

Indicator: High Sedative Load

Indicator Definition

Proportion of home care recipients who experienced a high sedative load ($SL \geq 3$)

Indicator Specification

Numerator data source

PBS

Numerator

Number of home care recipients who experienced high sedative load ($SL \geq 3$) medication use within a 91-day period in the reporting period of 1 year (see details on calculation of sedative load below). Sedative load is calculated by summing the sedative rating of each medication dispensed during the same period (Table 1).

Table 1. Medications with sedative properties, description, ATC codes, and sedative rating

Description	Code	Sedative Rating ¹
Conventional antipsychotics including butyrophenones and prochlorperazine	N05AA*, N05AB*, N05AC*, N05AD*, N05AF*	2
Antidepressants; tricyclic agents, non-selective monoamine reuptake inhibitors, antidepressant of second generation, combinations	N06AA*, N06CA01, N06AF*	2
Second-generation antidepressants (Mianserin)	N06AX03	2
Anxiolytics	N05B*	2
Hypnotics and sedatives	N05C* (excluding N05CM*)	2
Other (lithium)	N05AN*	2
Antispasmodics with psycho-epileptics	A03C*	1
Other alimentary (metoclopramide, scopolamine and in combinations)	A03FA01, A04AD01, A04AD51, N05CM05	1
Indometacin	M01AB51, M01AB01	1
Centrally acting muscle relaxants including psychotropics (baclofen, tizanidine, orphenadrine and orphenadrine combinations)	M03BX01, M03BX02, M03BC01, M03BC51	1
Opioids	N02A*	1
Gabapentinoids (Gabapentin)	N02BF01	1
Gabapentinoids (Pregabalin)	N02BF02	1
Antiepileptics	N03*	1
Antiparkinsonian drugs anticholinergic agents	N04A*	1
Atypical antipsychotics	N05AE*, N05AH*, N05AL*, N05AX*	1
Selective serotonin reuptake inhibitors	N06AB*, N06CA03	1
Other antidepressants of second generation	N06AX* (excluding N06AX03), N06AG02	1
Dopamine agonists	N04BC* (excluding N04BC01)	1
Migraine preparations	N02C*	1
Old antihistamines and antiemetics or drugs for dizziness, including psychotropics	R06AA*, R06AB*, R06AD*, R06AE*	1
Xanthines	R03DA*, R03DB*	1
Antitussives with sedating components (cough suppressants excluding combinations with expectorants, cough suppressants and expectorants, combinations, bromhexine)	R05DA*, R05F*, R05CB02	1
Anticholinergic drops for eyes	S01FA* (excluding S01FA06 and S01FA56)	1

¹Sedative rating 2= primary sedatives; Sedative rating 1= medications with sedation as prominent side-effect or preparations with a sedating component.

Note: for drugs that appear on PBS as a 5-digit ATC indication, the WHO ATC code has been used to classify the sedative load.

Denominator

Number of home care recipients

Exclusions

Exclude history of schizophrenia or Huntington's disease (Table 2) or receiving pharmacological cancer treatment (Table 3)

Table 2. Health conditions, ACAP MDS V2.0/NSAF, and ICD-10 descriptions and codes

Data source	Description	Code
NACDC-ACAP/NSAF ²	Dementia in Huntington's disease	0523
	Huntington's disease	0602
	Schizophrenia	0551
Data source	Condition ³	ICD-10-AM codes
SA APC, SA NAEC, NSW APDC, NSW EDDC, VAED, VAMD, QLD EDC, QHAPDC	Dementia in Huntington's disease (G10+)	F02.2
	Huntington's disease	G10
	Schizophrenia	F20*
	Schizotypal disorders	F21*
	Persistent delusional disorders	F22*
	Acute polymorphic psychotic disorder with symptoms of schizophrenia	F23.1*
	Schizoaffective disorders	F25*
	Schizophrenia	U792

²Reported at any prior ACAT assessment or NSAF assessment.

³Hospitalisations or ED presentations for or with schizophrenia in the 365 days prior to the start of the reporting period or date of entry into permanent aged care for new residents during the reporting period.

ACAT: Aged Care Assessment Team. **ACFI:** Aged Care Funding Instrument. **NACDC:** National Aged Care Data Clearinghouse. **ACAP:** Aged Care Eligibility Assessment Program. **NSAF:** National Screening and Assessment Form. **MDS V2.0:** Minimum Dataset V2.0. **ICD-10-AM:** International Classification of Diseases, Tenth Revision, Australian Modification. **SA APC:** South Australian Admitted Patient Care; **SA NAEC:** South Australian Non-Admitted Emergency Care; **NSW APDC:** New South Wales Admitted Patient Data Collection; **NSW EDDC:** New South Wales Emergency Department Data Collection; **VAED:** Victorian Admitted Episodes Dataset; **VAMD:** Victorian Emergency Minimum Dataset; **QLD EDC:** Queensland Emergency Department Collection; **QHAPDC:** Queensland Hospital Admitted Patient Data Collection.

Table 3. Cancer treatment description, ATC codes

Data Source	Description	Codes
PBS	Antineoplastic and immunomodulating agents ⁴	L01*

⁴Determined using 6 months of PBS prescription data prior to the study period.

ATC: Anatomical Therapeutic Chemical Classification System. **PBS:** Pharmaceutical Benefits Scheme.

