AUSTRALIAN COMMISSION
ON SAFETY AND QUALITY IN HEALTH CARE

TRIM: D20-14253

April 2020

Use of antipsychotic medicines: A literature review

Professor Sarah Hilmer, Dr Danijela Gnjidic, Dr Emily Reeve, Dr Lisa Kalisch, Dr Helen Wu and Ms Judy Raymond prepared this report on behalf of the Australian Commission on Safety and Quality in Health Care.

Published by the Australian Commission on Safety and Quality in Health Care
Level 5, 255 Elizabeth Street, Sydney NSW 2000

Phone: (02) 9126 3600
Fax: (02) 9126 3613

Email: mail@safetyandquality.gov.au
Website: www.safetyandquality.gov.au

ISBN: 978-1-925665-76-5

The Commission's preference is that you attribute this publication (and any material sourced from it) using the following citation:

Hilmer SN, Gnjidic D, Reeve E, Kalisch Ellett L, Wu H, Raymond J (2019). Use of Antipsychotic Medicines for People aged 65 years and over: A review undertaken for the Australian Commission on Safety and Quality in Health Care. Northern Sydney Local Health District, St Leonards NSW, Australia.

Disclaimer

The content of this document is published in good faith by the Commission for information purposes. The document is not intended to provide guidance on particular healthcare choices. You should contact your health care provider for information or advice on particular healthcare choices.

This document includes the views or recommendations of its authors and third parties. Publication of this document by the Commission does not necessarily reflect the views of the Commission, or indicate a commitment to a particular course of action. The Commission does not accept any legal liability for any injury, loss or damage incurred by the use of, or reliance on, this document.

Preface

In 2015, the Australian Atlas of Healthcare Variation (the first Atlas) identified unwarranted variation in the dispensing rates of antipsychotic medicines for people aged 65 years and over.

Upon repeat analysis in 2018, the Third Australian Atlas of Healthcare Variation (the third Atlas) found that prescription rates of antipsychotic medicines to people aged 65 years and over had decreased; however, the volume of antipsychotic medicines supplied on any given day in the Australian community remained stable, indicating that there has been little change in the overall amount of use during the four years. The magnitude of variation between the highest and lowest dispensing rates of antipsychotic medicines for this age group had increased since 2013-14.

Action 5.29 in the National Safety and Quality Health Service (NSQHS) Standards requires that health service organisations providing services to patients who have cognitive impairment or are at risk of developing delirium should have a system for caring for patients with cognitive impairment to:

a. Incorporate best-practice strategies for early recognition, prevention, treatment and management of cognitive impairment in the care plan, including the Delirium Clinical Care Standard, where relevant
b. Manage the use of antipsychotics and other psychoactive medicines, in accordance with best practice and legislation

There is concern that antipsychotic medicines are being prescribed inappropriately in people aged 65 years and over, outside guideline recommendations – such as for the management of behavioural and psychological symptoms of dementia (BPSD) or delirium – before secondary causes have been excluded and non-pharmacological measures have been tried.

The Commission engaged Professor Sarah Hilmer (Head of Department of Clinical Pharmacology, Royal North Shore Hospital and Conjoint Professor of Geriatric Pharmacology, Northern Clinical School, Faculty of Medicine and Health, the University of Sydney) to conduct a literature review to better understand the current clinical environment for the use of antipsychotic medicines for people aged 65 years and over.

Key findings

The burden of disease associated with BPSD and delirium is high and likely to rise in our ageing population. The prevalence of BPSD in people living with dementia is up to 90% and delusions and hallucinations are associated with increased carer burden and institutionalisation. Australian studies report that the prevalence of delirium in older people in acute care is 11-29%.

The literature review found the recommendations were consistent across all guidance documents reviewed. The key recommendations can be considered in terms of the Quality Use of Medicines Framework (2002), which is one of the central objectives of Australia's National Medicines Policy:

1. Selecting management options wisely;
    - Antipsychotics are only indicated after addressing precipitants and trialling non-pharmacological strategies, for persistent severe symptoms of psychosis or agitation that put the patient/carer at risk.

2. Choosing suitable medicines if a medicine is considered necessary;
    - Choose a medicine with evidence of efficacy for the symptom that is being treated.
    - Discuss the potential harms and benefits with the patient and/ or surrogate decision maker and obtain informed consent.
3. Using medicines safely and effectively;
    - Use the lowest possible dose for the shortest possible time.
    - Monitor safety and efficacy. Frequently review safety and efficacy, and consider tapering/cessation.
    - The main difference between management guidelines for BPSD and delirium relates to duration of antipsychotic treatment. Antipsychotic treatment is recommended for weeks to months for BPSD but only for a single dose or up to 1 week for delirium.

Recommendations of the report

In Australia, BPSD are very common in people living with dementia in the community and residential aged care settings, and delirium occurs commonly in hospital, particularly in people with a background of dementia. The prevalence of these conditions is likely to increase with the ageing of our population. While the evidence informing optimal use of antipsychotics in older people with BPSD and delirium is not very strong, national and international guidelines, many of which are high quality, make consistent strong recommendations about their use. These regulations are consistent with quality use of medicines principles and in keeping with national regulations (registration of drugs and legal requirements for consent). Further work is required to understand the variation in evidence-based care in Australia, key recommendations for non-pharmacological management strategies, and indicators and data sources for measurement of recommended care.

Next steps for the Commission

The Commission will consider the report's recommendations in the review of the Delirium Clinical Care Standard and in other work carried out by the Commission to reduce the inappropriate prescribing of antipsychotics in Australia.

Contents

Appendices

Glossary and Abbreviations

ACI NSW Health	Agency for Clinical Innovation, NSW Health
ACSQHC	Australian Commission on Safety and Quality in Health Care
AGREE	Appraisal of Guidelines for Research and Evaluation
AMH	Australian Medicines Handbook
APA	American Psychiatric Association
bd	Twice daily
BPSD	Behavioural and Psychological Symptoms of Dementia
CMAI	Cohen-Mansfield Agitation Inventory
CRD	Clinical Dementia Rating scale
DBMAS	Dementia Behaviour Management Advisory Service
DCRC	Dementia Centre for Research Collaboration
DSM	Diagnostic and Statistical Manual of Mental Disorders
DSS	Department of Social Services
eTG	Electronic Therapeutic Guidelines (Australia)
GRADE	Grading of Recommendations Assessment, Development and Evaluation
ICD	International Classification of Disease
IM	Intramuscular route of administration
MMSE	Mini Mental State Examination
NICE	The National Institute for Health and Care Excellence
NPI	Neuropsychiatric Inventory
NHMRC	National Health and Medical Research Council
NPS	Neuropsychiatric Symptoms
po	Oral route of administration
PRIME	Prospective Research in Memory clinics study
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analysis
QT interval	Electrocardiograph measurement of time for cardiac ventricles to depolarise and repolarise
RACF	Residential Aged Care Facility
RANZCP	Royal Australian and New Zealand College of Psychiatrists

SIGN	Scottish Intercollegiate Guidelines Network
SMAF	Functional Autonomy Measurement Scale
The Commission	The Australian Commission on Safety and Quality in Health Care
ZBI	Zarit Burden Interview

Use of antipsychotic medicines for people aged 65 years and over

Executive Summary

The variation in use of antipsychotic medications by older Australians identified in the Australian Atlas of Healthcare Variation suggests that antipsychotics are used outside of their evidence-based place in care, particularly in older people with behavioural and psychological symptoms of dementia (BPSD) and in people with delirium. In older people with these conditions there are considerable risks of antipsychotic medication use, including death, cerebrovascular events and falls. These harms are only outweighed by the therapeutic benefits of antipsychotics if they are used at low doses for short periods, in cases of severe agitation with risk to the person or carer, and where alternative non-pharmacological strategies have failed.

The burden of disease associated with BPSD and delirium is high and likely to rise in our ageing population. The prevalence of BPSD in people living with dementia is up to 90% and delusions and hallucinations are associated with increased carer burden and institutionalisation. Australian studies report that the prevalence of delirium in older people in acute care is 11-29%.

There is a paucity of research on terms most acceptable to clinicians and consumers to describe BPSD and delirium. Australian and international dementia advocacy groups have published guidance on preferred language for BPSD, but there is no empirical data supporting the recommendations. Reported goals for terminology include accuracy of diagnosis to inform clinical care and research, avoiding stigmatising the person living with dementia, avoiding blaming the carer, and prompting appropriate (not inappropriate) treatment. Predominant terminologies used in Australian multidisciplinary clinical literature over the past year are BPSD and delirium. These terms and others for BPSD (e.g. changed behaviours, expressions of unmet need and responsive behaviours) are used in consumer resources.

We identified 36 national and international guidelines, policies and recommendations providing guidance on the management of BPSD and dementia, which involved treatment with antipsychotics and/or non-pharmacological strategies. Ten of the twelve main guidelines identified for BPSD and delirium were rated as high in quality according to the AGREE II criteria. While the evidence for most recommendations was reported as weak-moderate, the strength of recommendations was moderate-high. The recommendations were consistent across all guidance documents reviewed.

Key recommendations can be considered in terms of the Quality Use of Medicines Framework (2002), which is one of the central objectives of Australia's National Medicines Policy:

1. Selecting management options wisely;

Antipsychotics are only indicated after addressing precipitants and trialling non-pharmacological strategies, for persistent severe symptoms of psychosis or agitation that put the patient/carer at risk.

2. Choosing suitable medicines if a medicine is considered necessary;

Choose a medicine with evidence of efficacy for the symptom that is being treated.

Consider the risks and benefits for the individual, including co-existing conditions (e.g. Parkinson's disease, Lewy Body Dementia, cardiovascular disease, arrhythmias), and co-medications (e.g. concurrent psychotropics, drugs that prolong the QT interval, drugs that increase falls risk).

Discuss the potential harms and benefits with the patient and/ or surrogate decision maker and obtain informed consent.

3. Using medicines safely and effectively;

Use the lowest possible dose for the shortest possible time.

Monitor safety and efficacy. Frequently review safety and efficacy, and consider tapering/cessation.

The main difference between management guidelines for BPSD and dementia relates to duration of antipsychotic treatment. Antipsychotic treatment is recommended for weeks to months for BPSD but only for a single dose or up to 1 week for delirium.

Several guidelines recommended discussing harms and benefits of treatment decisions with the patient or surrogate decision maker. Some Australian guidelines outlined the legal requirements for consent to treatment with a psychotropic medicine. In an acute situation, when the patient or others are at risk of harm, the common law of necessity allows treatment if the patient is unable to consent, followed by informed consent as soon as possible. In non-acute situations, informed consent is required. Consent should be obtained from the person themselves if possible, and if this is not possible, from the person responsible or a legal guardian.

BPSD and delirium are common across settings and likely to increase with the ageing of our population. While evidence on optimal use of antipsychotics in older people with BPSD and delirium is not very strong, recommendations are consistent in national and international guidelines. These recommendations align with Quality Use of Medicines principles and principles of shared clinical decision making.

1. Background

While evidence supports psychotropic use in some scenarios, we use them too often, for too long, at doses too high, and in dangerous combinations with other medications (1).

In older people, antipsychotic medications are indicated for the management of schizophrenia, severe mood disorders, or acute psychosis. For people living with dementia and those with delirium, antipsychotic treatment should only be prescribed after careful consideration of the benefits and risks for the individual, with informed consent from the patient or person responsible, at the lowest effective dose for the shortest possible time, with frequent monitoring and review. Legally, informed consent is required for antipsychotic treatment, although in an emergency, treatment thought to be in the patient's best interest can be given under the common law principle of necessity.

Conventional antipsychotics inhibit dopaminergic transmission and atypical antipsychotics inhibit both dopaminergic and serotonergic transmission. Side effects of antipsychotics in older people include extrapyramidal symptoms, long QT syndrome, falls (secondary to orthostatic hypotension, extrapyramidal symptoms and sedation), neutropaenia, metabolic syndrome, pneumonia and, amongst older people living with dementia, increased risk of stroke, all cause mortality and sudden death. There are additional safety concerns when antipsychotics are used with other psychotropics and other drugs, resulting in drug interactions. Nationally, in 2016, the prevalence of antipsychotic PBS dispensing in people living with dementia was approximately 21.3%, with 7.1% receiving multiple antipsychotics (2). The prevalence of antipsychotic use in Australian residential aged care facilities (RACF) ranges from 13% to 42%. Multi-disciplinary, multi-strategic approaches in RACFs have demonstrated reductions in antipsychotic use of up to 3% (3). The prevalence of antipsychotic use in patients aged over 65 years in an Australian general hospital was reported as 32%, with indications (when recorded) predominantly delirium, agitation and aggression (4).

Behavioural and psychological symptoms of dementia (BPSD) occur commonly in people living with dementia (5, 6). BPSD include calling out, screaming, verbal and physical aggression, hypersexuality, resistiveness, wandering, intrusiveness, repetitive behaviour, hoarding, nocturnal restlessness, emotionality, delusions and paranoid or reckless behaviours. Overall, prevalence increases with the severity of dementia. However, BPSD can occur at any stage of, and vary between types of dementia. In fronto-temporal dementia, disinhibition often results in early behavioural symptoms, while in Lewy body dementia, visual hallucinations are prominent.

BPSD may be triggered by environmental factors or by physical discomfort (e.g. pain, bowel or bladder symptoms), disease (e.g. infection) or its treatment (e.g. anticholinergic side effects of medications). Non-pharmacological interventions are the mainstay of prevention and treatment of BPSD (7). Evidence for efficacy of medications for BPSD is limited and risk of adverse effects is significant. Medications should only be considered after excluding secondary causes and if non-drug measures have failed, and should be limited to short term use (6). Symptoms that appear most responsive to antipsychotic medications are physical aggression and psychosis. Risperidone is the only atypical antipsychotic with a TGA approved indication for use in BPSD. This is limited to treatment for up to 12 weeks of psychotic symptoms or persistent agitation or aggression unresponsive to non-pharmacological approaches in patients with moderate or severe dementia of the Alzheimer type.

Delirium, which is an acute disorder of attention and cognition, occurs commonly in older people, particularly those in hospital, and carries a significant burden of morbidity and mortality (8, 9). It presents as an altered level of consciousness, decreased attention and cognitive function, with a

fluctuating course. Recovery is often rapid, although complete resolution may be delayed for months or never completely occur. For prevention of delirium, there is good data to support multi-component non-pharmacological interventions, but minimal evidence to support the use of medications, such as antipsychotics, cholinesterase inhibitors or melatonin (10).

Management of delirium involves identification and reversal of the causes, prevention of complications and management of the symptoms. Common causes of delirium include side effects of a wide range of medications, withdrawal from alcohol and other drugs, infections, pain and metabolic disturbances. Nonpharmacologic strategies for managing delirium symptoms include early mobility, orientation, using the patient's glasses or hearing aids, ensuring adequate hydration, nutrition and oxygenation, optimising bowel and bladder function, maintaining the sleep-wake cycle with uninterrupted sleep time and sleep protocols (8). Antipsychotics are only indicated after failure of non-drug treatment if the person's agitation/aggression interferes with their ability to receive essential medical/nursing care or threatens their safety or that of others. If an antipsychotic is required, a single low dose oral antipsychotic is often adequate but treatment may be required for up to one week (6).

In 2015 the Australian Atlas of Healthcare Variation identified unwarranted variation in the dispensing rates of antipsychotic medicines for people aged 65 years and over. Upon repeat analysis, the third Australian Atlas of Healthcare Variation found that dispensing rates of antipsychotic medicines to people aged 65 years and over had decreased, but the volume of antipsychotic medicines supplied on any given day remained stable, and the magnitude of variation had increased. There is concern that antipsychotic medicines are being prescribed outside guideline recommendations, such as for BPSD or delirium, before secondary causes have been excluded and non-pharmacological measures have been tried.

Therefore, the Commission sought a structured, evidence-based literature review to better understand the optimal and current use of antipsychotics in older Australians with BPSD and delirium, across community, RACF and hospital settings.

Research Questions

The research questions posed by the Commission to guide the review were:

1. What does the literature (Australian or international data) say about why the variation identified in the Atlas is a problem for Australians? Describe the burden of disease associated with BPSD or delirium in Australia and its social and economic impacts.
2. What are the terms most acceptable to clinicians and consumers to describe BPSD or behaviour for which antipsychotics can be used?
3. What relevant guidelines, policies and procedures, health programs or strategy documents are available in Australia, noting that the term the chemical restraint is in scope, or from an equivalent healthcare system (UK, US, Canada)?
4. What do the current guidelines recommend regarding the prescription and use of antipsychotic medicines for people aged 65 years and over for the treatment of BPSD and delirium?

2. Methods

We designed and performed searches of the relevant academic, peer-reviewed, commercially published ('black') and informally published ('grey') literature published over the past five years (2014-2019) to address each of the research questions, with methodology for addressing each question described in detail below. Databases searched included Medline, Embase, Google Scholar, Cochrane library and Cochrane Specialised Registers, clinical guideline portals, subject specific databases, grey literature (such as government reports or issues papers), professional organisations, colleges and consumer organisations. The main literature sources included are relevant guidelines, policies or strategic directions (Australian and international); systematic reviews and meta-analysis; and relevant grey literature. This was a rapid review performed by clinicians and academics.

2.1 What does the literature (Australian or international data) say about why the variation identified in the Atlas is a problem for Australians? Describe the burden of disease associated with BPSD or delirium in Australia and its social and economic impacts.

We performed a systematic search of electronic databases including Embase, Medline and PsycINFO for original observational research articles across all settings, published from May 2014 through to May 2019. The search strategy for each database is presented in Appendix A. The 'Preferred Reporting Items for Systematic Reviews and Meta-Analysis' (PRISMA) guidelines were followed throughout the review. Full text articles were included if they reported on the prevalence of BPSD and delirium, reported on the burden (e.g. social, carer stress, use of support services, admission to aged care, admission to hospital, or economic burden) of BPSD and delirium, and were conducted in Australia. We excluded articles that were (i) focused on participants under the age of 65; (ii) case reports, case series or clinical trials; and (iii) written in languages other than English.

After removal of duplicates, one reviewer (DG) independently screened the articles for potential suitability based on titles and abstracts. Full-text articles were then assessed for eligibility by the reviewer.

2.2 What are the terms most acceptable to clinicians and consumers to describe BPSD or behaviour for which antipsychotics can be used?

We conducted restrictive searches in traditional (Medline, Embase, PsychINFO) and non-traditional (Google Scholar, Google) databases and targeted citation chain searching (as described by (11), details in Appendix A). We also conducted targeted searches of relevant Australian medicine, pharmacy and nursing clinical journals and consumer resources to determine what terms are *used* as a proxy for specifically expressed preferences. We contacted experts in this field by email to check that we had not missed any relevant sources. Terms used in clinical and consumer resources were analysed descriptively.

2.3 What relevant guidelines, policies and procedures, health programs or strategy documents are available in Australia, noting that the term the chemical restraint is in scope, or from an equivalent healthcare system (UK, US, Canada)? A suitable tool should be used to appraise the guidelines you find and the evidence used to develop them.

