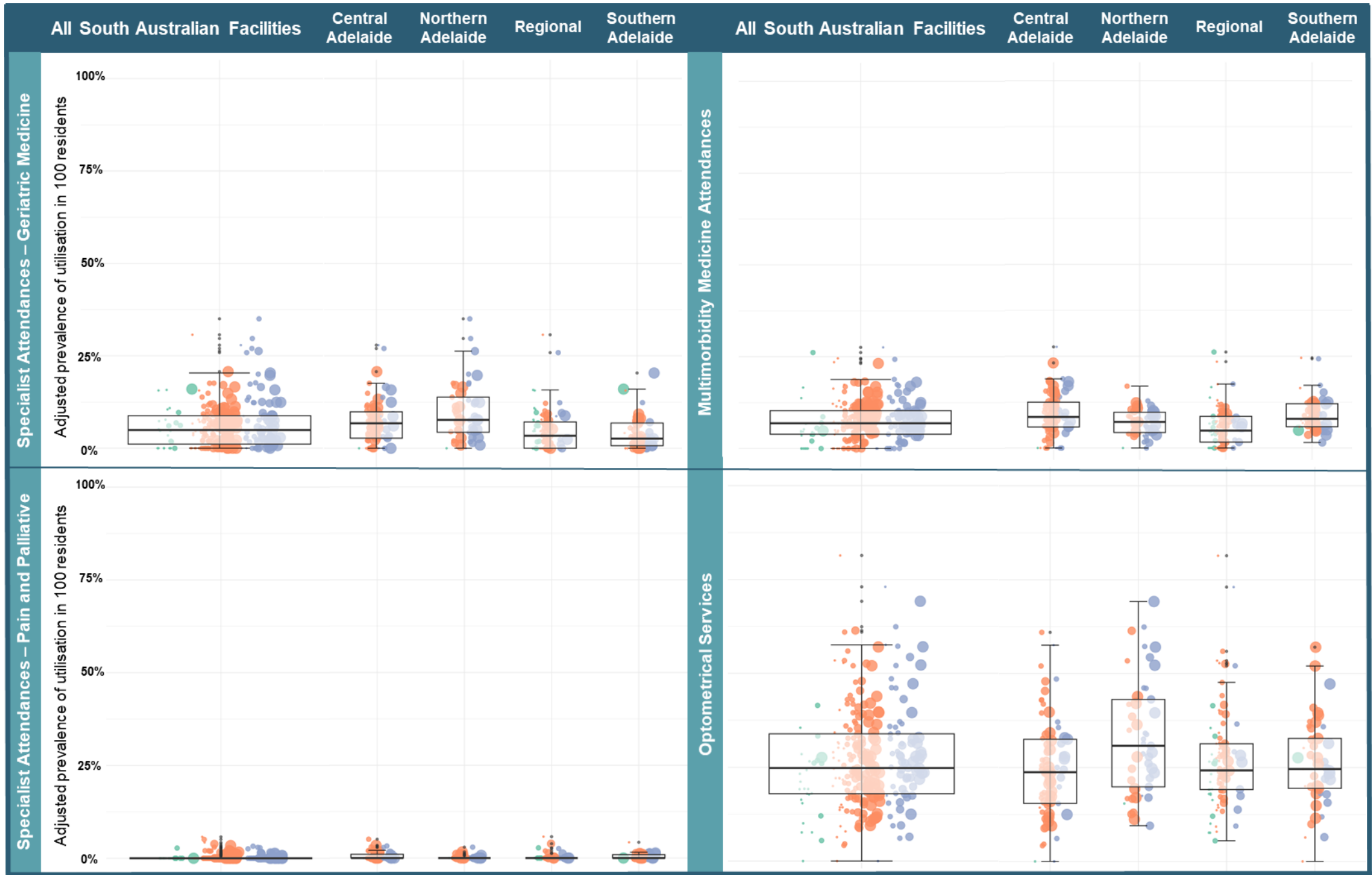
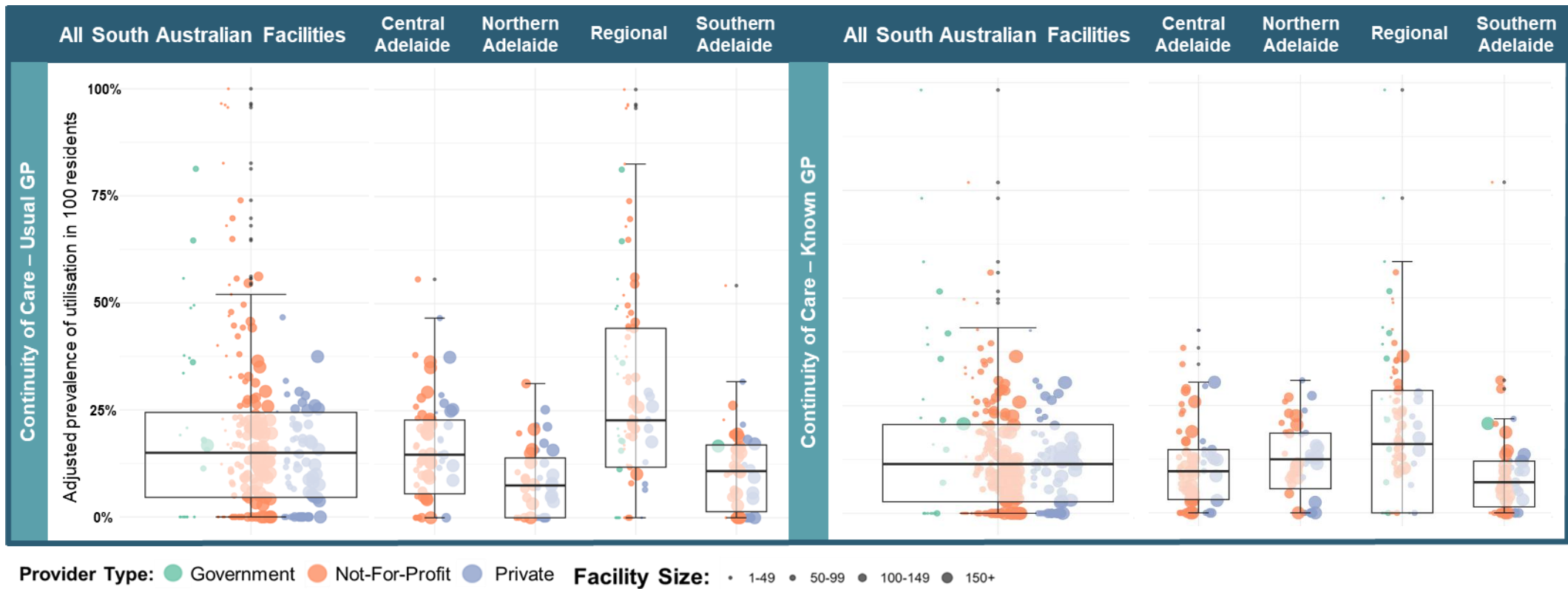