Covariates

Age, sex, number of health conditions

Stratifications

By dementia status (Table 4)

Table 4. Dementia diagnoses, including ACAP MDSV2.0, NSAF codes, ATC codes and used ICD-10 AM codes for ascertainment

Description	Coding
Data sources: ACAP / NSAF	
Condition	ACAP MDSv2.0 and NSAF
Dementia in Alzheimer's disease	0500
Dementia in Alzheimer's disease with early onset (<65 yrs)	0501
Dementia in Alzheimer's disease with late onset (>65 yrs)	0502

Dementia in Alzheimer's disease, atypical or mixed type	0503
Dementia in Alzheimer's disease, unspecified	0504
Vascular dementia	0510
Vascular dementia of acute onset	0511
Multi-infarct dementia	0512
Subcortical vascular dementia	0513
Mixed cortical & subcortical vascular dementia	0514
Other vascular dementia	0515
Vascular dementia – unspecified	0516
Dementia in other diseases classified elsewhere	0520
Dementia in Pick's disease	0521
Dementia in Creutzfeldt-Jakob disease	0522
Dementia in Huntington's disease	0523
Dementia in Parkinson's disease	0524
Dementia in human immunodeficiency virus (HIV) disease	0525
Dementia in other specified diseases classified elsewhere	0526
Lewy body dementia	0584
Other dementia	0530
Alcoholic dementia	0531
Unspecified dementia (includes presenile & senile dementia)	0532
Delirium superimposed on dementia	0542
Data source: SA APC, SA NAEC, NSW APDC, NSW EDDC, VAED, VAMD, QLD EDC, QHAPDC	
Condition	ICD-10-AM
Dementia in Alzheimer's disease	F00*
Vascular dementia	F01*
Dementia in other diseases classified elsewhere	F02*
Unspecified dementia	F03*
Delirium superimposed on dementia	F05.1
Alzheimer's disease	G30*
Lewy body disease	G31.3
Dementia (including in Alzheimer's disease)	U79.1
Data source: PBS	
Drug name	ATC
Donepezil	N06DA02
Rivastigmine	N06DA03
Galantamine	N06DA04
Memantine	N06DX01
Risperidone for dementia	N05AX08 AND PBS item codes 08787L, 08788M, 08789N, 08790P, 08791Q, 09293D, 01842Y, 11869Q, 11872W, 11874Y, 11877D, 11873X, 11879F, 11881H, 11882J
ACAP: Aged Care Assessment Program; NSAF: National Screening and Assessment Form; PBS: Pharmaceutical Benefits Scheme. SA APC: South Australian Admitted Patient Care. SA NAEC: South Australian Non-Admitted Emergency Care; NSW APDC: New South Wales Admitted Patient Data Collection; NSW EDDC: New South Wales Emergency Department Data Collection; VAED: Victorian Admitted Episodes Dataset; VEMD: Victorian Emergency Minimum Dataset; QLD EDC: Queensland Emergency Department Collection; QHAPDC: Queensland Hospital Admitted Patient Data Collection. ICD-10 AM: International Classification of Diseases, Tenth Revision, Australian Modification.	

Comments

The published literature was used to identify medicines that contribute to high sedative load [1-4].

Calculation of sedative load:

Sedative load is calculated by summing the sedative rating of each different medication dispensed within the 91-day period (Table 1). Each unique medication is only counted once towards sedative load regardless of the number of scripts or quantity dispensed. Medicines dispensed after exit from facility are not included in the calculation, however medicines dispensed whilst the person is on leave are included if there is a PBS script.

*91-day periods for sedative load defined as follows:

START = reporting period start date or date of entry into home care for new recipients during the reporting period.

END = min (date of death, date of exit from facility, 'last day of year')

Period 1: START to (START + 90) or END

Period 2: (START + 91) to (START +181) or END

Period 3: (START +182) to (START + 272) or END

Period 4: (START +273) to (START + 365) or END

Suggested citation: Registry of Senior Australians. Home Care Outcome Monitoring System Technical Specification – High Sedative Load. Version 4.0. South Australian Health and Medical Research Institute. Adelaide, Australia; August 2026, 4 pages.

Any enquires about, or comments on, this Technical Specification document should be directed to:

Registry of Senior Australians (ROSA) Research Centre
South Australian Health and Medical Research Institute
PO Box 11060, Adelaide SA 5001
Ph: +61 (08) 8128 4662 Email: ROSA.OMS@flinders.edu.au
Website: <https://rosaresearch.org/>

References

1. Linjakumpu T, Hartikainen S, Klaukka T, Koponen H, Kivela S, Isoaho R. A model to classify the sedative load of drugs. *Int J Geriatr Psychiatry*. 2003;18(6):542-4.
2. Taipale H, Bell J, Soini H, Pitkala K,. Sedative load and mortality among residents of long-term care facilities: a prospective cohort study. *Drugs Ageing*. 2009;26(10):871-81.
3. Peklar J, O'Halloran A, Maidment I, Henman M, Kenny R, Kos M. Sedative load and frailty among community dwelling population aged ≥65years. *J Am Dir Assoc*. 2015;16(4):282-9.
4. Taipale H, Bell J, Hartikainen S. Sedative load among community dwelling older individuals: change over time and association with mortality. *Int Clin Psychopharmacol*. 2012;27(4):224-30.