Guidelines, policies and procedures, health programs and strategy documents were identified from the search strategies for the black and grey literature presented in Appendix A. Documents were initially sorted by condition (BPSD or delirium), country of origin, setting and reported quality. Up to 25 guidance documents were selected by the multidisciplinary research team for further analysis, based on quality and their relevance to Australian practice across all settings (Appendix C).

We assessed the risk of bias in the key clinical guidelines focusing on the management of BPSD or delirium that provided information on treatment with antipsychotics using the AGREE II tool (https://www.agreetrust.org/wp-content/uploads/2017/12/AGREE-II-Users-Manual-and-23-item-Instrument-2009-Update-2017.pdf), applied independently by two reviewers (HW and JR). A guideline was considered as high quality if the scores across all 6 domains of AGREE II reached 75% or greater. This cut-off reflects high and low quality in examples provided by the AGREE II developers (12).

2.4 What do the current guidelines recommend regarding the prescription and use of antipsychotic medicines for people aged 65 years and over for the treatment of BPSD and delirium?

Recommendations were extracted using a structured format (Appendix D) including indications, contraindications, drug, dose, duration, monitoring of efficacy, monitoring of safety, requirement for consent. Where GRADE (Grading of Recommendations Assessment, Development and Evaluation) or GRADE-like assessments of the recommendations were reported in the guidelines, these were also extracted.

Analysis

Analysis was descriptive (a narrative summary). We did not carry out formal data synthesis for any of the research questions.

3. Results

3.1. What does the literature (Australian or international data) say about why the variation identified in the Atlas is a problem for Australians? Describe the burden of disease associated with BPSD or delirium in Australia and its social and economic impacts.

Search results and study characteristics

A total of 351 articles were identified. After removing duplicates, 277 were screened, with 31 full-text articles reviewed, of which 12 were included in the review (Figure 1). Most studies were conducted in the acute care setting (n=7; 58.3%). The prevalence of delirium was reported in seven studies and prevalence of BPSD in four studies (Table 1). The burden of delirium was reported by two studies and burden of BPSD by one (13) (Table 2).

Prevalence of delirium and BPSD across settings

In studies conducted in the acute care setting, the prevalence of delirium was defined using a range of measures including the chart-based instrument, Diagnostic and Statistical Manual of Mental Disorders 4th edition (DSM-IV) diagnostic criteria and Nursing Delirium Screening Scale. The prevalence of delirium ranged from 11% to 29% (14). Of the 11 million hospitalisations annually in Australia, 42% are for people aged over 65 years (15). Taken together, this suggests that there are approximately 0.5-1.3 million admissions with delirium per year in Australia.

The prevalence of BPSD, measured using the Neuropsychiatric Inventory (NPI) was reported in four studies conducted in the community setting (n=2) and nursing home setting (n=2). The prevalence of BPSD in the community setting was documented using the data from the Prospective Research in Memory (PRIME) study. One analysis conducted in 2014 (16), using a sub-group of PRIME study participants who had Mild Cognitive Impairment at baseline (n=185), reported a prevalence of BPSD of 63.8%. In another PRIME study (17), including 514 people living with dementia who had completed the NPI data at baseline, 89.9% reported one or more NPI symptoms at baseline and 57.5% reported one or more clinically significant NPI symptoms. Moreover, 80% of the participants experienced multiple symptoms, and levels of neuropsychiatric symptoms increased significantly and consistently over the 3-year period. Combining this data with the estimate that in 2018, 376,000 Australians were living with dementia (18), last year approximately 338,000 Australians had BPSD and 194,000 had clinically significant symptoms.

Burden of delirium and BPSD across settings

The burden of delirium was reported in two studies conducted in the acute care setting (Table 2). Patients diagnosed with delirium had higher 90-day mortality, and longer hospital and ICU length of stay (14). In another study, patients with delirium had a higher age-adjusted rate of all-cause one-year mortality after hip fracture compared to those without delirium (35.3% versus 23.9%) (19).

The study by Connors *et al* (13), which sourced the data from the PRIME study reported on the burden of disease of BPSD only. Delusions and hallucinations (assessed using the NPI), were both associated with greater dementia severity, poorer cognition and function, higher levels of other neuropsychiatric symptoms, and greater caregiver burden (Table 2). Delusions, by themselves and in combination with hallucinations, predicted institutionalisation. However, neither symptom was associated with mortality.

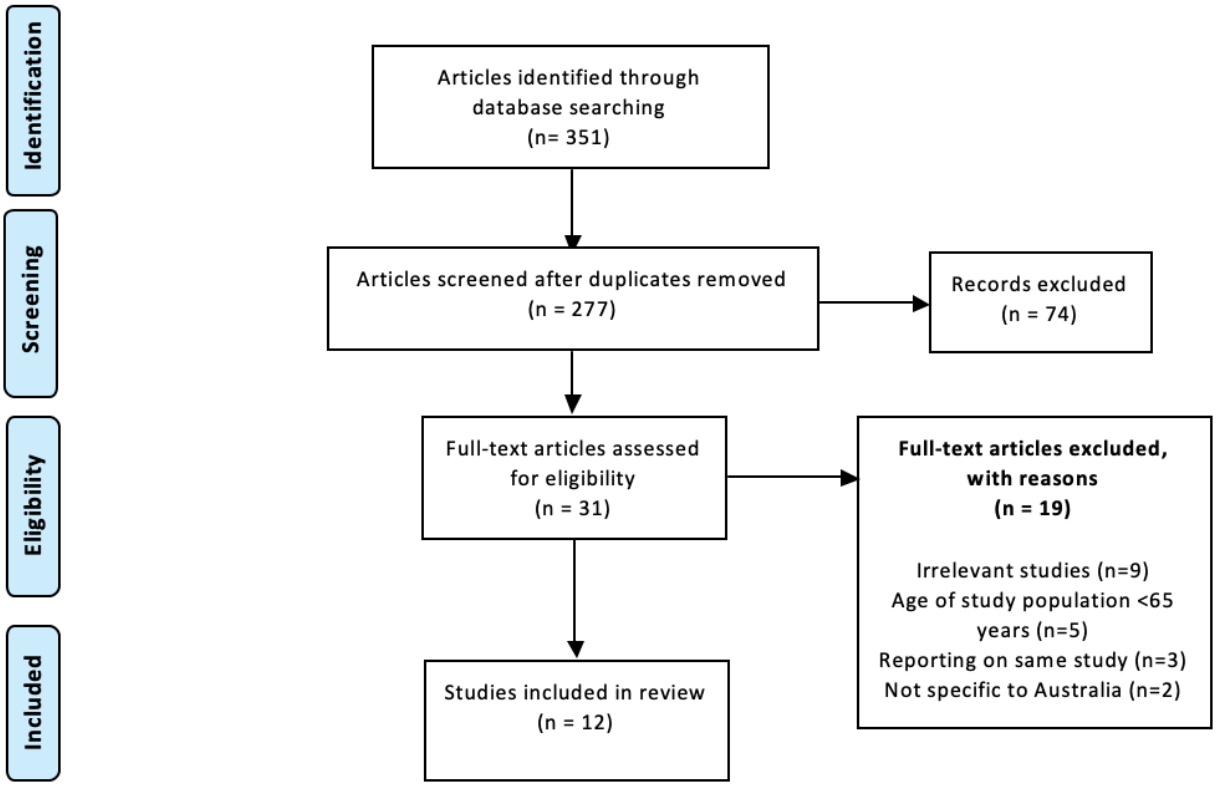

Figure 1. Review inclusion and exclusion criteria flowchart for research question 1: Prevalence and burden of disease associated with behavioural and psychological symptoms of dementia and delirium

Table 1. The prevalence of BPSD and delirium across settings

Author	Study design (n)	Age, mean (SD) or median (IQR)	BPSD or delirium definition	Prevalence of BPSD or delirium
BPSD				
Community				
Brodaty et al 2014 (16)	PRIME observational study (n=185)*	Dementia (n=52); 75.3 (6.7) No dementia (n=133); 76.0 (7.0)	NPI	63.8% (118) reported at least one neuropsychiatric symptom at baseline 8 (4.3%) patients reported to have delusions, 2 (1.1%) hallucinations, 54 (29.2%) agitation, 61 (33%) depression, 59 (31.9%) anxiety, 10 (5.4%) euphoria, 59 (31.9%) apathy, 25 (13.5%) disinhibition, 67 (36.2%) irritability, 12 (6.5%) aberrant motor behaviour, 34 (18.4%) night-time disturbances, and 26 (14.1%) appetite disturbances
Brodaty et al 2015 (17)	PRIME observational study (n=514 with dementia and completed NPI data)	77.6 (7.6)	Number of NPI symptoms over time	**At baseline any level of severity (clinically significant)** 1 or more symptoms; 89.9% (57.5%) 2 or more symptoms; 80.4% (36.8%) 3 or more symptoms; 66.1% (22.9%) 4 or more symptoms; 51.5% (14.3%) 5 or more symptoms; 39.5% (7.2%) **At each time point** (3-months, 6-months, 1-Year, 2-Years and 3-Years), approximately 90% of participants had ≥1 neuropsychiatric symptoms and > 50% of the sample had ≥1 clinically significant symptoms.
Nursing home				
Brown et al 2015 (20)	Cross-sectional (n=49)	85.6 (5.9)	NPI – Nursing Home version CMAI	NPI: Affective symptoms; 39% NPI: Agitated symptoms; 39% NPI: Psychotic symptoms; 16% NPI: Apathy/Eating symptoms; 34% CMAI: Verbal agitation; 41% CMAI: Non-aggressive agitation; 33% CMAI: Aggressive agitation; 28%
Theou et al 2016 (21)	Cross-sectional (383)	87.5 (6.2)	NPI – Nursing Home version	*Emailed authors for prevalence data but not available.*

Author	Study design (n)	Age, mean (SD) or median (IQR)	BPSD or delirium definition	Prevalence of BPSD or delirium
Delirium				
Hospital				
Heriot et al 2017 (14)	Retrospective study (n=348)	84.0 (IQR 82.4, 86.3)	Three measures of delirium: Inouye chart-based instrument; DSM-IV and ICD-10	Delirium in 11—29% of patients, the highest prevalence identified by chart review
Hosie et al 2016 (22)	Cross-sectional study (n=47)	74 (10)	Nursing Delirium Screening Scale (Nu-DESC), Memorial Delirium Assessment Scale and DSM-V diagnostic criteria	All patients were screened for delirium, with only 2 completing the Memorial Delirium Assessment Scale 34% screened positive for delirium and 19% were diagnosed as delirious according to the DSM-V
Jones et al 2019 (23)	Cohort study (n=2447)	66 (IQR 57, 74)	ICD-10-based coding for delirium recorded by hospital coding staff based on medical documentation	12.9% with post-operative delirium
McRae et al 2014 (24)	Retrospective cohort study (n=112)	74 (8)	Inouye chart-based instrument	21.0 % with delirium
Mitchell et al 2017 (19)	Retrospective cohort study (27,888 hospital admissions)	Not reported for overall study population	Delirium identified within hip fracture-related episode of care using ICD-10-AM classifications	Delirium during hospitalisation identified in 4,065 (14.6%) of 27,888 hip fracture hospitalisations
Poudel et al 2016 (25)	Prospective cohort study (n=1418)	81 (6.8)	InterRAI delirium screen positive at admission or discharge or delirium and/or any acute change in cognitive function noted on daily visits by nurse assessor	23.1% with delirium
Travers et al 2014 (26)	Prospective cohort study (n=493)	80.4 (6.5)	Physicians determined whether patients met the DSM-IV criteria for delirium, at admission or subsequently (incident delirium)	Delirium at admission: 23.5%; dementia patients (n=102) Delirium at admission: 6.1%; no dementia patients (n=391) Incident delirium: 14.7%; dementia patients (n=102) Incident delirium: 4.8%; dementia patients (n=102)

NPI, Neuropsychiatric Inventory; CMAI, Cohen-Mansfield Agitation Inventory; DSM, Diagnostic and Statistical Manual of Mental Disorders; ICD, International Classification of Diseases; PRIME, Prospective Research in Memory clinics study.*Participants from the PRIME study with Mild Cognitive Impairment at baseline.

Table 2. Social and economic burden of BPSD and delirium across settings

Author	Study design (n)	Age, mean (SD) or median (IQR)	Social and economic burden definition	Impact
Delirium				
Hospital				
Heriot et al 2017(14)	Retrospective study (n=348)	84.0 (IQR 82.4, 86.3)	Burden of delirium (measured using 3 different criteria) on survival and hospital stay	Patients diagnosed with delirium had higher 90-day mortality. Those meeting criteria for all 3 methods had longer hospital and ICU length of stay.
Mitchell et al 2017(19)	Retrospective cohort study (27,888 admissions)	Not reported for overall study population	The burden of delirium on survival	Individuals with delirium had a higher age-adjusted rate of all-cause one-year mortality after hip fracture compared to those without delirium (35.3% vs 23.9%).
BPSD				
Community				
Connors et al 2018 (13)	PRIME observational study (n=445 with Alzheimer's dementia and completed NPI data)	78.7 (7.3)	Clinical outcomes associated with delusions and hallucinations	Participants with delusions had higher dementia severity (1.2 units on CDR), lower cognition (0.8 units on MMSE), lower function (2.6 units on SMAF), higher neuropsychiatric symptom scores (6.5 units on NPI), and greater caregiver burden (7.8 units on ZBI) than participants without psychotic symptoms Participants with hallucinations had higher dementia severity (0.9 units on CDR), lower cognition (1.0 units on MMSE), lower function (2.7 units on SMAF), higher neuropsychiatric symptom scores (4.8 units on NPI), and greater caregiver burden (5.7 units on ZBI) than participants without psychotic symptoms. Participants with both symptoms had higher dementia severity (2.7 units on CDR), lower cognition (1.6 units on MMSE), lower function (5.1 units on SMAF), higher neuropsychiatric symptom scores (17.6 units on NPI), and greater caregiver burden (13.6 units on ZBI) than participants without psychotic symptoms Delusions or both delusions and hallucinations, but not hallucinations alone, associated with increased risk of institutionalisation. Neither symptom associated with mortality.

CRD, Clinical Dementia Rating scale; MMSE, Mini-Mental State Examination; NPI, Neuropsychiatric Inventory (excluding delusions and hallucinations); PRIME, Prospective Research in Memory clinics study; SMAF, Functional Autonomy Measurement System; ZBI, Zarit Burden Interview.

3.2 What are the terms most acceptable to clinicians and consumers to describe BPSD or behaviour for which antipsychotics can be used.

Summary of findings

For BPSD, recommended terms include 'changed behaviour' or 'expressions of unmet need' with BPSD being acceptable in a clinical context. Australian consumer materials developed by national government or consumer organisations generally use the term BPSD, or changes in behaviour, while in medical, pharmacy and nursing journals BPSD was the most common term used.

For delirium, the only document identified that reported clinician or consumer preferred terms, was one original research article, which is only relevant for delirium related to surgery; the recommended term for clinicians being 'postoperative delirium'. Delirium was generally the term used in both clinician facing journals and consumer materials.

This review presents the literature on preferred terminology. It does not analyse or discuss the appropriateness of terms. Common reasons cited in the grey literature for use of particular terms include to provide clarity to facilitate diagnosis, clinical management and research; be comprehensible by consumers; respectful; avoid blame; and describe the symptoms or syndrome not the person.

Results of restricted database searches

Only one original research article was eligible for inclusion (27) (Figure 2). This study reported recommendations from clinicians' expert consensus for terminology relating to cognitive changes associated with surgery. They recommended that 'Postoperative delirium' should be recognised as a specific category consistent with DSM-5 terminology along with appropriate specifiers (substance intoxication, substance withdrawal, medication-induced, delirium because of other medical conditions, and delirium because of multiple aetiologies), once other specific causes have been excluded and the patient is in the immediate postoperative period".

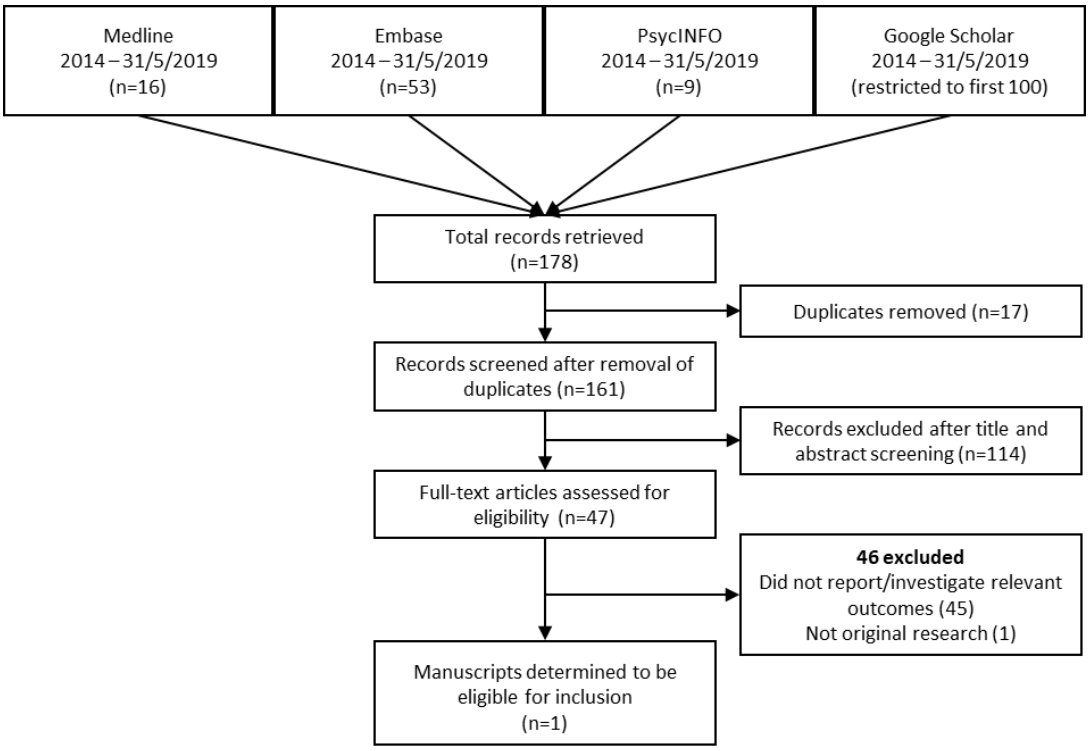

Figure 2. Restricted database search results for research question 2: Preferred terminology for BPSD and delirium

While we did not identify any other studies that fulfilled the inclusion criteria, several of the articles did comment on terms used for BPSD or delirium:

- Australian qualitative study of residential care facility staff knowledge found an absence of use of the word 'delirium' by staff (28). Specific descriptions of symptoms were used instead. No recommended term was reported.
- Review article (29) notes: "Terminology to describe these symptoms varies but neuropsychiatric symptoms (NPS) or behavioral and psychological symptoms of dementia (BPSD) are most commonly used."
- Review article (30) notes: "Behavioural and psychological symptoms of dementia (BPSD), also known as neuropsychiatric symptoms…"
- Review article (31) notes about BPSD: "These symptoms, also known as neuropsychiatric symptoms of dementia"
- Review article (32) notes: "The term behavioural and psychological symptoms of dementia (BPSD; also termed neuropsychiatric symptoms)…"

Through contacting Australian experts, we identified a recently published editorial outlining the history of the use and discussing the appropriateness of the term, 'behavioural and psychological symptoms of dementia' (33). A concern was cited that where a person is 'labelled' as having BPSD this can have a negative impact on the care that they receive (34). The label may encourage overuse of psychotropic medications rather than attempting to identify and treat the underlying cause (such as unmet needs or pain). Additionally, not all behaviours displayed by a person living with dementia are caused by changes in the brain. Even in an ideal environment, a small number of people with dementia can have significant behaviour changes which can place themselves or others at risk. There is no appropriate preferable term that fully captures changed behaviours and psychological symptoms which occur due to alterations in the brain pathophysiology. In finding a preferred term for BPSD there appears to be a balance between removing stigma and identifying the underlying causes while not ignoring the realities of the experiences of people living with dementia and their carers and the way brain changes can affect behaviour. This editorial recommends using the verb 'to understand' when talking about behaviour changes in people with dementia. The authors suggest that it may be reasonable to continue using the term BPSD in specialist clinical and research settings although recommends using the terminology "behaviours and psychological symptoms of dementia" (behaviours, not behavioural) (33).