Figure 5. Variation in utilisation of specialist attendances and optometrical services



Provider Type: ● Government ● Not-For-Profit ● Private Facility Size: ● 1-49 ● 50-99 ● 100-149 ● 150+

Figure 6. Variation in GP continuity of care



References

1. Inacio MC, Caughey GE, Wesselingh S, Team RR, Steering Committee M. Registry of Senior Australians (ROSA): integrating cross-sectoral information to evaluate quality and safety of care provided to older people. *BMJ Open* 2022;12(11):e066390. DOI: 10.1136/bmjopen-2022-066390.
2. SA Health. Dataset 2611 - Local Health Networks. 2019.

Suggested Citation

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Supplementary Table 1. Exposures of Interest: Health Care Services Coding and Calculations

Health Care Services Exposures			
MBS Ascertained	MBS Groups	MBS Group Description	MBS items
General Attendances			
GP/Medical practitioner attendances	A01	GP attendances	3, 4, 23, 24, 36, 37, 44, 47
	A02	Non-referred attendance to medical practitioner	52, 53, 54, 57, 58, 59, 60, 65
	A35	Medical services at residential aged care facilities	20, 35, 43, 51, 92, 93, 95, 96, 183, 188, 202, 212, 90020, 90035, 90043, 90051, 90092, 90093, 90095, 90096, 90183, 90188, 90202, 90212

