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Indicator: High Sedative Load

Indicator Definition

Proportion of residents who experienced a high sedative load (SL>=3)

Indicator Specification

Numerator data source

PBS

Numerator

Number of permanent residents who experienced high sedative load (SL>=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, antidepressants 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

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PBS: Pharmaceutical Benefits Scheme. ATC: Anatomical Therapeutic Chemical. [1]Sedative 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 permanent residents of aged care

Exclusions

Residents living with schizophrenia or Huntington's disease (Table 2), receiving pharmacological cancer treatment or are receiving palliative care (Table 3)

Table 2. Health conditions, ACAP MDS V2.0/NSAF, ACFI, 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
ACFI[3]	Psychoses e.g. schizophrenia, paranoid states	550B
	Huntington's disease	0602
Data source	**Description[4]**	**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

[2]Reported at any prior ACAT assessment or ACFI assessment. [3]Any prior ACFI assessments (prior to 1 Oct 2022).
[4]Hospitalisations or ED presentations for or with schizophrenia in the 365 days prior to entry into care.
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; VEMD: Victorian Emergency Minimum Dataset; QLD EDC: Queensland Emergency Department Collection; QHAPDC: Queensland Hospital Admitted Patient Data Collection.

Table 3. Cancer treatment and palliative care, descriptions, ATC codes, AN-ACC code

Data Source	Description	Codes
PBS	Antineoplastic and immunomodulating agents[5]	L01*
NACDC - AN-ACC	Palliative care (AN-ACC assessment tool palliative care question 01) "did the resident enter the facility for residential palliative care" and from AN-ACC Classification: 1	"Y"

[5]Determined using 6 months of PBS prescription data prior to the study period.
PBS: Pharmaceutical Benefits Scheme. ATC: Anatomical Therapeutic Chemical Classification System. NACDC: National Aged Care Data Clearinghouse. AN-ACC: Australian National Aged Care Classification.

Covariates

Age, sex, number of health conditions, Rockwood Frailty Score (Table 4)

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Table 4. Rockwood frailty score descriptions[6]

Data source	Description	Score
NACDC-AN-ACC	Very fit	1
	Well	2
	Managing well	3
	Living with very mild frailty	4
	Living with mild frailty	5
	Living with moderate frailty	6
	Living with severe frailty	7
	Living with very severe frailty	8
	Terminally ill	9

NACDC-AN-ACC: National Aged Care Data Clearinghouse-Australian National Aged Care Classification.
[6]Categorised as Rockwood frailty score <6 or ≥6. Only the most recent care needs assessment using the AN-ACC assessment tool up to 90 days post-entry into permanent residential aged care was used. The most recent assessment was identified as the assessment with the fewest days between the assessment start date and the date of entry into care. If the person was already in permanent residential aged care 90 days prior to the start of the reporting period, the most recent past AN-ACC assessment (any) prior to the reporting period start date was used. If the first entry into permanent residential aged care occurred within 90 days prior to start of the reporting period or during the reporting period, the first AN-ACC assessment within 90 days post-entry into care was used.

Stratifications

By dementia status (Table 5)

Table 5. Dementia diagnoses, including ACAP MDSV2.0, NSAF codes[7], ACFI, ATC codes and used ICD-10 AM codes for ascertainment

	Description[8]	Coding
Data Source	**Condition**	**ACAP MDSV2.0 and NSAF code**
ACAP, NSAF, ACFI	**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	**Drug name**	**ATC codes**
PBS	Donepezil	N06DA02

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	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
Data Source	**Description**	**ICD-10 AM codes**
SA APC, SA NAEC, NSW APDC, NSW EDDC, VAED, VAMD, QLD EDC, QHAPDC	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

[7]All codes are used in the assessment conducted prior to entering residential aged care. [8]In the ACFI assessment prior to 1 October 2022, dementia is only identified using the codes in bold.
ACAP: Aged Care Assessment Program; **NSAF:** National Screening and Assessment Form; **ACFI:** Aged Care Funding Instrument; **PBS:** Pharmaceutical Benefits Scheme. **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; **VEMD:** Victorian Emergency Minimum Dataset; **QLD EDC:** Queensland Emergency Department Collection; **QHAPDC:** Queensland Hospital Admitted Patient Data Collection.

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 drug is only counted once towards sedative load within the 91-day period 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 permanent residential aged care for new residents 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

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

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