Results of restricted Google search

No further original research articles eligible for inclusion were identified through the Google search. Two documents (35, 36) were identified that reported preferred terminology related to BPSD, which both cited Dementia Australia's Dementia Language Guidelines (May 2018) (37). Several other documents discussed language related to these terms, but did not specifically report what the preferred terms were. Additional non-systematic searching on Google revealed documents similar to this internationally. Because of the limited findings and variability in what information was available on this topic, we have presented these results descriptively below.

BPSD

The Dementia Australia publication 'Dementia Language Guidelines' (2018) (37), aims "to promote the consistent use of appropriate, inclusive and non stigmatising language when talking or writing about dementia and people living with dementia". They report:

"The following expressions and terms are preferred when talking about the behavioural and psychological symptoms of dementia:

- Changed behaviour(s)
- Expressions of unmet need
- Behavioural and psychological symptoms of dementia (in a clinical context)

The following terms/phrases should not be used when talking about the behavioural symptoms of dementia:

- Behaviour(s) of concern
- Challenging behaviours
- Difficult behaviours

The following terms/phrases should not be used when talking about the person with behavioural symptoms of dementia:

- Difficult
- Faded away, empty shell or not all there
- Disappearing
- Aggressor
- Wanderer
- Obstructive
- Wetter
- Poor feeder
- Vocaliser
- Sexual disinhibitor
- Nocturnal
- Screamer
- Violent offender"

This guideline highlights the importance of language and the heterogeneity of people living with dementia. The recommendations take into account that often, the behavioural and psychological symptoms are an expression of an unmet need, or other sensation that the person with dementia is experiencing, yet may not be able to verbalise (such as pain, boredom, or frustration). No information was provided within the document or on the website as to how the guideline was developed. It does not differentiate between language preferred by clinicians or consumers. This guideline was cited by other Australian documents we identified (35, 36).

Dementia Training Australia (DTA: an Australian Government funded group tasked with providing nationwide education and training on caring for people living with dementia, https://www.dta.com.au/use-of-the-term-responsive-behaviours/) reports that they use "the term 'Responsive Behaviours' rather than 'Behavioural & Psychological Symptoms of Dementia (BPSD)' throughout their training materials." They recommend using terms preferred by people with dementia, regardless of whether that person is present or not. Dementia Training Australia references Dementia Australia's Dementia Language Guideline on the webpage with this information, although the term DTA uses ('responsive behaviours') is not listed in this guideline. No reference is provided as to why DTA chose to use 'responsive behaviours' in their materials.

We also identified a document prepared by KPMG for the Department of Social Services (DSS) which reported on the findings of the Ministerial Dementia Forum: Dementia Care – Core Business held on the 6th of November 2015 (38). The report captures the feedback provided on the day by participants in attendance who were a DSS-approved representative sample of service providers, clinicians, carers, people with dementia and the Australian Government. Under the theme of Quality Provision, it is noted that:

- "The language used to describe dementia needs to be reviewed. For example, 'BPSD' leads staff to believe that distress is a symptom of dementia. The term 'behaviour management' is also unhelpful; we suggest using 'distress management' instead."

In Canada, the Alzheimer Society of Canada reports that 'responsive behaviours' is the term preferred by people with dementia (as reported on the Ontario chapter's website, no reference given) (39). They describe that, 'These guidelines have been reviewed by people living with dementia and have been developed for use by all individuals involved in the care of people with dementia.' This organisation does not appear to use the term 'behavioural and psychological symptoms of dementia' at all on their webpage. Their Person Centered Language Guidelines (40) recommend language to be avoided as described in Table 3. The Alzheimer Society of Canada recommend describing the behaviour, being as specific as possible and giving examples, as the non-specific terms above indicate that the problem is with the person, rather than enabling a person-centered response to the symptoms. However, in a document published by Alberta Health Services (Canada) the term 'responsive behaviours' is described as a sub-set of BPSD, referring to behaviours that are due to unmet need, response to external stimulus or people or psychosocial needs (41).

Documents from the UK and the US also report preferred language; the recommendations from these international documents are shown in Table 3. The information on development of the US document (42) is, 'Borrowing from the excellent work developed by Alzheimer's Australia titled "Dementia Language Guidelines", as well as interviews and discussions with people living with dementia.' The information provided on development of the UK document (43) is, 'It has been informed by what we have been told by people with dementia, their carers and all those affected by the condition.'

Table 3. Preferred or recommended terminology related to BPSD published by Australian and international national dementia socieities

	Dementia Australia: Dementia Language Guidelines (37)	**Alzheimer Society of Canada: Person Centered Language Guidelines (40)**	**Dementia Action Alliance (US): Living fully with dementia: words matter (42)**	**Alzheimer's Society (UK): Positive language - How to talk about the effects of dementia (43)**
Recommended/ preferred terms	• Changed behaviour(s) • Expressions of unmet need • Behavioural and psychological symptoms of dementia (in a clinical context)	Describe the behaviour being as specific as possible and giving examples "Responsive behaviour" can be used for general situations, but specific descriptions are preferred.	• Expressions of unmet need • Behavior expressions • Behaviors expressed by a person living with dementia	• Changes in behaviour • Challenging behaviour • Behaviours that challenge • Distressed behaviours • Symptoms of distress • Behaviour that is out of character • Expressions of needs or desires that are not being met • Behavioural and psychological symptoms of dementia (clinical context)
Terms which are not recommended	• Behaviour(s) of concern • Challenging behaviours • Difficult behaviours The following terms/phrases should not be used when talking about the person with behavioural symptoms of dementia: difficult; faded away, empty shell or not all there; disappearing; aggressor; wanderer; obstructive; wetter; poor feeder; vocaliser; sexual disinhibitor; nocturnal; screamer; violent offender	• Acting out / Aggressive behaviour • Agitation • Challenging behaviour • Difficult/ Problem behaviour • Hoarder/ Hoarding • Violent • Screamer • Sundowning/ Sundowner • Wandering/ Wanderer"	• Behavior problem • Challenging behaviour • Difficult behaviors • Behavioral and psychological symptoms of dementia (BPSD) • Vocalizer • Aggressor	• Difficult behaviours • 'Being difficult'

We identified two other Australian documents which commented on BPSD terminology, however, did not report whether these were preferred terms. All the documents relate to terminology used by and between clinicians.

- The Clinician's Field Guide to Good Practice: Managing Behavioural and Psychological Symptoms of Dementia (produced by DCRC, DBMAS) notes in a section of terminology that "the term BPSD will be used to refer to dementia related behavioural and psychological symptoms" (https://www.dementia.com.au/getattachment/cfc101fe-f9a5-4825-95c3-abe55a0bdcda/A-Clinician%E2%80%99s-Field-Guide-to-Good-Practice-Manag.aspx).
- In the deprescribing guide for antipsychotics in the treatment of BPSD published on the NSW Therapeutic Advisory Group (TAG) website, preferred language for communicating recommendations and actions related to deprescribing between clinicians is provided. In an example of use of this preferred language, the term BPSD is used (i.e. not in the preferred language template but used as example of filling it in) (http://www.nswtag.org.au/wp-content/uploads/2018/06/Deprescribing-guide-for-Antipsychotics-for-treatment-of-BPSD.pdf).

Overall, three main points seem to be important to the terminology for BPSD. The first is that language is important to reduce stigma and ensure person-centered care. The second is that many of the symptoms within 'BPSD' occur due to emotions or needs that people living with dementia are not able to express in traditional ways. Respectful and appropriate terminology in relation to these symptoms therefore may enable responding to and treating the underlying causes of these symptoms in an appropriate way. Finally, clarity of terminology is important for accurate diagnosis for clinical management and research (44).

Delirium

Very little was found regarding preferred or recommended terms for delirium. However, the Australian website CareSearch Palliative Care Knowledge Network webpage 'Delirium' notes that delirium is an important diagnosis to make and recommends that non-specific language (such as muddled, agitated) should be avoided (https://www.caresearch.com.au/caresearch/tabid/3467/Default.aspx).

Results of searching Australian medical, pharmacy and nursing clinical publications

Results of the journal search are shown in Appendix B Supplementary Table 1 and of the terminology used in these journals in Table 4. 'Behavioural and psychological symptoms of dementia' was the most common term for this group of symptoms both within and among journals (used in a total of 13 articles). 'Neuropsychiatric symptoms' and 'behaviours of concern' (or 'concerning behaviour') were the next most commonly used terms, used in three articles each. 'Delirium' was the only term we identified for this condition among these journals.

Table 4. Terms for behavioural and psychological symptoms of dementia (BPSD) and delirium used in Australian medical, pharmacy and nursing clinical publications in the last 12 months

Journal (References)	BPSD (number of articles using the term)	Delirium (number of articles using the term)
Medical Journal of Australia (MJA) (45-48)	Behavioural and psychological symptoms of dementia (4) Aggression and other behaviour (1)	Delirium (1)
Internal Medicine Journal (IMJ) (49-52)	Behavioural and psychological symptoms of dementia (1) Behaviour of concern (1)	Delirium (4 – DSM-5 definition mentioned in 1 article)
Medicine Today (53)	Neuropsychiatric symptoms (1)	
Australian Journal of General Practice (AJGP) (54, 55)	Behavioural and psychological symptoms of dementia (1) Behavioural disturbances (1) Behavioural symptoms (1)	Delirium (2)
Journal of Pharmacy Practice and Research (JPPR) (56, 57)	Behavioural and psychological symptoms of dementia (2)	
Australian Pharmacist (58-64) (59, 65-67)	Behavioural and psychological symptoms of dementia (2) (or Behavioural and psychological symptoms (1) or Behaviour and psychological symptoms associated with dementia (1)) Behaviour (mentioned in the context of antipsychotics) (1) Neuropsychiatric symptoms (2) Concerning behaviour such as wandering, inappropriate voiding, verbal aggression or screaming (1) Behaviours of concern (1)	Delirium (4)
Australian Nursing and Midwifery Journal (68) (69)	Behavioural responses (1)	Delirium (1)
Australian Journal of Advanced Nursing (70)	Behavioural and psychological symptoms of dementia (1)	Delirium (1)
Contemporary nurse (71)	Behavioural issues (1)	

Note: A term was only counted once per article (that is, if the term was used multiple times in the same article, it only contributed 1). A single article could use multiple terms. Specific symptoms (e.g. apathy, agitation) were not searched for or captured.

Results of searching for Australian consumer directed publications and resources

A snapshot of Australian consumer resources that use terminology related to BPSD (n=9) or delirium (n=6) is presented in Appendix B Supplementary Tables 2 and 3 respectively. To describe BPSD, variations on 'changed behaviour(s)' or 'behavioural changes' as well as the term BPSD were commonly used in these resources. The only other alternative term was 'expressions of distress', which was used in a document called 'Medicines and dementia: what you need to know' developed by NPS MedicineWise. Interestingly, this document was co-branded with Dementia Australia (and funded by Alzheimer's Australia (National Quality Dementia Care Initiative with support from J.O. & J.R. Wicking Trust), yet 'expressions of distress' is not a term on the Dementia Australia recommended or not recommended list (37). Delirium was the main term used in consumer resources on delirium. Acute confusion and the description 'increased confusion, agitation or withdrawal' were also used in one resource each. However, they were used alongside delirium as a descriptor rather than appearing to be a preferred standalone term.

3.3. What relevant guidelines, policies and procedures, health programs or strategy documents are available in Australia, noting that the term the chemical restraint is in scope, or from an equivalent healthcare system (UK, US, Canada)?

A suitable tool should be used to appraise the guidelines you find and the evidence used to develop them.

Using the black literature search criteria detailed above, 553 articles were found. Each article's title and abstract were screened for relevant guidelines, policies and procedures, health programs or strategy documents. Only one guideline article was suitable for inclusion. Relevant systematic reviews, meta-analyses, and review articles were also identified, and a further 69 articles were extracted and full text was reviewed for referenced guidelines. Six further relevant guidelines fulfilling the inclusion criteria were found from this reference search. A manual search of eTG complete by Therapeutic Guidelines was conducted for delirium and BPSD and this yielded two additional relevant guidelines.

Using the grey literature search terms listed in the methods section, the websites of 89 key organisations, government bodies, healthcare facilities (hospitals and aged care providers) and other relevant sources from Australia, New Zealand, UK, US and Canada were searched to identify guidelines, policies and procedures, health programs or strategy documents relating to the prescription and use of antipsychotics for BPSD and delirium.

A list of 50 potential documents was identified from an initial review of the grey literature, which was refined to the following final list that fulfilled the inclusion criteria (flowchart shown in Figure 3):

- **Main guidance** on the management of BPSD or delirium involving treatment with antipsychotics (n=12 guidelines, 2 policy documents, 1 position statement). AGREE II quality assessment was applied to the guidelines.
- **Other guidance**: recommendations endorsed by a national body or professional college with information on management of BPSD or delirium including treatment with antipsychotics (n=8)
- **Choosing Wisely**[1] consensus recommendations from professional colleges and organisations in Australia and the US on the management of BPSD or delirium. Selection of Choosing Wisely recommendations was not limited to recommendations involving treatment with antipsychotics and included recommendations on non-pharmacological management (n=13).

All seven guidelines identified in the black literature search were also identified in the search of the grey literature and are included in the final list above.

A full list of the relevant guidance documents identified from the black and grey literature searches is shown in Appendix C Supplementary Tables 1 (Australian) and 2 (international). The flowchart in Figure 3 shows the selection of the most relevant guidance documents to inform Australian practice across all settings. The main guidance and other guidance documents selected for BPSD and delirium are shown in Tables 5 and 6 respectively.

The Choosing Wisely criteria from Australia with recommendations on management of BPSD and delirium included those published by the Australian and New Zealand Society for Geriatric Medicine (2016), The Society of Hospital Pharmacists of Australia (2016) and Pharmaceutical Society of Australia. The Choosing Wisely criteria from the USA with relevant recommendations included those

[1] Choosing Wisely is an initiative of the American Board of Internal Medicine foundation. It calls upon medical specialty societies and other organisations to identify tests or procedures in their field whose necessity should be questioned and discussed.

from the American Academy of Nursing (2014), American Geriatrics Society (2014) and American Psychiatric Association (2014).

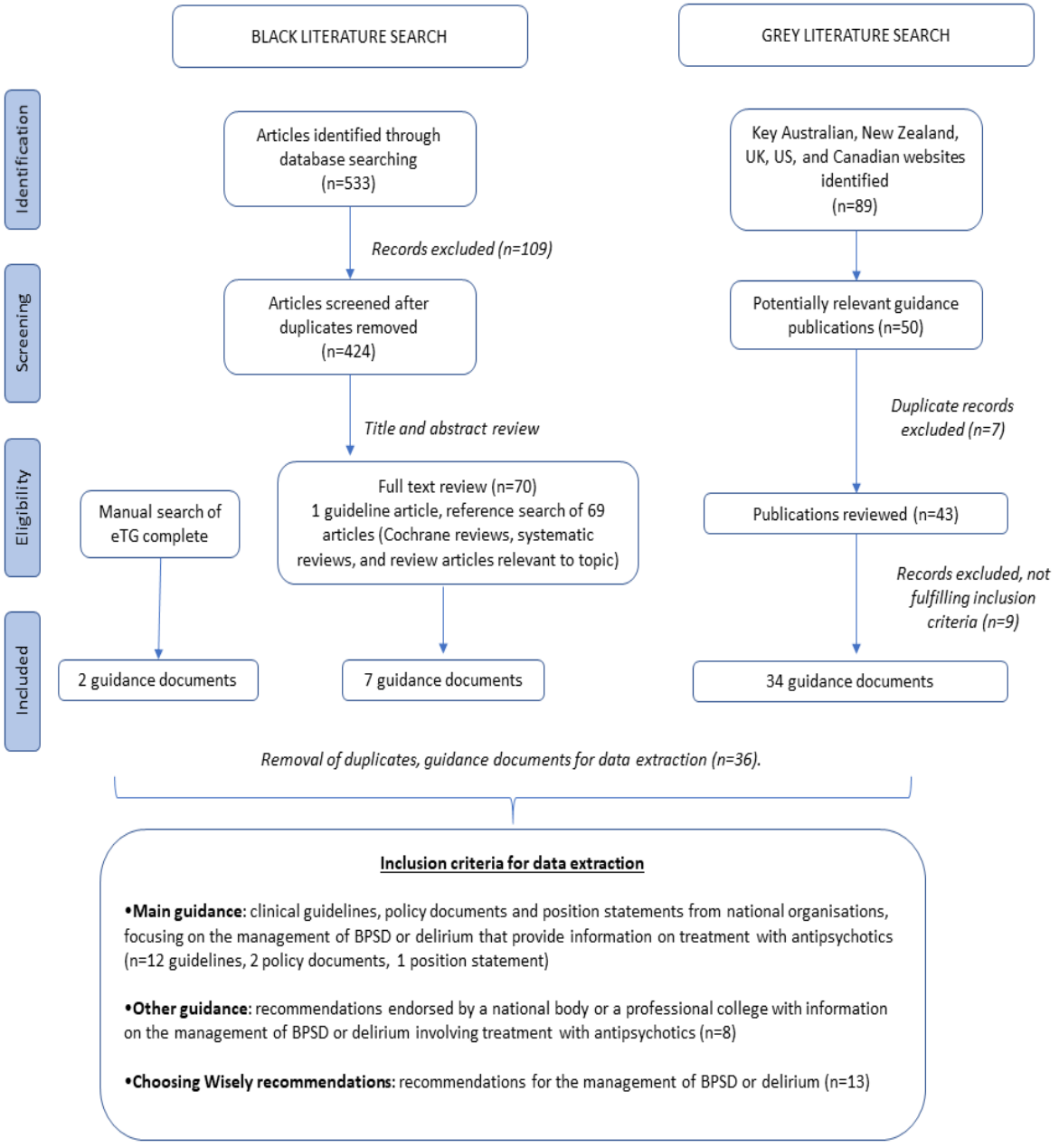

Figure 3. Review inclusion and exclusion criteria flowchart for Question 3: Guidelines for management of behavioural and psychological symptoms of dementia and delirium

