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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 butrophenones 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 psychoepileptics | 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 |











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| Antitussives with sedating components (cough | R05DA*, R05F*, R05CB02 | 1 |
|--|-------------------------------|---|
| suppressants excluding combinations with | | |
| expectorants, cough suppressants and expectorants, | | |
| _combinations, bromhexine) | | |
| Anticholinergic drops for eyes | S01FA* (excluding S01FA06 and | 1 |
| | S01FA56) | |

PBS: Pharmaceutical Benefits Scheme. ATC: Anatomical Therapeutic Chemical. 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 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)

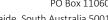
Table 2. Health conditions, ACAP MDS V2.0/NSAF, ACFI, and ICD-10 descriptions and codes

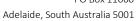
| Data source | Description | Code |
|-----------------------|---|-----------------|
| NACDC-ACAP/NSAF1 | Dementia in Huntington's disease | 0523 |
| | Huntington's disease | 0602 |
| | Schizophrenia | 0551 |
| ACFI ² | Psychoses e.g. schizophrenia, paranoid states | 550B |
| | Huntington's disease | 0602 |
| Data source | Description ³ | ICD-10-AM codes |
| SA APC, SA NAEC, NSW | Dementia in Huntington's disease (G10+) | F02.2 |
| APDC, NSW EDDC, VAED, | Huntington's disease | G10 |
| VAMD, QLD EDC, QHAPDC | Schizophrenia | F20* |
| | Schizotypal disorders | F21* |
| | Persistent delusional disorders | F22* |
| | Acute polymorphic psychotic disorder with | F23.1* |
| | symptoms of schizophrenia | |
| | Schizoaffective disorders | F25* |
| | Schizophrenia | U792 |

¹Reported at any prior ACAT assessment or ACFI assessment. ² Any prior ACFI assessments (prior to 1 Oct 2022). ³ 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.

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| Table 3. Cancer treatment and palliative care, descriptions, ATC codes, AN-ACC code | | |
|--|---|-------|
| Data Source | Description | Codes |
| PBS | Antineoplastic and immunomodulating agents ¹ | L01* |
| NACDC - AN-ACC | Palliative care (AN-ACC assessment tool palliative care | "Y" |
| | question 01) "did the resident enter the facility for residential | |
| | palliative care" and from AN-ACC Classification: 1 | |
| ¹ Determined using 6 months of PBS prescription data prior to the study period. ATC: Anatomical Therapeutic | | |

Chemical Classification System. AN-ACC: Australian National Aged Care Classification.

Covariates

Age, sex, number of health conditions, Rockwood frailty score (Table 4)

Table 4. Rockwood frailty score descriptions

| 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. 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 codes², ACFI, ATC codes and used ICD-10 AM codes for ascertainment

| TO AIVI COUES TO | decreamment | |
|--|--|---------------|
| | Description ¹ | Coding |
| Data Source | Condition | ACAP MDSV2.0 |
| | | and NSAF code |
| ACAP, NSAF ¹ , ACFI ² | 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 |









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| | 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 |
| | 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 | Dementia in Alzheimer's disease | F00* |
| NAEC, NSW | Vascular dementia | F01* |
| APDC, NSW | Dementia in other diseases classified elsewhere | F02* |
| EDDC, VAED, | Unspecified dementia | F03* |
| VAMD, QLD | Delirium superimposed on dementia | F05.1 |
| EDC, | Alzheimer's disease | G30* |
| QHAPDC | Lewy body disease | G31.3 |
| | Dementia (including in Alzheimer's disease) | U79.1 |

¹All codes are used in the assessment conducted prior to entering residential aged care. ²In 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.











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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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- 2. Linjakumpu T, Hartikainen S, Klaukka T, Koponen H, Kivela SL, Isoaho R. A model to classify the sedative load of drugs. Int J Geriatr Psychiatry. 2003;18(6):542-544.
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