After-hours attendances	A22	GP after-hours attendance	5000, 5003, 5010, 5020, 5023, 5028, 5040, 5043, 5049, 5060, 5063, 5067
	A23	Non-referred after-hours attendance with medical practitioners	5200, 5203, 5207, 5208, 5220, 5223, 5227, 5228, 5260, 5263, 5265, 5267
Urgent attendance after-hours	A11	Urgent GP/Medical practitioner attendance after-hours	585, 588, 591, 594, 597, 598, 599, 600
Nurse practitioners attendances	M14	Nurse practitioners	82200, 82205, 82210, 82215, 82220, 82221, 82222, 82223, 82224, 82225
Health Assessments / Management Plans			
Health assessments	A14	GP/Medical practitioner health assessments	224, 225, 226, 227, 701, 703, 705, 707
Management plans	A15	GP/Medical practitioner management plan attendances/team care arrangements and multidisciplinary care plans	229, 230, 231, 232, 233, 235, 236, 237, 238, 239, 240, 243, 244, 721, 723, 729, 731, 732, 735, 739, 743, 747, 750, 758, 871, 872
GP/ Medical practitioner attendance associated with PIP/non-referred attendance associated with PIP	A18/19	GP/Medical practitioner attendance associated with PIP/non-referred attendance associated with PIP	251, 252, 253, 254, 255, 256, 257, 259, 260, 261, 262, 263, 265, 266, 268, 269, 270, 271, 2497, 2501, 2503, 2504, 2506, 2507, 2509, 2517, 2518, 2521, 2522, 2525, 2526, 2546, 2547, 2552, 2553, 2558, 2559, 2598, 2600, 2603, 2606, 2610, 2613, 2616, 2620, 2622, 2624, 2631, 2633, 2635, 2664, 2666, 2668, 2673, 2675, 2677
Allied Health Services			
Allied health service part of CDMP	M03	Allied health component of chronic disease management plan (GP management plan)	10951, 10952, 10953, 10954, 10956, 10958, 10960, 10962, 10964, 10966, 10968, 10970
		Podiatry services	10962
Optometrical services	A10	Optometrical services	10905, 10907, 10911, 10912, 10913, 10915, 10916, 10918, 10922, 10923, 10924, 10925, 10926, 10927, 10928, 10929, 10930, 10931, 10932, 10933, 10940, 10941, 10942, 10943, 10944, 10945, 10946, 10947, 10948
Comprehensive medication review	A17	Domiciliary and residential medication management reviews	245, 249, 900, 903
Selected Specialist Attendances			
Geriatric medicine	A28	Geriatric medicine attendances	141, 143, 145, 147, 149
Multimorbidity medicine attendances	A04	Consultant physician attendances to which no other item applies, patient with at least 2 morbidities (multiple morbidities)	132, 133
Mental Health Services			
Psychiatry attendances	A08	Consultant psychiatric services	288, 291, 293, 296, 297, 299, 300, 302, 304, 306, 308, 310, 312, 314, 316, 318, 319, 320, 322, 324, 326, 328, 330, 332, 334, 336, 338, 342, 344, 346, 348, 350,

			352, 353, 355, 356, 357, 358, 359, 361, 364, 366, 367, 369, 370
Psychological therapy	M06	Psychological therapy services	80000, 80001, 80005, 80010, 80011, 80015, 80020, 80021
Focussed psychological strategies	M07	Focussed psychological strategies	941, 942, 2721, 2723, 2725, 2727, 80100, 80101, 80105, 80110, 80111, 80115, 80120, 80121, 80125, 80126, 80130, 80135, 80136, 80140, 80145, 80146, 80150, 80151, 80155, 80160, 80161, 80165, 80170, 80171
GP mental health	A20	GP mental health treatment	272, 276, 277, 279, 281, 282, 2700, 2701, 2702, 2712, 2713, 2715, 2717, 2719
Derived Exposures			
Services included in the identification of continuity of primary care categories			
GP/Medical practitioner attendances	A01	GP attendance	3, 4, 23, 24, 36, 37, 44, 47
	A02	Non-referred attendance to medical practitioner	52, 53, 54, 57, 58, 59, 60, 65
	A35	Medical services at residential aged care facilities	20, 35, 43, 51, 92, 93, 95, 96, 183, 188, 202, 212, 90020, 90035, 90043, 90051, 90092, 90093, 90095, 90096, 90183, 90188, 90202, 90212
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Abbreviations: GP=General Practitioner, PIP=Practice Incentives Program, CDMP=Chronic Disease Management Plan.