Table 5. Guidance identified on use of antipsychotic medicines in management of behavioural and psychological symptoms of dementia

Organisation	Year	Country	Reference (Guidance Type)	*Guideline quality (AGREE II %)
MAIN GUIDANCE				
The American Psychiatric Association (APA)	2016	USA	The APA Practice Guideline on the Use of Antipsychotics to Treat Agitation or Psychosis in Patients With Dementia. (72) (Guideline)	98.7
National Institute for Health and Care Excellence (NICE)	2018	UK	Dementia: assessment, management and support for people living with dementia and their carers. NICE guideline [NG97]. (73) (Guideline)	98.3
International Psychogeriatric Association	2015	International	A consensus guideline for antipsychotic drug use for dementia in care homes. Bridging the gap between scientific evidence and clinical practice. (74) (Guideline)	94
NHMRC Cognitive Decline Partnership Centre	2016	Australia	Clinical Practice Guidelines and Principles of Care for People with Dementia. (35) (Guideline)	93
Therapeutic Guidelines (eTG)	2015	Australia	Psychotropic guidelines: Dementia: treatment of mood and behavioural disturbances in dementia (75) (Guideline)	80.7
Australia and New Zealand Society for Geriatric Medicine (ANZSGM)	2016	Australia	Management of Behavioural and Psychological Symptoms of Dementia (BPSD). (76) (Guideline/position statement)	69.7
The Royal Australian and New Zealand College of Psychiatrists (RANZCP)	2016	Australia	Antipsychotic medications as a treatment of behavioural and psychological symptoms of dementia. (77) (Guideline)	62.5
Australian Commission on Safety and Quality in Health Care (ACSQHC)	2014	Australia	A better way to care: Safe and high-quality care for patients with cognitive impairment (dementia and delirium) in hospital - Actions for health service managers. (78) (Policy document)	N/A

Organisation	Year	Country	Reference	Guideline Quality (AGREE II %)
Australian Commission on Safety and Quality in Health Care (ACSQHC)	2017	Australia	National Safety and Quality Health Service Standards guide for hospitals, 2017. Action 5.29: Preventing delirium and managing cognitive impairment. (79) (Policy document)	N/A
Alzheimer Society of Canada	2017	Canada	Use of antipsychotic medications to treat people with dementia in long-term care homes. (93) (Position statement)	N/A
OTHER GUIDANCE				
Australian Medicines Handbook (AMH) Aged Care Companion	2019	Australia	Behavioural and psychological symptoms of dementia. (80) (Medication handbook)	N/A
Health Vic	2018	Victoria, Australia	Managing behavioural and psychological symptoms of dementia. (81) (State policy document)	N/A
Agency for Clinical Innovation (NSW Health)	2015	NSW, Australia	Key principles for care of confused hospitalised older persons. (82) (State policy document)	N/A
University of South Australia. Quality Use of Medicines and Pharmacy Research Centre.	2016	Veterans, Australia	Veteran's MATES: Dementia and changes in behaviour. Topic 44. (83) (Guidance limited to Veterans)	N/A
Translational Research Project Funded by NSW Health	2018	NSW, Australia	Deprescribing guide for antipsychotics for treatment of behavioural and psychological symptoms of dementia. (84) (Guidance limited to deprescribing)	N/A
Canadian Deprescribing Network	2018	Canada	Deprescribing antipsychotics for behavioural and psychological symptoms of dementia and insomnia: Evidence-based clinical practice guideline. (85) (Guideline limited to deprescribing)	N/A

*Guideline quality was assessed for the guidelines in the main guidance only. Assessment was based on the information available. An average of scores from the six criteria of AGREE II is presented. Guidelines are listed in order of descending average AGREE II score. A guideline is considered high quality if it reaches a score ≥ 75 %.

Table 6. Guidance identified on use of antipsychotic medicines in delirium

Organisation	Year	Country	Reference (Guidance Type)	*Guideline Quality (AGREE II %)
MAIN GUIDANCE				
Scottish Intercollegiate Guidelines Network (SIGN)	2019	Scotland	Risk reduction and management of delirium. (86) (Guideline)	99.2
National Institute for Health and Care Excellence (NICE)	2019	UK	Delirium: prevention, diagnosis and management clinical guideline [CG103] (87) (Guideline)	96.7
Australian Commission on Safety and Quality in Health Care (ACSQHC)	2016	Australia	Delirium Clinical Care Standard. (88) (Guideline)	90.2
American Geriatrics Society (AGS)	2014	USA	Clinical Practice Guideline for Postoperative Delirium in Older Adults. (89) (Guideline)	85.2
Therapeutic Guidelines (eTG)	2015	Australia	Psychotropic: Management of Delirium. (90) (Guideline)	80.3
Australian Commission on Safety and Quality in Health Care (ACSQHC)	2014	Australia	A better way to care: Safe and high-quality care for patients with cognitive impairment (dementia and delirium) in hospital - Actions for health service managers. (78) (Policy document)	N/A
Australian Commission on Safety and Quality in Health Care (ACSQHC)	2017	Australia	National Safety and Quality Health Service Standards guide for hospitals 2017. Action 5.29: Preventing delirium and managing cognitive impairment. (79) (Policy document)	N/A
OTHER GUIDANCE				
Australian Medicines Handbook (AMH) Aged Care Companion	2019	Australia	Delirium. (91) (Medication handbook)	N/A
Health Vic	2018	Victoria, Australia	Preventing and managing delirium. (92) (State policy document)	N/A
Agency for Clinical Innovation (NSW Health)	2015	NSW, Australia	Key principles for care of confused hospitalised older persons. (82) (State policy document)	N/A

*Guideline quality was assessed for the main guidelines only. Assessment was based on the information available. An average of scores from the six criteria of AGREE II is presented. Guidelines are listed in order of descending average AGREE II score. A guideline is considered high quality if it reaches a score ≥ 75 %.

3.4. What do the current guidelines recommend regarding the prescription and use of antipsychotic medicines for people aged 65 years and over for the treatment of BPSD and delirium?

Information extracted from each of the 15 main guidance documents on the management of BPSD or delirium that made recommendations on treatment with antipsychotics, is shown in Appendix D, Box 1, with detailed outcomes of quality assessments according to AGREE II criteria for the 12 guidelines. Note that quality assessments of some guidelines were limited by lack of reported data on key domains. Recommendations from other guidance documents endorsed by a national body or a professional college with information on the management of BPSD or delirium including treatment with antipsychotics are shown in Appendix D, Box 2 (n=8). Relevant Choosing Wisely recommendations on pharmacological and non-pharmacological management of BPSD and delirium from Australia and the USA are shown in Appendix D, Box 3 (n=13).

Summary of Recommendations

Recommendations for the role of antipsychotics in BPSD and delirium have been synthesised and aligned with Australia's Quality Use of Medicines strategy: selecting management options wisely, choosing suitable medicines if a medicine is considered necessary, and using medicines safely and effectively (Table 7 BPSD, Table 8 delirium). Recommendations for each aspect of practice and specific recommendations for consent are provided. Each recommendation is attributed to the main guidance document that made the recommendation with any details on level of evidence for and strength of the recommendation extracted from the guidance. Other guidance documents that made the recommendation are also listed. The synthesis process also looked for inconsistent recommendations but none were found.

Recommendations for use of antipsychotics in management of BPSD are only to do so after addressing possible precipitating factors. Antipsychotics should only be used for treatment of agitation or psychosis when symptoms are dangerous and/or cause the patient significant distress, after review response to non-pharmacological interventions and with concurrent non-pharmacological interventions. Drug choice is determined by registration (risperidone is the only approved medicine for BPSD in Australia), proven efficacy for specific symptoms (risperidone and olanzapine have efficacy for agitation/aggression), minimising extrapyramidal side effects (use atypical antipsychotics), and using oral formulations when possible. Relative contra-indications to antipsychotics include dementia with Lewy Bodies or Parkinson's disease, cardiovascular diseases and arrhythmias. Alternative pharmacological therapies for BPSD if antipsychotics fail or are contraindicated include selective serotonin reuptake inhibitors, oxazepam (maximum 2 weeks) for anxiety and agitation, and cholinesterase inhibitors or memantine for psychotic symptoms. Multiple concurrent psychotropic agents should be avoided.

If antipsychotic treatment is used, it should be started at a low dose and titrated up to the minimum effective dose as tolerated; used for the shortest possible time; and monitored every 4-12 weeks for safety and efficiacy. Antipsychotics should be withdrawn if there is no response after 1-4 weeks or if significant side effects are experienced. If there is an adequate response, antipsychotics should be withdrawn within 3-4 months unless the patient experienced recurrence with prior attempts at tapering. Withdrawal should be by tapering (unless side effects are severe), with patients monitored at least monthly during tapering and for 4 months afterwards. Complex patients should be referred for specialist behavioural management services. Potential harms and benefits of starting and withdrawing therapy should be discussed with the patient or surrogate decision maker.

Recommendations for use of antipsychotics in management of delirium are to detect and address possible causes of delirium and treat agitation/distress using non-pharmacological strategies only if possible. Antipsychotics are reserved for patients who are a danger to themselves or others due to severe agitation, aggression or psychosis. Relative contraindications to antipsychotics are dementia with Lewy Bodies or Parkinson's disease, and haloperidol is contraindicated with any other drug that prolongs QTc interval. Avoid benzodiazepines (except in management of delirium related to alcohol/benzodiazepine withdrawal or seizures) because complications are common and long-acting benzodiazepines increase delirium. If an antipsychotic is required, limit to a single low dose of an oral medication in most cases, waiting at least 30 minutes before administering a second dose. Avoid prescribing multiple psychotropic agents. Review daily and stop as soon as possible, typically in 1-2 days/within a week. Seek advice from clinical experts if required. Discuss the treatment decision with the patient and carer and obtain consent.

The Choosing Wisely recommendations from Australia and the USA for management of BPSD and delirium were consistent with those described in the main guidance documents. Recommendations emphasised the importance of accurate diagnosis of BPSD and delirium and of assessment of the underlying cause. There were consistent recommendations not to use antipsychotics (or other psychotropic medications) as first line therapy for either condition. Where psychotropic medications are used for BPSD, it was recommended that the duration is limited to 3 months. There were additional recommendations not to physically restrain patients with BPSD or delirium.

Table 7. Summary of recommendations on use of antipsychotics in management of BPSD

Recommendation on use of antipsychotics in management of BPSD	Main guidance documents making recommendation (Level of evidence/ strength of recommendation)	Other guidance documents making the recommendation
Selecting management options wisely: Place in management of BPSD for antipsychotics		
Only consider antipsychotics after addressing possible precipitating factors	APA 2016 (72)*; strength 1C NICE Dementia 2018 (73)*; moderate-high quality evidence IPA 2015 (74)* NHMRC Cognitive Decline Partnership Centre 2016 (35)*; practice point eTG Psychotropic; Dementia 2015 (75)* ACSQHC; A better way to care 2014 (78) ANZSGM 2016 (76) ACSQHC; National Safety and Quality Health Service Standards 2017 (79) RANZCP 2016 (77) Alzheimer Society of Canada 2017 (93)	AMH Aged Care Companion; BPSD 2019 (80) Health Vic 2018 (81) ACI NSW Health 2015 (82) Veteran's MATES 2016 (83)
Treatment of agitation or psychosis in patients with dementia when symptoms are severe, dangerous, and/or cause significant distress to the patient.	APA 2016 (72)*; strength 1B NICE Dementia 2018 (73)*; moderate-high quality evidence IPA 2015 (74)* NHMRC Cognitive Decline Partnership Centre 2016 (35)*; practice point eTG Psychotropic; Dementia 2015 (75)* ACSQHC; A better way to care 2014 (78) ACSQHC; National Safety and Quality Health Service Standards 2017 (79)	AMH Aged Care Companion; BPSD 2019 (80) Health Vic 2018 (81) ACI NSW Health 2015 (82) Veteran's MATES 2016 (83)
After review response to non-pharmacological interventions and with concurrent non-pharmacological interventions.	APA 2016 (72)*; strength 1C NICE Dementia 2018 (73)*; moderate-high quality evidence NHMRC Cognitive Decline Partnership Centre 2016 (35)*; practice point eTG Psychotropic; Dementia 2015 (75)* ANZSGM 2016 (76) RANZCP 2016 (77) ACSQHC; A better way to care 2014 (78) ACSQHC; National Safety and Quality Health Service Standards 2017 (79)	AMH Aged Care Companion. BPSD 2019 (80). Health Vic 2018 (81). Veteran's MATES 2016 (83).

Recommendation on use of antipsychotics in management of BPSD	Main guidance documents making recommendation (Level of evidence/ strength of recommendation)	Other guidance documents making the recommendation
Choosing a suitable medicine if a medicine is considered necessary		
Risperidone only approved medicine in Australia for BPSD in Alzheimer's disease. Should be used first line.	eTG Psychotropic; Dementia 2015 (75)* RANZCP 2016 (77).	AMH Aged Care Companion. BPSD 2019 (80)
Only antipsychotics with proven evidence for specific symptoms. **Risperidone for psychosis.** **Risperidone and olanzapine for agitation/aggression**	IPA 2015 (74)* NHMRC Cognitive Decline Partnership Centre 2016 (35)*; moderate eTG Psychotropic; Dementia 2015 (75)* ACSQHC; A better way to care 2014 (78) ACSQHC; National Safety and Quality Health Service Standards 2017 (79)	AMH Aged Care Companion. BPSD 2019 (80)
Haloperidol not first line agent. Use atypical or second generation antipsychotics with low propensity to cause extrapyramidal side effects.	APA 2016 (72)*; strength 1B NHMRC Cognitive Decline Partnership Centre 2016 (35)*; practice point	AMH Aged Care Companion. BPSD 2019 (80)
Long acting injectable antipsychotic not used unless otherwise indicated for chronic psychotic disorder	APA 2016 (72)*; strength 1B	
If parenteral medication necessary to control violence, aggression and extreme agitation, olanzapine or lorazepam preferred. Olanzapine only antipsychotic approved for parenteral (IM) use in Australia for BPSD.	NHMRC Cognitive Decline Partnership Centre 2016 (35)*; practice point RANZCP 2016 (77); recommend olanzapine	

Recommendation on use of antipsychotics in management of BPSD	Main guidance documents making recommendation (Level of evidence/ strength of recommendation)	Other guidance documents making the recommendation
Avoid prescribing multiple psychotropic agents	RANZCP 2016 (77) ACSQHC; National Safety and Quality Health Service Standards 2017 (79)	AMH Aged Care Companion. BPSD 2019 (80). Veteran's MATES 2016 (83).
Alternative pharmacological therapies for BPSD (if antipsychotics fail or are contraindicated): **Selective serotonin reuptake inhibitors** **Oxazepam for anxiety and agitation (maximum 2 weeks)** **Cholinesterase inhibitors and memantine for psychotic symptoms**	NHMRC Cognitive Decline Partnership Centre (35)*; selective serotonin reuptake inhibitors, GRADE of evidence moderate eTG Psychotropic; Dementia 2015 (75)*; recommend oxazepam RANZCP (77); recommend citalopram, cholinesterase inhibitors, memantine	AMH Aged Care Companion. BPSD 2019 (80); Lewy Body Dementia consider cholinesterase inhibitors; anxiety short term benzodiazepines Veteran's MATES 2016 (83); Lewy Body Dementia consider cholinesterase inhibitors
Relative contraindications to antipsychotics: **- Dementia with Lewy Bodies or Parkinson's disease sensitive to adverse events – never use first generation antipsychotics and use second generation with extreme caution.** **- Risk with cardiovascular diseases and arrhythmias**	NICE Dementia 2018 (73)* IPA 2015 (74)* NHMRC Cognitive Decline Partnership Centre 2016 (35)*; practice point eTG Psychotropic; Dementia 2015 (75)* RANZCP 2016 (77). ACSQHC; National Safety and Quality Health Service Standards 2017 (79)	AMH Aged Care Companion. BPSD 2019 (80) Veteran's MATES 2016 (83)
Using antipsychotic medicines safely and effectively		
Initiate treatment at low dose and titrate up to minimum effective dose as tolerated	APA 2016 (72)*; strength 1B NICE Dementia 2018 (73)* IPA 2015 (74)* NHMRC Cognitive Decline Partnership Centre 2016 (35)*; GRADE of evidence moderate eTG Psychotropic; Dementia 2015 (75)* ACSQHC; A better way to care 2014 (78) ACSQHC; National Safety and Quality Health Service Standards 2017 (79). RANZCP 2016 (77)	AMH Aged Care Companion. BPSD 2019 (80) Health Vic 2018 (81) Veteran's MATES 2016 (83)

Recommendation on use of antipsychotics in management of BPSD	Main guidance documents making recommendation (Level of evidence/ strength of recommendation)	Other guidance documents making the recommendation
Use antipsychotics for shortest possible time	NICE Dementia 2018 (73)* IPA 2015 (74)* eTG Psychotropic; Dementia (75)* ACSQHC; A better way to care 2014 (78) ACSQHC; National Safety and Quality Health Service Standards 2017 (79) RANZCP 2016 (77).	AMH Aged Care Companion. BPSD 2019 (80) Health Vic 2018 (81)
Monitor frequently (every 4-12 weeks) for safety and efficacy (assess with quantitative measure/ measure of target symptoms).	APA 2016 (72)*; strength 1C NICE Dementia 2018 (73)* NHMRC Cognitive Decline Partnership Centre 2016 (35)*; GRADE of evidence moderate eTG Psychotropic; Dementia 2015 (75)* ANZSGM 2016 (76) ACSQHC; National Safety and Quality Health Service Standards 2017 (79) RANZCP 2016 (77) Alzheimer Society of Canada 2017 (93)	AMH Aged Care Companion. BPSD 2019 (80) ACI NSW Health 2015 (82) Veteran's MATES 2016 (83)
Withdraw if no response after 1-4 weeks.	APA 2016 (72)*; strength 1B NICE Dementia 2018 (73)* NHMRC Cognitive Decline Partnership Centre 2016 (35)*; GRADE of evidence moderate Alzheimer Society of Canada 2017 (93)	AMH Aged Care Companion. BPSD 2019 (80) Deprescribing guide, NSW 2018 (84) Deprescribing guideline, Canadian Deprescribing Network 2018 (85)
Withdraw if significant side effects	APA 2016 (72)*; Strength 1C RANZCP 2016 (77) Alzheimer Society of Canada 2017 (93)	Deprescribing guide, NSW Australia 2018 (84)
If adequate response, attempt to withdraw within 3-4 months unless experienced recurrence with prior attempts at tapering	APA 2016 (72)*; Strength 1C IPA 2015 (74)* eTG Psychotropic; dementia 2015 (75)* RANZCP 2016 (77)	AMH Aged Care Companion. BPSD 2019 (80) Deprescribing guide, NSW 2018 (84)

		Deprescribing guideline, Canadian Deprescribing Network 2018 (85)
Recommendation on use of antipsychotics in management of BPSD	**Main guidance documents making recommendation (Level of evidence/ strength of recommendation)**	**Other guidance documents making the recommendation**
Monitor at least monthly during tapering and for 4 months after discontinuation	APA 2016 (72)*; Strength 1C	Deprescribing guide. NSW 2018 (84)
Discontinue by tapering rather than immediate discontinuation unless severe side effects	IPA 2015 (74)*	AMH Aged Care Companion. BPSD 2019 (80) Veteran's MATES 2016 (83) Deprescribing guide, NSW 2018 (84) Deprescribing guideline, Canadian Deprescribing Network 2018 (85)
Refer complex patients to specialist service for management of BPSD	NHMRC Cognitive Decline Partnership Centre 2016 (35)*; practice point ACSQHC; A better way to care 2014 (78) ANZSGM 2016 (76). ACSQHC; National Safety and Quality Health Service Standards 2017 (79)	AMH Aged Care Companion. BPSD 2019 (80) Deprescribing guide, NSW Australia 2018 (84)
Informed consent		
Discuss risks and benefits with patient/ surrogate decision maker before non emergency treatment	APA 2016 (72)*; strength 1C NICE Dementia 2018 (73)* IPA 2015 (74)* NHMRC Cognitive Decline Partnership Centre 2016 (35)*; GRADE of evidence moderate ACSQHC; A better way to care 2014 (78) ACSQHC; National Safety and Quality Health Service Standards 2017 (79) RANZCP 2016 (77) Alzheimer Society of Canada 2017 (93)	Veteran's MATES 2016 (83).
Explain and discuss urgent involuntary sedation afterwards and document.	IPA 2015 (74)* NHMRC Cognitive Decline Partnership Centre 2016 (35)*; practice point	

	ACSQHC; National Safety and Quality Health Service Standards 2017 (79) RANZCP 2016 (77) Alzheimer Society of Canada 2017 (93)	
Recommendation on use of antipsychotics in management of BPSD	**Main guidance documents making recommendation (Level of evidence/ strength of recommendation)**	**Other guidance documents making the recommendation**
Discuss risks and benefits of withdrawal prior to initiating	APA 2016 (72)*; Strength 1C NICE Dementia 2018 (73)* IPA 2015 (74)*	Veteran's MATES 2016 (83) Deprescribing guide , NSW 2018 (84) Deprescribing guideline, Canadian Deprescribing Network 2018 (85)

Note:

For American Psychiatric Association (APA) Practice Guideline on the Use of Antipsychotics to Treat Agitation or Psychosis in Patients With Dementia (72), strength of recommendations: 1 = recommendation (confidence benefits outweigh harms), 2 = suggestion (uncertain). Strength of supporting research evidence: A = high, B = moderate, C = low.

For NHMRC Cognitive Decline Partnership Centre Clinical Practice Guidelines and Principles of Care for People with Dementia (35), recommendations are classed as 'evidence-based recommendations', 'consensus based recommendations' or 'practice points'. Each evidence-based recommendation is supported by a grade from very low to high reflecting the quality of the evidence, using the Grading of Recommendations Assessment, Development and Evaluation (GRADE) approach.

*Indicates main guidelines with AGREE II score >75%, indicating high quality guidelines.

Table 8. Summary of recommendations on use of antipsychotics in management of delirium

Recommendation on use of antipsychotics in management of delirium	Main guidance documents making recommendation (Level of evidence/ strength of recommendation)	Other guidance documents making the recommendation
Selecting management options wisely: Place in management of delirium for antipsychotics		
Detect and address possible causes of delirium and treat agitation and/or distress using non-pharmacological strategies only if possible.	SIGN. Risk reduction and management of delirium (86)*; Strong evidence NICE. Delirium: prevention, diagnosis and management (87)* ACSQHC. Delirium clinical care standard (88) AGS. Clinical Practice Guideline for Postoperative Delirium in Older Adults (89)* eTG Psychotropic: Management of delirium (90)* ACSQHC. A better way to care 2014 (78) ACSQHC. National Safety and Quality Health Service Standards 2017 (79)	AMH Aged Care Companion. Delirium. (91) Health Vic. Preventing and Managing Delirium. (92)
Reserve antipsychotic medicines for patients who are distressed despite non-pharmacological strategies, such as those who are a threat to themselves or others, and limit to severe symptom types that may respond (agitation, aggression, psychosis).	NICE. Delirium: prevention, diagnosis and management (87)* ACSQHC. Delirium clinical care standard 2016 (88)* AGS. Clinical Practice Guideline for Postoperative Delirium in Older Adults (89)* eTG Psychotropic: Management of delirium (90)* ACSQHC. A better way to care 2014 (78) ACSQHC. National Safety and Quality Health Service Standards 2017 (79).	AMH Aged Care Companion. Delirium. (91) Health Vic. Preventing and Managing Delirium. (92) ACI NSW Health. Key Principles for Care of Confused Hospitalised Older Persons (82).
Antipsychotics do not reduce delirium severity, resolve symptoms or alter mortality in the acute care setting	SIGN. Risk reduction and management of delirium (86)*; Strong evidence	AMH Aged Care Companion. Delirium. (91) Health Vic. Preventing and Managing Delirium. (92) ACI NSW Health. Key Principles for Care of Confused Hospitalised Older Persons (82).
Insufficient evidence to recommend for or against use of antipsychotic medications prophylactically in older surgical patients to prevent delirium	AGS. Clinical Practice Guideline for Postoperative Delirium in Older Adults (89)*; Low evidence	AMH Aged Care Companion. Delirium. (91) Health Vic. Preventing and Managing Delirium. (92)

Recommendation on use of antipsychotics in management of delirium	Main guidance documents making recommendation (Level of evidence/ strength of recommendation)	Other guidance documents making the recommendation
Choosing a suitable medicine if a medicine is considered necessary		
Oral administration of single dose if possible. Options include halperidol 0.5 mg po, risperidone 0.5 mg po or olanzapine 2.5 mg po. Half doses may be appropriate in frail elderly.	NICE. Delirium: prevention, diagnosis and management (87)*; haloperidol recommended, moderate quality evidence ACSQHC. Delirium clinical care standard 2016 (refer to AMH and eTG) (88) eTG Psychotropic: Management of delirium (90)*	AMH Aged Care Companion. Delirium. (91) Health Vic. Preventing and Managing Delirium. (92)
If oral administration is impossible, use haloperidol 0.125-0.5 mg IM as a single dose, or olanzapine 2.5 mg IM as a single dose. Half doses may be appropriate in frail elderly.	ACSQHC. Delirium clinical care standard (refer to AMH and eTG) (88) eTG Psychotropic: Management of delirium (90)*	AMH Aged Care Companion. Delirium. (91)
Avoid prescribing multiple psychotropic agents.		Health Vic. Preventing and Managing Delirium. (92)
Alternative pharmacological therapies for delirium: except for delirium related to alcohol/benzodiazepine withdrawal or seizures, avoid benzodiazepines.	ACSQHC. Delirium clinical care standard 2016 (refer to AMH and eTG) (88) eTG Psychotropic: Management of delirium (90)*	AMH Aged Care Companion. Delirium. (91)
Relative contraindications to antipsychotics: **- Dementia with Lewy Bodies or Parkinson's disease sensitive to adverse events –use with extreme caution/seek specialist advice.** **- Haloperidol is contraindicated in combination with any drug that is associated with QTc prolongation.**	SIGN. Risk reduction and management of delirium (86)*; Moderate quality evidence for avoiding haloperidol with other drugs that prolong QTc ACSQHC. Delirium clinical care standard 2016 (refer to AMH and eTG) (88) NICE. Delirium: prevention, diagnosis and management (87)*; Dementia with Lewy Bodies or Parkinson's disease ACSQHC. Delirium clinical care standard 2016 (88)*; Dementia with Lewy Bodies or Parkinson's Disease	AMH Aged Care Companion. Delirium (91)

Recommendation on use of antipsychotics in management of delirium	Main guidance documents making recommendation (Level of evidence/ strength of recommendation)	Other guidance documents making the recommendation
Using antipsychotic medicines safely and effectively		
Start at the lowest clinically appropriate dose	NICE. Delirium: prevention, diagnosis and management (87)* ACSQHC. Delirium clinical care standard 2016 (88)* AGS Clinical Practice Guideline for Postoperative Delirium in Older Adults (89)* ACSQHC. A better way to care 2014 (78) ACSQHC. National Safety and Quality Health Service Standards 2017 (79).	AMH Aged Care Companion. Delirium (91) Health Vic. Preventing and Managing Delirium (92)
Single dose usually adequate	ACSQHC. Delirium clinical care standard 2016 (refer to AMH and eTG) (88)* eTG Psychotropic: Management of delirium (90)*	AMH Aged Care Companion. Delirium (91)
Recommendation on use of antipsychotics in management of delirium	**Main guidance documents making recommendation (Level of evidence/ strength of recommendation)**	**Other guidance documents making the recommendation**
If additional dose is required, titrate cautiously. Wait for at least 30 minutes between doses.	NICE. Delirium: prevention, diagnosis and management (87)*; titrate cautiously, no specific advice ACSQHC. Delirium clinical care standard 2016 (88)* eTG Psychotropic: Management of delirium (90)* ACSQHC. A better way to care 2014 (78) ACSQHC. National Safety and Quality Health Service Standards 2017 (79).	AMH Aged Care Companion. Delirium (91)
Review daily and stop as soon as the clinical situation allows, typically within 1-2 days/less than a week.	SIGN. Risk reduction and management of delirium (86)*; High quality evidence NICE. Delirium: prevention, diagnosis and management (87)* ACSQHC. Delirium clinical care standard 2016 (88)* AGS Clinical Practice Guideline for Postoperative Delirium in Older Adults (89)* eTG Psychotropic: Management of delirium (90)* ACSQHC. A better way to care 2014 (78) ACSQHC. National Safety and Quality Health Service Standards 2017 (79)	AMH Aged Care Companion. Delirium (91) Health Vic. Preventing and Managing Delirium (92)
Seek advice from clinical experts when beyond skill of receiving clinicians	ACSQHC. A better way to care 2014 (78) ACSQHC. National Safety and Quality Health Service Standards 2017 (79)	AMH Aged Care Companion. Delirium (91)

Recommendation on use of antipsychotics in management of delirium	Main guidance documents making recommendation (Level of evidence/ strength of recommendation)	Other guidance documents making the recommendation
Informed Consent		
Discuss with patient and carer the choice of antipsychotic medicine, risks and benefits, dosage and duration	ACSQHC. Delirium clinical care standard 2016 (88)* ACSQHC. National Safety and Quality Health Service Standards 2017 (79)	Health Vic. Preventing and Managing Delirium (92)
Obtain consent	ACSQHC. National Safety and Quality Health Service Standards 2017 (79); Manage in accordance with legislation	-

SIGN, Scottish Intercollegiate Guidelines Network; NICE, National Institute for Health and Care Excellence; ACSQHC, Australian Commission on Safety and Quality in Health Care; eTG, electronic Therapeutic Guidelines; AMH, Australian Medicines Handbook.

*Indicates main guidelines with AGREE II score >75%, indicating high quality guidelines.

4. Discussion

This rapid review of antipsychotic medication use in older Australians with BPSD and delirium described the prevalence and burden of these conditions, terminology considerations for the conditions, key guidelines and clinical recommendations.

We found that the prevalence of delirium was reported in Australian hospitals (but not in other settings), ranging from 11-29%, and varied with the population studied (increased prevalence in people with dementia) and the tool used to define delirium, which is comparable to findings from international reviews (94). No recent Australian studies were identified that evaluated the prevalence of delirium in non-acute settings. International studies estimate the overall population prevalence of delirium amongst people aged >65 years is 1-2% and the prevalence in residential aged care ranges from 1.4% to 70%, depending on the diagnostic criteria and prevalence of dementia (95).

The prevalence of BPSD in the community was 75.3-77.6% in people with dementia, and 85.6-87.5% in residential aged care facilities. This is consistent with international estimates of a prevalence of 79% in residential aged care (96).

We found that delirium was associated with mortality and BPSD (particularly psychotic symptoms) with carer burden and institutionalisation. In other studies outside the scope of this review, delirium has been associated with increased mortality, length of hospital stay and institutionalisation and persistent symptoms (reviewed by (94)); and BPSD has been shown to be associated with lower functional abilities and poorer prognosis, an increased burden on carers and nursing home staff, higher costs of care and earlier institutionalisation (reviewed by (97)).

There is a paucity of research on the terms most acceptable to clinicians and consumers to describe BPSD and delirium. Australian and international dementia advocacy groups have published guidance on preferred language for BPSD, but empirical data supporting these recommendations is not available. The predominant terminology used in the Australian multidisciplinary clinical literature over the past year has been BPSD and delirium. However, other terms for BPSD, such as changed behaviours, expressions of unmet need and responsive behaviours, have also been used in consumer resources.

We identified 36 national and international guidance documents with recommendations on the management of BPSD and delirium. These included 15 main guidance documents (12 guidelines, 2 policy documents and 1 position statement) focusing on the management of BPSD and delirium that provided recommendations on use of antipsychotics. Ten of the twelve main guidelines were high in quality according to the AGREE II criteria. The evidence for most recommendations was reported as weak-moderate, some recommendations were informed by regulatory issues (registration/licencing of drugs for specific indications, legal requirements for consent), and the strength of most recommendations was moderate-high. The recommendations in the 15 main guidance documents were very consistent and are summarised in Tables 7 and 8. These recommendations were in keeping with those from other guidance documents on BPSD and delirium that covered use of antipsychotics (n=8) and from Choosing Wisely recommendations on management of BPSD and delirium (n=13).

The strength of this review is that we performed systematic searches, using PRISMA guidelines to search the black literature complemented by extensive searches of the grey literature. We rigorously applied the AGREE II criteria (using 2 reviewers) to assess the quality of the 12 main guidelines that we identified. The main limitations of this rapid review are that we did not have a second person screen the articles identified by the searches and the assessment of the strength of the evidence for

recommendations was limited to that reported in the guidelines (we did not assess the quality of the studies). Furthermore, we did not engage consumers and other multidisciplinary clinicians in the planning or analysis of the review, and such engagement is an important next step in progressing this work.

5. Conclusions

In conclusion, in Australia, BPSD are very common in people living with dementia in the community and residential aged care settings, and delirium occurs commonly in hospital, particularly in people with a background of dementia. The prevalence of these conditions is likely to increase with the ageing of our population. While the evidence informing optimal use of antipsychotics in older people with BPSD and delirium is not very strong, national and international guidelines, many of which are high quality, make consistent strong recommendations about their use. These regulations are consistent with quality use of medicines principles and in keeping with national regulations (registration of drugs and legal requirements for consent). Further work is required to understand the variation in evidence-based care in Australia, key recommendations for non-pharmacological management strategies, and indicators and data sources for measurement of recommended care.

REFERENCES

1. Hilmer SN, Gnjidic D. Rethinking psychotropics in nursing homes. Med J Aust. 2013;198(2):77.

2. Brett J, Zoega H, Buckley NA, Daniels BJ, Elshaug AG, Pearson SA. Choosing wisely? Quantifying the extent of three low value psychotropic prescribing practices in Australia. BMC Health Serv Res. 2018;18(1):1009.

3. Westaway K, Sluggett J, Alderman C, Moffat A, Procter N, Roughead E. The extent of antipsychotic use in Australian residential aged care facilities and interventions shown to be effective in reducing antipsychotic use: A literature review. Dementia (London). 2018:1471301218795792.

4. Brunero S, Wand AP, Lamont S, John L. A point prevalence study of the use of psychotropic medication in an acute general hospital. Int Psychogeriatr. 2016;28(6):967-75.

5. Macfarlane S, O'Connor D. Managing behavioural and psychological symptoms in dementia. Aust Prescr. 2016;39(4):123-5.

6. Australian Medicines Handbook Aged Care Companion. Adelaide, South Australia; 2016.

7. Abraha I, Rimland JM, Trotta FM, Dell'Aquila G, Cruz-Jentoft A, Petrovic M, et al. Systematic review of systematic reviews of non-pharmacological interventions to treat behavioural disturbances in older patients with dementia. The SENATOR-OnTop series. BMJ Open. 2017;7(3):e012759.

8. Oh ES, Fong TG, Hshieh TT, Inouye SK. Delirium in Older Persons: Advances in Diagnosis and Treatment. JAMA. 2017;318(12):1161-74.

9. Inouye SK, Westendorp RG, Saczynski JS. Delirium in elderly people. Lancet. 2014;383(9920):911-22.

10. Siddiqi N, Harrison JK, Clegg A, Teale EA, Young J, Taylor J, et al. Interventions for preventing delirium in hospitalised non-ICU patients. Cochrane Database Syst Rev. 2016;3:CD005563.

11. Costa DSJ, Mercieca-Bebber R, Tesson S, Seidler Z, Lopez AL. Patient, client, consumer, survivor or other alternatives? A scoping review of preferred terms for labelling individuals who access healthcare across settings. BMJ Open. 2019;9(3):e025166.

12. Brouwers MC, Kho ME, Browman GP, Burgers JS, Cluzeau F, Feder G, et al. Development of the AGREE II, part 2: assessment of validity of items and tools to support application. CMAJ. 2010;182(10):E472-8.

13. Connors MH, Ames D, Woodward M, Brodaty H. Psychosis and Clinical Outcomes in Alzheimer Disease: A Longitudinal Study. American Journal of Geriatric Psychiatry. 2018;26(3):304-13.

14. Heriot NR, Levinson MR, Mills AC, Khine TT, Gellie AL, Sritharan G. Diagnosing delirium in very elderly intensive care patients. Intensive Crit Care Nurs. 2017;38:10-7.

15. Australian Institute of Health and Welfare (AIHW), Australian Government. Australia's hospitals 2016-17 at a glance. Health Services Series no. 85, Cat. no. HSE204. Canberra, Australia 2018.

16. Brodaty H, Connors MH, Ames D, Woodward M, group Ps. Progression from mild cognitive impairment to dementia: a 3-year longitudinal study. Aust N Z J Psychiatry. 2014;48(12):1137-42.

17. Brodaty H, Connors MH, Xu J, Woodward M, Ames D, group Ps. The course of neuropsychiatric symptoms in dementia: a 3-year longitudinal study. Journal of the American Medical Directors Association. 2015;16(5):380-7.

18. Australian Institute of Health and Welfare (AIHW), Australian Government. Dementia in Australia. Cat. no. AGE 70. Canberra: AIHW; 2012.

19. Mitchell R, Harvey L, Brodaty H, Draper B, Close J. One-year mortality after hip fracture in older individuals: the effects of delirium and dementia. Arch Gerontol Geriatr. 2017;72:135-41.

20. Brown DT, Westbury JL, Schuz B. Sleep and agitation in nursing home residents with and without dementia. International Psychogeriatrics. 2015;27(12):1945-55.

21. Theou O, Tan EC, Bell JS, Emery T, Robson L, Morley JE, et al. Frailty Levels in Residential Aged Care Facilities Measured Using the Frailty Index and FRAIL-NH Scale. Journal of the American Geriatrics Society. 2016;64(11):e207-e12.

22. Hosie A, Lobb E, Agar M, Davidson P, Chye R, Lam L, et al. Measuring delirium point-prevalence in two Australian palliative care inpatient units. Int J Palliat Nurs. 2016;22(1):13-21.

23. Jones D, Matalanis G, Martensson J, Robbins R, Shaw M, Seevanayagam S, et al. Predictors and Outcomes of Cardiac Surgery-Associated Delirium. A Single Centre Retrospective Cohort Study. Heart Lung Circ. 2019;28(3):455-63.

24. McRae PJ, Peel NM, Walker PJ, De Looze JWM, Mudge AM. Geriatric syndromes in individuals admitted to vascular and urology surgical units. Journal of the American Geriatrics Society. 2014;62(6):1105-9.

25. Poudel A, Ballokova A, Hubbard RE, Gray LC, Mitchell CA, Nissen LM, et al. Algorithm of medication review in frail older people: Focus on minimizing the use of high-risk medications. Geriatr Gerontol Int. 2016;16(9):1002-13.

26. Travers C, Byrne GJ, Pachana NA, Klein K, Gray LC. Prospective observational study of dementia in older patients admitted to acute hospitals. Australas J Ageing. 2014;33(1):55-8.

27. Evered L, Silbert B, Knopman DS, Scott DA, DeKosky ST, Rasmussen LS, et al. Recommendations for the Nomenclature of Cognitive Change Associated with Anaesthesia and Surgery-20181. J Alzheimers Dis. 2018;66(1):1-10.

28. Buettel A, Cleary M, Bramble M. Delirium in a residential care facility: An exploratory study of staff knowledge. Australas J Ageing. 2017;36(3):228-33.

29. Ford AH. Neuropsychiatric aspects of dementia. Maturitas. 2014;79(2):209-15.

30. Franchi B. Pharmacological management of behavioural and psychological symptoms of dementia. Journal of Pharmacy Practice and Research. 2016;46(3):277-85.

31. Kales HC, Gitlin LN, Lyketsos CG. Assessment and management of behavioral and psychological symptoms of dementia. BMJ. 2015;350:h369.

32. Tible OP, Riese F, Savaskan E, von Gunten A. Best practice in the management of behavioural and psychological symptoms of dementia. Ther Adv Neurol Disord. 2017;10(8):297-309.

33. Cunningham C, Macfarlane S, Brodaty H. Language paradigms when behaviour changes with dementia: #BanBPSD. Int J Geriatr Psychiatry. 2019.

34. Barsness S BL, Greenwood D, Macaulay S, Power A, Swaffer K. Rethinking dementia care. Aust J Dement Care. 2018;7(4):8.

35. NHMRC Partnership Centre for Dealing with Cognitive and Related Functional Decline in Older People, Guideline Adaptation Committee. Clinical Practice Guidelines and Principles of Care for People with Dementia. Sydney. Guideline Adaptation Committee; 2016.

36. South Australian State-wide Older Persons Clinical Network. SA Health Services Plan for People with Dementia and Delirium. 2015.

37. Dementia Australia. Dementia Language Guidelines 2018 [June 2018]. Available from: https://www.dementia.org.au/files/resources/dementia-language-guidelines.pdf.

38. KPMG. Ministerial Dementia Forum 'Dementia Care - Core Business' Held on 6 November 2015: Final Report. 2015.

39. Alzheimer Society of Canada. What are responsive behaviours 2017 [Available from: https://alzheimer.ca/en/on/We-can-help/Resources/Shifting-Focus/What-are-responsive-behaviours.

40. Alzheimer Society of Canada. Person Centred Language Guidelines. Canada: Alzheimer Society of Canada; 2017.

41. Seniors Health Strategic Clinical Network AHS. Responsive Behaviours. Alberta Health Services; 2016.

42. Pinkowitz J and Love K (eds). Living fully with dementia: words matter. Falls Church, VA: Dementia Action Alliance; 2015.

43. Alzheimer's Society UK. Positive language: An Alzheimer's Society guide to talking about dementia. Publication Code PLExt. 2018.

44. Markwell H. Loaded meanings: the narrative of behaviour. Australian Journal of Dementia Care. 2016;5(3):12-6.

45. Reeve E, Farrell B, Thompson W, Herrmann N, Sketris I, Magin PJ, et al. Deprescribing cholinesterase inhibitors and memantine in dementia: guideline summary. Med J Aust. 2019;210(4):174-9.

46. Lynch EA, Mackintosh S, Luker JA, Hillier SL. Access to rehabilitation for patients with stroke in Australia. Med J Aust. 2019;210(1):21-6.

47. Peisah C, Burns K, Edmonds S, Brodaty H. Rendering visible the previously invisible in health care: the ageing LGBTI communities. Med J Aust. 2018;209(3):106-8.

48. Ibrahim JE. Royal Commission into Aged Care Quality and Safety: the key clinical issues. Med J Aust. 2019;210(10):439-41 e1.

49. Low ZY, Storer M, Tai R, Yates P. In-hospital morbidity and mortality among patients from residential respite care. Intern Med J. 2019.

50. Canet E, Amjad S, Robbins R, Lewis J, Matalanis M, Jones D, et al. Differential Clinical Characteristics, Management, and Outcome of Delirium among Ward Compared with ICU Patients. Intern Med J. 2019.

51. Mudge AM, Hubbard RE. Management of frail older people with acute illness. Intern Med J. 2019;49(1):28-33.

52. Casey P, Cross W, Mart MW, Baldwin C, Riddell K, Darzins P. Hospital discharge data under-reports delirium occurrence: results from a point prevalence survey of delirium in a major Australian health service. Intern Med J. 2019;49(3):338-44.

53. Curran EC, Chong T, Lautenschlager, N. Dementia: how to reduce the risk and impact. Clinical flowchart: suggested algorithm for managing patients with neuropsychiatric symptoms associated with dementia. Medicine Today. 2018.

54. Tan EC, Hilmer SN, Garcia-Ptacek S, Bell JS. Current approaches to the pharmacological treatment of Alzheimer's disease. Aust J Gen Pract. 2018;47(9):586-92.

55. Pond D. Office-based assessment of cognitive impairment. Aust J Gen Pract. 2018;47(9):602-5.

56. Liu E, Dyer, S.M., Whitehead, C., Kouladjian-O'Donnell, L., Gnanamanickam, E.S., Harrision, S.L., Milte, R., Crotty, M. Patterns of medication prescription by dementia diagnosis in Australian nursing home residents: a cross-sectional study. Journal of Pharmacy Practice and Research. 2019;49:33-40.

57. Page A, Etherton-Beer, C., Seubert, L.J., Clark, V., Hill, X., King, S., Clifford, R.M. Medication use to manage comorbidities for people with dementia: a systematic review. Journal of Pharmacy Practice and Research. 2018;48:356-67.

58. Hava C. Pharmacists' role in dementia care. Australian Pharmacist. 2019.

59. Campbell C, Page, A., Edwards, S., Moles, R., Lee, K., Pisano, A., Jackson, S., Freeman, C. Choosing wisely: sedatives. Australian Pharmacist. 2019.

60. Cowie T. Safe hands: minimising antipsychotic use in the elderly. Australian Pharmacist. 2019.

61. Smith S. Intervention reduces antipsychotic use in aged care. Australian Pharmacist. 2018.

62. Hava C. The startling extent of Australia's medication overuse. Australian Pharmacist. 2018.

63. Cowie T. Medicine use in aged care: a pill for every ill? Australian Pharmacist. 2018.

64. Khalil H. Management of apathy in patients with Alzheimer's disease. Australian Pharmacist. 2018.

65. Casey S. Early elixirs: sodium thiopental for truth or sleep. Australian Pharmacist. 2019.

66. Hava C. Help patients beat the extreme heat. Australian Pharmacist. 2019.

67. Hava C. Choosing wisely: new medicines advice service arrives. Australian Pharmacist. 2018.

68. News: free training set to improve hospital experience for people with dementia. Australian Nursing and Midwifery Journal. 2018.

69. Education - falls prevention. Australian Nursing and Midwifery Journal. 2018;26(4):32-4.

70. Kay S, Grealish, L., Cruickshank, M. The care of older people with dementia in rural Australian hospitals - a case study. The Australian Journal of Advanced Nursing. 2018;36(1):6.

71. Hoang H, Barnett, T., Maine, G., Crocombe, L. Aged care staff's experiences of 'Better Oral Health in Residential Care Training': a qualitative study. Contemporary Nurse. 2018;54(3):268-83.

72. The American Psychiatric Association. Practice Guideline on the Use of Antipsychotics to Treat Agitation or Psychosis in Patients With Dementia. 2016. Available from: https://psychiatryonline.org/doi/pdf/10.1176/appi.books.9780890426807.

73. National Institute for Health and Care Excellence (NICE). Dementia: assessment, management and support for people living with dementia and their carers 2018 [NICE guideline NG97]. Available from: https://www.nice.org.uk/guidance/ng97.

74. Zuidema SU, Johansson A, Selbaek G, Murray M, Burns A, Ballard C, et al. A consensus guideline for antipsychotic drug use for dementia in care homes. Bridging the gap between scientific evidence and clinical practice. International Psychogeriatrics. 2015;27(11):1849-59.

75. Therapeutic Guidelines. eTG April 2019 edition; Psychotropic guidelines: Dementia: treatment of mood and behavioural disturbances in dementia. eTG complete: Psychotropic. Melbourne, Victoria: Therapeutic Guidelines Ltd 2015.

76. Australian Commission on Safety and Quality in Health Care (ACSQHC). A better way to care: Safe and high-quality care for patients with cognitive impairment (dementia and delirium) in hospital - Actions for health service managers. Sydney, Australia: ACSQHC; 2014.

77. Australian and New Zealand Society for Geriatric Medicine (ANZSGM). Management of Behavioural and Psychological Symptoms of Dementia (BPSD), 2016. 12 August 2016. Position statement 26.

78. Australian Commission on Safety and Quality in Health Care (ACSQHC). National Safety and Quality Health Service Standards guide for hospitals, 2017. Action 5.29: Preventing delirium and managing cognitive impairment. Sydney, Australia: ACSQHC; 2017.

79. The Royal Australian and New Zealand College of Psychiatrists. Antipsychotic medications as a treatment of behavioural and psychological symptoms of dementia. Professional Practice Guideline 10. 2016.: The Royal Australian and New Zealand College of Psychiatrists; 2016.

80. Australian Medicines Handbook (AMH) Aged Care Companion. Behavioural and psychological symptoms of dementia. In: AMH Aged Care Companion. 2018 ed. Adelaide: AMH Pty Ltd; 2018.

81. Vic Health. Managing behavioural and psychological symptoms of dementia. In: Department of Health and Human Services State Government of Victoria, Australia, 2018.

82. Agency for Clinical Innovation (ACI) Aged Health Network. Key priniciples for care of confused hospitalised older persons. NSW Health; 2015.

83. University of South Australia Quality Use of Medicines and Pharmacy Research Centre. Veteran's MATES: Dementia and changes in behaviour. Adelaide 2016.

84. Hilmer SN. Deprescribing guide for antipsychotics for treatment of behavioural and psychological symptoms of dementia. Sydney, NSW: NSLHD, SLHD, NSW TAG and University of Sydney. 2018. Available from: http://www.nswtag.org.au/.

85. Bjerre LM, Farrell B, Hogel M, Graham L, Lemay G, McCarthy L, et al. Deprescribing antipsychotics for behavioural and psychological symptoms of dementia and insomnia: Evidence-based clinical practice guideline. Canadian Family Physician. 2018; 64(1):17-27.

86. Scottish Intercollegiate Guidelines Network (SIGN). Risk reduction and management of delirium. 2019. Contract No.: SIGN 157.

87. National Institute for Health Care Excellence (NICE). Delirium: prevention, diagnosis and management clinical guideline (CG103). 2019. Contract No.: CG103.

88. Australian Commission on Safety and Quality in Health Care (ACSQHC). Delirium Clinical Care Standard. 2016.

89. American Geriatrics Society Expert Panel on Postoperative Delirium in Older Adults. American Geriatrics Society abstracted clinical practice guideline for postoperative delirium in older adults. J Am Geriatr Soc. 2015;63(1):142-50.

90. Therapeutic Guidelines. Psychotropic guidelines: delirium: management of delirium. eTG complete. eTG April 2019 edition. Melbourne, Victoria 2015.

91. Australian Medicines Handbook (AMH) Aged Care Companion. Adelaide, Australia: Australian Medicines Handbook Pty Ltd; 2018.

92. Vic Health. Preventing and managing delirium. In: Department of Health and Human Services State Government of Victoria, Australia, 3 ed. Victoria 2018.

93. Alzheimer Society Canada. Use of antipsychotic medications to treat people with dementia in long-term care homes. Position Statement (2017).

94. Siddiqi N, House AO, Holmes JD. Occurrence and outcome of delirium in medical in-patients: a systematic literature review. Age Ageing. 2006;35(4):350-64.

95. de Lange E, Verhaak PF, van der Meer K. Prevalence, presentation and prognosis of delirium in older people in the population, at home and in long term care: a review. Int J Geriatr Psychiatry. 2013;28(2):127-34.

96. Margallo-Lana M, Swann A, O'Brien J, Fairbairn A, Reichelt K, Potkins D, et al. Prevalence and pharmacological management of behavioural and psychological symptoms amongst dementia sufferers living in care environments. Int J Geriatr Psychiatry. 2001;16(1):39-44.

97. Brodaty H, Draper BM, Low LF. Behavioural and psychological symptoms of dementia: a seven-tiered model of service delivery. Med J Aust. 2003;178(5):231-4.

Roles of Authors and Acknowlegements

Sarah Hilmer led all aspects of the conception and design of the work, the acquisition, analysis and interpretation of the data, drafting the work, critical appraisal, final approval and is accountable for the work. All other authors contributed to the design of the work. Danijela Gnjidic performed the data acquisition, analysis, interpretation and drafting for research question 1. Emily Reeve performed the data acquisition, analysis, interpretation and drafting for research question 2. Lisa Kalisch-Ellett contributed to the data acquisition, analysis and interpretation for research questions 2 and 3 and additional complementary scoping reviews. Helen Wu and Judy Raymond performed the data acquisition, analysis, interpretation and drafting for research questions 3 and 4.

We acknowledge the assistance of the following librarians with conducting the searches for this review: Yulia Ulyannikova , University of Sydney and Sarah McQuillen and Hayley Leaver, University of South Australia.

Appendix A. Detailed Search Strategies

Search Strategy for Research Question 1.

Database: Ovid MEDLINE(R) ALL <1946 to May 20, 2019>

Search Strategy:

---

1 exp Confusion/ (12825)

2 postoperative psychos*.mp. (111)

3 confusion.mp. (33204)

4 delirium.mp. (16469)

5 exp Dementia/ (153831)

6 neuropsych*.mp. (143277)

7 ((aggress* or agitat*) and behavio?r).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] (47991)

8 (behavio?ral and psychological symptom* of dementia).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms] (1241)

9 BPSD.mp. (930)

10 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 (366618)

11 case reports/ or observational study/ (2058738)

12 exp case-control studies/ or exp cohort studies/ or cross-sectional studies/ (2286019)

13 11 or 12 (4199979)

14 exp Australia/ (134705)

15 Australia.mp. (150124)

16 14 or 15 (168754)

17 10 and 13 and 16 (877)

18 limit 17 to "all aged (65 and over)" (527)

19 limit 18 to last 5 years (201)

Database: Embase Classic <1947 to 1973>, Embase <1974 to 2019 May 20>

Search Strategy:

---

1 exp delirium/ (29553)

2 exp confusion/ (28891)

3 postoperative psychos*.mp. (152)

4 (confusion or delirium).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word, candidate term word] (97353)

5 exp dementia/ (337071)

6 neuropsych*.mp. (159220)

7 ((aggress* or agitat*) and behavio?r).mp. (69439)

8 (behavio?ral and psychological symptom* of dementia).mp. (1875)

9 BPSD.mp. (1533)

10 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 (616245)

11 case report/ (2391415)

12 observational study/ (167277)

13 exp case control study/ (158071)

14 cohort analysis/ (465909)

15 11 or 12 or 13 or 14 (3131491)

16 exp Australia/ (155498)

17 Australia.mp. (209524)

18 16 or 17 (211811)

19 10 and 15 and 18 (439)

20 limit 19 to aged <65+ years> (207)

21 limit 20 to last 5 years (118)

Database: PsycINFO <1806 to May Week 2 2019>

Search Strategy:

---

1 delirium/ (3136)

2 mental confusion/ (867)

3 (delirium or confusion).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] (24143)

4 exp dementia/ (72408)

5 neuropsych*.mp. (96025)

6 ((aggress* or agitat*) and behavio?r).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] (59577)

7 (behavio?ral and psychological symptom* of dementia).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures] (931)

8 BPSD.mp. (753)

9 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 (236282)

10 case report/ (22898)

11 observation* stud*.mp. (10153)

12 case-control stud*.mp. (7089)

13 cohort stud*.mp. (19511)

14 cross-section* stud*.mp. (23906)

15 10 or 11 or 12 or 13 or 14 (82155)

16 Australia.mp. (31795)

17 9 and 15 and 16 (76)

18 limit 17 to last 5 years (32)

Search Strategy for Research Question 2.

Restricted database searches

The traditional databases Medline, Embase and PsycINFO as well as the non-traditional database Google Scholar were searched, limiting the results to the last 5 years. The search terms and date of searches are shown in Appendix A. Up to the first 100 results from each database were extracted, combined, and then duplicates were removed. Titles and abstracts were screened, with all those considered potentially relevant undergoing full text review. Additionally, for relevant original research articles, all references and all citing articles were reviewed (citation chain searching).

Inclusion criteria:

- original research (quantitative, qualitative or mixed methods, any study design);
- participants were the public, people with dementia, carers, or practicing health care professionals; and
- the research question, primary or secondary, asked what terms were most acceptable and/or preferred terms for BPSD or delirium.

Restricted Google search

We searched Google to identify resources not indexed in traditional databases or Google Scholar. We reviewed the first 100 results of this search to identify potentially relevant documents or resources.

Inclusion criteria:

- Document must be developed or endorsed by a professional, government, educational (i.e. university) or consumer organisation
- Date of development within past 5 years
- Australian

Where relevant documents were identified, references relevant to the reported preferred terms were reviewed for inclusion in this section or where reporting original research articles.

Targeted search of relevant Australian medical, pharmacy and nursing clinical publications

All articles published in the last 12 months in the listed journals (Appendix A) were searched for the terms ‘dementia’, ‘delirium’ or ‘antipsychotic*’ to identify any reference to symptoms, changes or the condition of BPSD or delirium. That is, these specific terms did not have to be used. We reviewed the text for any terms related to change in behaviours or psychological symptoms in people with dementia, or acute confusional states (in people with or without dementia). The search was restricted to title and abstract (where possible) to identify the most relevant articles.

Targeted search for Australian consumer directed publications and resources

A number of sources (websites) were searched to identify documents which use terminology related to BPSD and delirium which are targeted towards a public (or specifically person with dementia or carer) audience (Appendix A). We only included resources that were publicly available.

Restricted database searches

Database	Date of search	Search terms
Ovid MEDLINE(R) ALL <1946 to May 31, 2019>	3/06/19	1 exp Confusion/ (12869) 2 postoperative psychos*.mp. (111) 3 confusion.mp. (33371) 4 delirium.mp. (16546) 5 exp Dementia/ (154211) 6 neuropsych*.mp. (143651) 7 ((aggress* or agitat*) and behavio?r).mp. (48204) 8 (behavio?ral and psychological symptom* of dementia).mp. (1247) 9 BPSD.mp. (935) 10 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 (367768) 11 (consumer* or patient* or carer* or caregiver* or client* or clinician* or physician* or doctor* or nurse* or pharmacist*).mp. (7230482) 12 ((prefer* or recommend* or guid* or friendly) and (term* or language)).mp. (224959) 13 exp Australia/ (134969) 14 10 and 11 and 12 and 13 (40) 15 limit 14 to yr="2014 -Current"
Embase Classic+Embase <1947 to 2019 May 31>	3/06/19	1 exp Confusion/ (29166) 2 postoperative psychos*.mp. (170) 3 confusion.mp. (70734) 4 delirium.mp. (33820) 5 exp Dementia/ (340824) 6 neuropsych*.mp. (160895) 7 ((aggress* or agitat*) and behavio?r).mp. (71648) 8 (behavio?ral and psychological symptom* of dementia).mp. (1882) 9 BPSD.mp. (1537) 10 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 (625280) 11 (consumer* or patient* or carer* or caregiver* or client* or clinician* or physician* or doctor* or nurse* or pharmacist*).mp. (10864972) 12 ((prefer* or recommend* or guid* or friendly) and (term* or language)).mp. (336852) 13 exp Australia/ (161125) 14 10 and 11 and 12 and 13 (89) 15 limit 14 to yr="2014 -Current"
PsycINFO <1806 to May Week 4 2019>	3/06/19	1 exp Confusion/ (870) 2 postoperative psychos*.mp. (51) 3 confusion.mp. (18584) 4 delirium.mp. (6561) 5 exp Dementia/ (72554) 6 neuropsych*.mp. (96238) 7 ((aggress* or agitat*) and behavio?r).mp. (59670) 8 (behavio?ral and psychological symptom* of dementia).mp. (935) 9 BPSD.mp. (755) 10 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 (236776)

		11 (consumer* or patient* or carer* or caregiver* or client* or clinician* or physician* or doctor* or nurse* or pharmacist*).mp. (1021366) 12 ((prefer* or recommend* or guid* or friendly) and (term* or language)).mp. (80305) 13 Australia.mp. (31841) 14 10 and 11 and 12 and 13 (17) 15 limit 14 to yr="2014 -Current"
Google Scholar	3/06/19	(terminology OR term OR language) AND (preference OR preferred OR friendly OR recommended) AND (patient OR consumer OR carer OR caregiver OR clinician OR physician OR doctor OR pharmacist OR nurse) AND ("behavioural and psychological symptoms of dementia" OR delirium) AND Australia* Limit 2014-2019

Google search with review of the first 100 results of each only.

Search strategy: terminology prefer* patient OR consumer OR carer OR caregiver OR clinician OR physician OR doctor OR pharmacist OR nurse "behavioural and psychological symptoms of dementia" OR delirium. Limit to last 5 years (2014-2019)

Targeted search of relevant Australian medical, pharmacy and nursing clinical publications

The following journals (and source of search) were included:

- Medical Journal of Australia (MJA): Journal website, advanced search function (could not limit to title and abstract, full text included)
- Internal Medicine Journal (IMJ): NCBI advanced search
- Medicine Today Journal: journal website searched (all article types except patient handouts)
- Australian Journal of General Practice (AJGP): NCBI advanced search
- Journal of Pharmacy Practice and Research (JPPR): Wiley online advanced search
- Australian Pharmacist: Journal website (could not limit to title and abstract, full text included)
- Australian Prescriber: NCBI advanced search
- Australian Nursing and Midwifery Journal: NCBI advanced search plus hand searched full text pdfs of all issues (as NCBI only included research article types)
- Australian Journal of Advanced Nursing: Informit advanced search
- Contemporary nurse: Taylor and Francis journal website (couldn't limit to abstract in search but removed at screening stage, also at search stage removed those where first author not Australian as the journal has moved to an international focus recently)

Numbers of articles identified are shown in the table below.

Targeted search for Australian consumer directed publications and resources

The following relevant sources (websites) were searched:

- Dementia Australia
- NPS MedicineWise
- Choosing Wisely Australia
- Health Direct
- Dementia Training Australia
- Dementia Centre for Research Collaboration (DCRC)
- Australian Institute of Health and Welfare
- National Ageing Research Institute (NARI)
- Australian Indigenous HealthInfoNet
- My Aged Care
- Dementia Support Australia
- NHMRC Cognitive Decline Partnership Centre
- Veterans' MATES
- Australian Government Department of Health and Ageing
- COTA Australia
- Carers Australia

Search strategy for Questions 3 and 4.

Black literature search strategy:

Databases:

- Medline and Medline All (this covers 'new' papers that are not yet indexed in Medline)
- Embase
- Cochrane Library (Cochrane DB SR, CENTRAL, Special Collections, Clinical Answers)
- ANZ Clinical trials
- DRUG
- Emcare
- InfoRMIT Health
- JBI
- ETG
- Pharmaceutical News (Proquest)

Inclusion criteria for papers identified in the literature search:

- Studies involving people aged 65 years or over, relating to the prescription and use of antipsychotics for BPSD or delirium
- Types of studies to include: guidelines, policies or strategic directions (Australian and international), systematic reviews and meta-analysis

- Time period: 2014-current (noting that earlier important works should also be included, and that individual studies should be included if systematic reviews/meta analyses are outdated

Medline

Database(s): **Ovid MEDLINE(R) ALL** 1946 to May 30, 2019
Search Strategy:

#	Searches	Results
1	exp aged/	2947478
2	geriatrics/	29227
3	geriatric psychiatry/	2291
4	(aged patient$ or aged person or aged people or aged subject$ or "the aged" or elder* or senior citi?en$ or seniors or geriatric$ or old* adult$ or old* person or old* people or old* patient$ or old* subject$ or gerontopsychiatry or ageing or aging).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]	5368265
5	or/1-4	5368265
6	dementia/	47228
7	alzheimer disease/	87309
8	Lewy body disease/	2928
9	frontotemporal dementia/	2300
10	Huntington disease/	11514
11	dementia, multi-infarct/	1086
12	dementia, vascular/	4717
13	Delirium/	8427
14	Pick disease of the brain/	501
15	(lewy bod* or dementia$ or Alzheimer* or pick* disease or huntington* or BPSD or delirium or senility).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]	254192
16	or/6-15	254192
17	5 and 16	126085
18	Antipsychotic Agents/	51767
19	risperidone/	6036
20	Quetiapine Fumarate/	2652
21	Paliperidone Palmitate/	773
22	olanzapine/	5360

23	Lurasidone Hydrochloride/	205
24	aripiprazole/	2214
25	amisulpride/	680
26	Clopenthixol/	395
27	haloperidol/	15524
28	chlorpromazine/	17183
29	Acepromazine/	678
30	Benperidol/	798
31	Loxapine/	302
32	Methotrimeprazine/	783
33	Pimozide/	1698
34	Promazine/	1099
35	Thiothixene/	334
36	Trifluoperazine/	3566
37	(amisulpride or aktiprol or amilia or aminosultopride or amiprid or amisan or amissulprida or amisulgen or amisulid or amisulpiride or amisulpisan or amisulprid or amisulprida or amisulpridlich or amisulpridum or amitrex or amsulgen or aposuprid or aracalm or "dan 2163" or dan2163 or deniban or isofredil or nodasic or pridosil or sertol or socian or solian or sulamid or aripiprazole or abilify or abilitat or "opc 14597" or opc14597 or real one or asenapine or "org 5222" or org5222 or saphris or sycrest or lurasidone or latuda or "mk 3756" or mk3756 or "sm 13496" or sm13496 or "smp 13496" or smp13496 or olanzapine or anzatric or dopin tab or jolyon md or lanopin or lanzac or "ly 170053" or ly170053 or meltolan or midax or olace or oladay or olan or olandus or olanex or olansek or olanzapine mylan or olapin or olazax or oleanz or olexar or oltal or olzap or onza or ozapin md or psychozap or relprevv or zalasta or zelta or zypadhera or zyprex or zyprexa or zyprexav or paliperidone or invega or "r 76477" or r76477 or "ro 76477" or "ro 92670" or ro76477 or ro92670 or trevicta or xeplion or quetiapine or alcreno or alzen or biquelle or desiquet or "ici 204636" or "ici 204646" or ici204636 or ici204646 or ketileppt or ketilept or ketipinor or kvelux or kventiax or psicotric or quetex or seresano or seroquel or setinin or socalm or tienapine or tomel or xeroquel or risperidone or belivon or consta or eperon or neripros or noprenia or "r 64766" or r64766 or riperidon or risolept or rispen or risperdal or risperdalconsta lp or risperdaloro or risperidone or rispid or rispolept or rispolet or rispolux neo or rizodal or sequinan or zargus or zofredal or ziprasidone or "cp 88059" or "cp 88059?01" or "cp 88059?27" or cp88059 or cp88059?01 or cp88059?27 or geodon or zeldox or zeldrox or zipsydon or anti?psychotic agent$ or antipsychotic drug or anti?psychotics or butyrophenone tranquil?i?er$ or classical anti?psychotic$ or long acting neuroleptic$ or major tranquil?i?er$ or neuroleptic$ or neurolepticum or phenothiazine	122143

	tranquil?i?er$ or tranquil?i?ing agent$ or typical anti?psychotic$ or chlorpromazine or "2601 a" or "4560 r p" or aminasin or aminasine or aminazin or aminazine or ampliactil or amplictil or ancholactil or aspersinal or bellacina or cepezet or chlomazine or "chlor pz" or chloractil or chlorbromasin or chlordelazine or chlorderazin or chlormazine or chloropromazine or chlorpromanyl or chlorpromazine or chlorpromed or clonazine or clordelazin or clorpromaz or clorpromazine or clozine or contomin or duncan or elmarin or esmino or fenactil or hibanil or hibernal or hibernol or "hl 3746" or "hl 5746" or klorproman or klorpromazin or klorpromex or laractyl or largactil or largactyl or matcine or megaphen or megatil or "ml 5746" or neomazine or neurazine or novomazina or phenethyl or plegomazin or plegomazine or proma or promacid or promactil or promapar or promazil or promexin or propaphen or propaphenin or prozil or prozin or psychozine or psynor or "rp 4560" or sanopron or "skf 2601 a" or solidon or sonazine or taroctil or taroctyl or thor prom or thorazene or thorazine or torazina or vegetamin or winsumin or wintamine or wintermin or zuledin or haloperidol or alased or aloperidin or aloperidine or apo?haloperidol or avant or benison or brotopon or celenase or cereen or cerenace or cizoren or depidol or dores or dozic or duraperidol or einalon s or fortunan or govotil or haldol or halidol or halo?p or halojust or halomed or haloneural or haloper or haloperil or haloperin or haloperitol or halopidol or halopol or halosten or haricon or haridol?d or keselan or linton or lodomer?2 or "mcn jr 1625" or "mcn jr1625" or mixidol or novoperidol or "nsc 170973" or nsc170973 or peluces or perida or peridol or peridor or "r 1625" or r1625 or selezyme or seranace or serenace or serenase or serenelfi or siegoperidol or sigaperidol or trancodol?10 or trancodol?5 or Brexpiprazole or "opc 34712" or opc34712 or rexulti or rxulti or Periciazine or aolept or neulactil or neuleptil or neuleptile or periciazinum or periciazine or properciazine or propericiazin or propericiazine or "rp 8909" or "skf 20716" or Zuclopenthixol or cis clopenthixol or cisordinol or sedanxol or z clopenthixol or zuclopenthixol dihydrochloride or zuclopentixol).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]	
38	(Thorazine or Acepromazine or Benperidol or Methotrimeprazine or Pimozide or Promazine or Thiothixene or Trifluoperazine or acetazine or acetylpromazine or notensil or promace or soprintin or vetranquil or benperidone or benz?peridol or "cb 8089" or cb8089 or frenactyl or glianimon or "mcn jr 4584" or "mcn jr4584" or phenactil or "r 4584" or "r4584" or adasuve or "alxz 004" or alxz004 or "az 004" or az004 or "cl 62?362" or "cl62?362" or cloxazepin or cloxazepine or loxapane or loxapin? or "loxitane c" or "loxitane im" or oxilapine or "sum 3170" or sum3170 or desconex or loxapac or loxitane or levomepromazine or "bayer 1213" or "cl 36467" or "cl 39743" or cl36467 or cl39743 or hirnamin or "l mepromazine" or levium or "levo mepromazine" or "levo promazine" or levomeprazine or levopromazin or levopromazine or levoprome or levozin or mepromazine or methotrimeprazine or methozane or milezin or	13010

	minozinan or neozine or neuractil or neurocil or nirvan or nozinan or "rp 7044" or "rp7044" or sinogan or "sk and f 5116" or "skf 5116" or skf5116 or tis?erin or tisercin or veractil or antalon or "mcn jr 6238" or opiran or orap or pimocide or pimoride or pimozide or pizide or "r 6238" or alofen or alophen or ampazine or amprazim or centractyl or delazin or esparin or lete or liranol or "neo hibernex" or neuroplegil or piarine or prazine or "pro tan" or promantine or promanyl or promilene or promwill or protact?l or romthiazine or romtiazin or "rp 3276" or sediston or sinophenin? or sparine or tomil or v?rophen or "wy 1094" or tiotixene or "cp 12,252 1" or "cp 12252 1" or "cp 122521" or "cp12,252 1" or "cp12252 1" or "cp122521" or navan or navane or "nsc 108165" or nsc108165 or onaven or orbinamon or "p 4657 b" or "p 4657b" or p4657b or thiothixene or thiothixene or thiotixene or thiotixin or thiotixine or thixit or tiotixene chloride or calmazine or eskazine or eskazinyl or espazine or fluoperazine or fluperin or flurazin or iremo-pierol or jatroneural or leptazine or modalina or modiur or nerolet or nylipton or operzine or oxyperazine or psyrazine or "sk and f 5019" or "skf 5019" or sporalon or stelazine or terfluzin or terfluzine or triflumed or trifluoperazide or trifluoperazine dihydrochloride or trifluoperzine or trifluoroperazine or trifluorperacine or trifluorperazine or trifluperazine or triflurin or triftazin or triftazine or triftazinum or trinicalm or triozine or triphtazine or triphthasine or triphthazine).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]	
39	chemical* restrain*.mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]	434
40	or/18-39	130629
41	guideline/	16102
42	practice guideline/	25209
43	nursing assessment/	28707
44	consensus/	10573
45	clinical protocols/	26662
46	standing orders/	10
47	policy/	2197
48	organizational policy/	13811
49	program evaluation/	59548
50	Clinical governance/	492
51	"United States Food and Drug Administration"/	28140

52	world health organization/	32598
53	systematic review/	107398
54	(guid* or protocol$ or consensus or policy or policies or program$ or programme$ or "food and drug administration" or world health organization or therapeutic goods administration or pan american health organisation or systematic* review*).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]	2663228
55	(standing adj2 order$).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]	553
56	or/41-55	2686369
57	new zealand/	37217
58	exp australia/	134947
59	united kingdom/	221050
60	northern ireland/	4735
61	exp england/	103259
62	scotland/	23979
63	wales/	13706
64	exp canada/	149808
65	exp United States/	1297397
66	(australia or united kingdom or UK or new zealand or NZ or canada or united states or north america or US or USA or britain or england or wales or scotland or northern ireland or south australia or tasmania or victoria or western australia or northern territory or queensland or new south wales or australian capital territory or quebec or ontario or nova scotia or new brunswick or manitoba or british columbia or prince edward island or alberta or new foundland or labrador or saskatchewan or alaska or hawaii or alabama or arizona or arkansas or california or colorado or connecticut or delaware or florida or georgia or idaho or illinois or indiana or iowa or kansas or kentucky or louisiana or maine or maryland or massachusetts or michican or minnesota or mississippi or missouri or montana or nebraska or nevada or new hampshire or new jersey or new mexico or new york or north carolina or north dakota or ohio or oklahoma or oregon or pennsylvania or rhode island or south carolina or south dakota or tennessee or texas or utah or vermont or virginia or washington or west virginia or wisconsin or wyoming).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word,	10282031

	protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]	
67	or/57-66	10324563
68	17 and 40 and 56 and 67	311
69	limit 68 to (english language and yr="2014 -Current")	107

Embase

Database(s): **Embase Classic+Embase** 1947 to 2019 May 30
Search Strategy:

#	Searches	Results
1	exp aged/	2958604
2	geriatrics/	36844
3	gerontopsychiatry/	7541
4	geriatric patient/	22870
5	(aged patient$ or aged person or aged people or aged subject$ or "the aged" or elder* or senior citi?en$ or seniors or geriatric$ or old* adult$ or old* person or old* people or old* patient$ or old* subject$ or gerontopsychiatry or ageing or aging).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word, candidate term word]	4892216
6	or/1-5	4892216
7	dementia/	112269
8	alzheimer disease/	184417
9	diffuse Lewy body disease/	7972
10	frontotemporal dementia/	12843
11	Huntington chorea/	25904
12	multiinfarct dementia/	11581
13	senile dementia/	3240
14	Delirium/	26229
15	senility/	1716
16	Pick presenile dementia/	1361
17	(lewy bod* or dementia$ or Alzheimer* or pick* disease or huntington* or BPSD or delirium or senility).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word, candidate term word]	399828
18	or/7-17	399828
19	6 and 18	162383
20	neuroleptic agent/	78003
21	atypical antipsychotic agent/	13933
22	ziprasidone/	8707
23	risperidone/	35170
24	quetiapine/	22404

25	paliperidone/	4139
26	olanzapine/	32529
27	lurasidone/	1433
28	asenapine/	1335
29	aripiprazole/	14356
30	amisulpride/	5387
31	Zuclopenthixol/	1999
32	Periciazine/	1000
33	Brexpiprazole/	358
34	haloperidol/	57654
35	chlorpromazine/	51927
36	Acepromazine/	1954
37	Benperidol/	1399
38	Loxapine/	2414
39	Loxapine succinate/	434
40	levomepromazine/	5783
41	Pimozide/	7915
42	Promazine/	3457
43	tiotixene/	2606
44	Trifluoperazine/	10514
45	trifluoperazine derivative/	15
46	(amisulpride or aktiprol or amilia or aminosultopride or amiprid or amisan or amissulprida or amisulgen or amisulid or amisulpiride or amisulpisan or amisulprid or amisulprida or amisulpridlich or amisulpridum or amitrex or amsulgen or aposuprid or aracalm or "dan 2163" or dan2163 or deniban or isofredil or nodasic or pridosil or sertol or socian or solian or sulamid or aripiprazole or abilify or abilitat or "opc 14597" or opc14597 or real one or asenapine or "org 5222" or org5222 or saphris or sycrest or lurasidone or latuda or "mk 3756" or mk3756 or "sm 13496" or sm13496 or "smp 13496" or smp13496 or olanzapine or anzatric or dopin tab or jolyon md or lanopin or lanzac or "ly 170053" or ly170053 or meltolan or midax or olace or oladay or olan or olandus or olanex or olansek or olanzapine mylan or olapin or olazax or oleanz or olexar or oltal or olzap or onza or ozapin md or psychozap or relprevv or zalasta or zelta or zypadhera or zyprex or zyprexa or zyprexav or paliperidone or invega or "r 76477" or r76477 or "ro 76477" or "ro 92670" or ro76477 or ro92670 or trevicta or xeplion or quetiapine or alcreno or alzen or biquelle or desiquet or "ici 204636" or "ici 204646" or ici204636 or ici204646 or ketileppt or ketilept or ketipinor or kvelux or kventiax or psicotric or quetex or seresano or	226148

	seroquel or setinin or socalm or tienapine or tomel or xeroquel or risperidone or belivon or consta or eperon or neripros or noprenia or "r 64766" or r64766 or riperidon or risolept or rispen or risperdal or risperdalconsta lp or risperdaloro or risperidone or rispid or rispolept or rispolet or rispolux neo or rizodal or sequinan or zargus or zofredal or ziprasidone or "cp 88059" or "cp 88059?01" or "cp 88059?27" or cp88059 or cp88059?01 or cp88059?27 or geodon or zeldox or zeldrox or zipsydon or anti?psychotic agent$ or antipsychotic drug or anti?psychotics or butyrophenone tranquil?i?er$ or classical anti?psychotic$ or long acting neuroleptic$ or major tranquil?i?er$ or neuroleptic$ or neurolepticum or phenothiazine tranquil?i?er$ or tranquil?i?ing agent$ or typical anti?psychotic$ or chlorpromazine or "2601 a" or "4560 r p" or aminasin or aminasine or aminazin or aminazine or ampliactil or amplictil or ancholactil or aspersinal or bellacina or cepezet or chlomazine or "chlor pz" or chloractil or chlorbromasin or chlordelazine or chlorderazin or chlormazine or chloropromazine or chlorpromanyl or chlorpromazine or chlorpromed or clonazine or clordelazin or clorpromaz or clorpromazine or clozine or contomin or duncan or elmarin or esmino or fenactil or hibanil or hibernal or hibernol or "hl 3746" or "hl 5746" or klorproman or klorpromazin or klorpromex or laractyl or largactil or largactyl or matcine or megaphen or megatil or "ml 5746" or neomazine or neurazine or novomazina or phenethyl or plegomazin or plegomazine or proma or promacid or promactil or promapar or promazil or promexin or propaphen or propaphenin or prozil or prozin or psychozine or psynor or "rp 4560" or sanopron or "skf 2601 a" or solidon or sonazine or taroctil or taroctyl or thor prom or thorazene or thorazine or torazina or vegetamin or winsumin or wintamine or wintermin or zuledin or haloperidol or alased or aloperidin or aloperidine or apo?haloperidol or avant or benison or brotopon or celenase or cereen or cerenace or cizoren or depidol or dores or dozic or duraperidol or einalon s or fortunan or govotil or haldol or halidol or halo?p or halojust or halomed or haloneural or haloper or haloperil or haloperin or haloperitol or halopidol or halopol or halosten or haricon or haridol?d or keselan or linton or lodomer?2 or "mcn jr 1625" or "mcn jr1625" or mixidol or novoperidol or "nsc 170973" or nsc170973 or peluces or perida or peridol or peridor or "r 1625" or r1625 or selezyme or seranace or serenace or serenase or serenelfi or siegoperidol or sigaperidol or trancodol?10 or trancodol?5 or Brexpiprazole or "opc 34712" or opc34712 or rexulti or rxulti or Periciazine or aolept or neulactil or neuleptil or neuleptile or periciazinum or periciazine or properciazine or propericiazin or propericiazine or "rp 8909" or "skf 20716" or Zuclopenthixol or cis clopenthixol or cisordinol or sedanxol or z clopenthixol or zuclopenthixol dihydrochloride or zuclopentixol).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word, candidate term word]	
47	(Thorazine or Acepromazine or Benperidol or Methotrimeprazine or Pimozide or Promazine or Thiothixene or Trifluoperazine or acetazine or acetylpromazine or notensil or promace or soprintin or vetranquil or benperidone or benz?peridol or "cb 8089" or cb8089 or frenactyl or glianimon or "mcn jr 4584" or "mcn jr4584" or phenactil or "r 4584" or "r4584" or adasuve or	33438

	"alxz 004" or alxz004 or "az 004" or az004 or "cl 62?362" or "cl62?362" or cloxazepin or cloxazepine or loxapane or loxapin? or "loxitane c" or "loxitane im" or oxilapine or "sum 3170" or sum3170 or desconex or loxapac or loxitane or levomepromazine or "bayer 1213" or "cl 36467" or "cl 39743" or cl36467 or cl39743 or hirnamin or "l mepromazine" or levium or "levo mepromazine" or "levo promazine" or levomeprazine or levopromazin or levopromazine or levoprome or levozin or mepromazine or methotrimeprazine or methozane or milezin or minozinan or neozine or neuractil or neurocil or nirvan or nozinan or "rp 7044" or "rp7044" or sinogan or "sk and f 5116" or "skf 5116" or skf5116 or tis?erin or tisercin or veractil or antalon or "mcn jr 6238" or opiran or orap or pimocide or pimoride or pimozide or pizide or "r 6238" or alofen or alophen or ampazine or amprazim or centractyl or delazin or esparin or lete or liranol or "neo hibernex" or neuroplegil or piarine or prazine or "pro tan" or promantine or promanyl or promilene or promwill or protact?l or romthiazine or romtiazin or "rp 3276" or sediston or sinophenin? or sparine or tomil or v?rophen or "wy 1094" or tiotixene or "cp 12,252 1" or "cp 12252 1" or "cp 122521" or "cp12,252 1" or "cp12252 1" or "cp122521" or navan or navane or "nsc 108165" or nsc108165 or onaven or orbinamon or "p 4657 b" or "p 4657b" or p4657b or thiothixene or thiothixene or thiotixene or thiotixin or thiotixine or thixit or tiotixene chloride or calmazine or eskazine or eskazinyl or espazine or fluoperazine or fluperin or flurazin or iremo-pierol or jatroneural or leptazine or modalina or modiur or nerolet or nylipton or operzine or oxyperazine or psyrazine or "sk and f 5019" or "skf 5019" or sporalon or stelazine or terfluzin or terfluzine or triflumed or trifluoperazide or trifluoperazine dihydrochloride or trifluoperzine or trifluoroperazine or trifluorperacine or trifluorperazine or trifluperazine or triflurin or triftazin or triftazine or triftazinum or trinicalm or triozine or triphtazine or triphthasine or triphthazine).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word, candidate term word]	
48	chemical* restrain*.mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word, candidate term word]	552
49	or/20-48	240935
50	practice guideline/	377813
51	nursing protocol/	155
52	consensus development/	23788
53	exp clinical protocol/	93091
54	policy/	90855
55	organizational policy/	863
56	health care policy/	184252
57	hospital policy/	2279
58	exp health program/	124643

59	european medicines agency/	2355
60	"food and drug administration"/	84895
61	world health organization/	104581
62	systematic review/	205898
63	(guid* or protocol$ or consensus or policy or policies or program$ or programme$ or "food and drug administration" or world health organization or therapeutic goods administration or pan american health organisation or systematic* review*).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word, candidate term word]	3830808
64	(standing adj2 order$).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word, candidate term word]	761
65	or/50-64	3831879
66	exp "Australia and New Zealand"/	219776
67	exp united kingdom/	433211
68	exp canada/	180131
69	exp United States/	1256188
70	(australia or united kingdom or UK or new zealand or NZ or canada or united states or north america or US or USA or britain or england or wales or scotland or northern ireland or south australia or tasmania or victoria or western australia or northern territory or queensland or new south wales or australian capital territory or quebec or ontario or nova scotia or new brunswick or manitoba or british columbia or prince edward island or alberta or new foundland or labrador or saskatchewan or alaska or hawaii or alabama or arizona or arkansas or california or colorado or connecticut or delaware or florida or georgia or idaho or illinois or indiana or iowa or kansas or kentucky or louisiana or maine or maryland or massachusetts or michican or minnesota or mississippi or missouri or montana or nebraska or nevada or new hampshire or new jersey or new mexico or new york or north carolina or north dakota or ohio or oklahoma or oregon or pennsylvania or rhode island or south carolina or south dakota or tennessee or texas or utah or vermont or virginia or washington or west virginia or wisconsin or wyoming).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word, candidate term word]	4023131
71	or/66-70	4025059
72	19 and 49 and 65 and 71	373
73	limit 72 to (english language and yr="2014 -Current")	149

Emcare

Database(s): **Ovid Emcare** 1995 to 2019 week 21
Search Strategy:

#	Searches	Results
1	exp aged/	710795
2	geriatrics/	8580
3	gerontopsychiatry/	2750
4	geriatric patient/	10854
5	(aged patient$ or aged person or aged people or aged subject$ or "the aged" or elder* or senior citi?en$ or seniors or geriatric$ or old* adult$ or old* person or old* people or old* patient$ or old* subject$ or gerontopsychiatry or ageing or aging).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword]	1008019
6	or/1-5	1008019
7	dementia/	45070
8	alzheimer disease/	46575
9	diffuse Lewy body disease/	2250
10	frontotemporal dementia/	3464
11	Huntington chorea/	3367
12	multiinfarct dementia/	4081
13	senile dementia/	642
14	Delirium/	9743
15	senility/	243
16	Pick presenile dementia/	243
17	(lewy bod* or dementia$ or Alzheimer* or pick* disease or huntington* or BPSD or delirium or senility).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword]	105573
18	or/7-17	105573
19	6 and 18	55672
20	neuroleptic agent/	17890
21	atypical antipsychotic agent/	4363
22	ziprasidone/	2372
23	risperidone/	9116
24	quetiapine/	6263
25	paliperidone/	782

26	olanzapine/	8592
27	lurasidone/	265
28	asenapine/	293
29	aripiprazole/	3534
30	amisulpride/	1094
31	Zuclopenthixol/	409
32	Periciazine/	135
33	Brexpiprazole/	65
34	haloperidol/	8832
35	chlorpromazine/	4535
36	Acepromazine/	93
37	Benperidol/	45
38	Loxapine/	471
39	Loxapine succinate/	74
40	levomepromazine/	744
41	Pimozide/	857
42	Promazine/	195
43	tiotixene/	397
44	Trifluoperazine/	792
45	trifluoperazine derivative/	0
46	(amisulpride or aktiprol or amilia or aminosultopride or amiprid or amisan or amissulprida or amisulgen or amisulid or amisulpiride or amisulpisan or amisulprid or amisulprida or amisulpridlich or amisulpridum or amitrex or amsulgen or aposuprid or aracalm or "dan 2163" or dan2163 or deniban or isofredil or nodasic or pridosil or sertol or socian or solian or sulamid or aripiprazole or abilify or abilitat or "opc 14597" or opc14597 or real one or asenapine or "org 5222" or org5222 or saphris or sycrest or lurasidone or latuda or "mk 3756" or mk3756 or "sm 13496" or sm13496 or "smp 13496" or smp13496 or olanzapine or anzatric or dopin tab or jolyon md or lanopin or lanzac or "ly 170053" or ly170053 or meltolan or midax or olace or oladay or olan or olandus or olanex or olansek or olanzapine mylan or olapin or olazax or oleanz or olexar or oltal or olzap or onza or ozapin md or psychozap or relprevv or zalasta or zelta or zypadhera or zyprex or zyprexa or zyprexav or paliperidone or invega or "r 76477" or r76477 or "ro 76477" or "ro 92670" or ro76477 or ro92670 or trevicta or xeplion or quetiapine or alcreno or alzen or biquelle or desiquet or "ici 204636" or "ici 204646" or ici204636 or ici204646 or ketileppt or ketilept or ketipinor or kvelux or kventiax or psicotric or quetex or seresano or seroquel or setinin or socalm or tienapine or tomel or xeroquel or risperidone or belivon or consta or eperon or neripros or noprenia or "r 64766" or r64766 or riperidon or risolept or rispen	39308

	or risperdal or risperdalconsta lp or risperdaloro or risperidone or rispid or rispolept or rispolet or rispolux neo or rizodal or sequinan or zargus or zofredal or ziprasidone or "cp 88059" or "cp 88059?01" or "cp 88059?27" or cp88059 or cp88059?01 or cp88059?27 or geodon or zeldox or zeldrox or zipsydon or anti?psychotic agent$ or antipsychotic drug or anti?psychotics or butyrophenone tranquil?i?er$ or classical anti?psychotic$ or long acting neuroleptic$ or major tranquil?i?er$ or neuroleptic$ or neurolepticum or phenothiazine tranquil?i?er$ or tranquil?i?ing agent$ or typical anti?psychotic$ or chlorpromazine or "2601 a" or "4560 r p" or aminasin or aminasine or aminazin or aminazine or ampliactil or amplictil or ancholactil or aspersinal or bellacina or cepezet or chlomazine or "chlor pz" or chloractil or chlorbromasin or chlordelazine or chlorderazin or chlormazine or chloropromazine or chlorpromanyl or chlorpromazine or chlorpromed or clonazine or clordelazin or clorpromaz or clorpromazine or clozine or contomin or duncan or elmarin or esmino or fenactil or hibanil or hibernal or hibernol or "hl 3746" or "hl 5746" or klorproman or klorpromazin or klorpromex or laractyl or largactil or largactyl or matcine or megaphen or megatil or "ml 5746" or neomazine or neurazine or novomazina or phenethyl or plegomazin or plegomazine or proma or promacid or promactil or promapar or promazil or promexin or propaphen or propaphenin or prozil or prozin or psychozine or psynor or "rp 4560" or sanopron or "skf 2601 a" or solidon or sonazine or taroctil or taroctyl or thor prom or thorazene or thorazine or torazina or vegetamin or winsumin or wintamine or wintermin or zuledin or haloperidol or alased or aloperidin or aloperidine or apo?haloperidol or avant or benison or brotopon or celenase or cereen or cerenace or cizoren or depidol or dores or dozic or duraperidol or einalon s or fortunan or govotil or haldol or halidol or halo?p or halojust or halomed or haloneural or haloper or haloperil or haloperin or haloperitol or halopidol or halopol or halosten or haricon or haridol?d or keselan or linton or lodomer?2 or "mcn jr 1625" or "mcn jr1625" or mixidol or novoperidol or "nsc 170973" or nsc170973 or peluces or perida or peridol or peridor or "r 1625" or r1625 or selezyme or seranace or serenace or serenase or serenelfi or siegoperidol or sigaperidol or trancodol?10 or trancodol?5 or Brexpiprazole or "opc 34712" or opc34712 or rexulti or rxulti or Periciazine or aolept or neulactil or neuleptil or neuleptile or periciazinum or periciazine or properciazine or propericiazin or propericiazine or "rp 8909" or "skf 20716" or Zuclopenthixol or cis clopenthixol or cisordinol or sedanxol or z clopenthixol or zuclopenthixol dihydrochloride or zuclopentixol).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword]	
47	(Thorazine or Acepromazine or Benperidol or Methotrimeprazine or Pimozide or Promazine or Thiothixene or Trifluoperazine or acetazine or acetylpromazine or notensil or promace or soprintin or vetranquil or benperidone or benz?peridol or "cb 8089" or cb8089 or frenactyl or glianimon or "mcn jr 4584" or "mcn jr4584" or phenactil or "r 4584" or "r4584" or adasuve or "alxz 004" or alxz004 or "az 004" or az004 or "cl 62?362" or "cl62?362" or cloxazepin or cloxazepine or loxapane or loxapin? or "loxitane c" or "loxitane im" or oxilapine or "sum 3170" or sum3170 or desconex or loxapac or loxitane or levomepromazine or "bayer 1213" or "cl 36467"	3035

	or "cl 39743" or cl36467 or cl39743 or hirnamin or "l mepromazine" or levium or "levo mepromazine" or "levo promazine" or levomeprazine or levopromazin or levopromazine or levoprome or levozin or mepromazine or methotrimeprazine or methozane or milezin or minozinan or neozine or neuractil or neurocil or nirvan or nozinan or "rp 7044" or "rp7044" or sinogan or "sk and f 5116" or "skf 5116" or skf5116 or tis?erin or tisercin or veractil or antalon or "mcn jr 6238" or opiran or orap or pimocide or pimoride or pimozide or pizide or "r 6238" or alofen or alophen or ampazine or amprazim or centractyl or delazin or esparin or lete or liranol or "neo hibernex" or neuroplegil or piarine or prazine or "pro tan" or promantine or promanyl or promilene or promwill or protact?l or romthiazine or romtiazin or "rp 3276" or sediston or sinophenin? or sparine or tomil or v?rophen or "wy 1094" or tiotixene or "cp 12,252 1" or "cp 12252 1" or "cp 122521" or "cp12,252 1" or "cp12252 1" or "cp122521" or navan or navane or "nsc 108165" or nsc108165 or onaven or orbinamon or "p 4657 b" or "p 4657b" or p4657b or thiothixene or thiothixene or thiotixene or thiotixin or thiotixine or thixit or tiotixene chloride or calmazine or eskazine or eskazinyl or espazine or fluoperazine or fluperin or flurazin or iremo-pierol or jatroneural or leptazine or modalina or modiur or nerolet or nylipton or operzine or oxyperazine or psyrazine or "sk and f 5019" or "skf 5019" or sporalon or stelazine or terfluzin or terfluzine or triflumed or trifluoperazide or trifluoperazine dihydrochloride or trifluoperzine or trifluoroperazine or trifluorperacine or trifluorperazine or trifluperazine or triflurin or triftazin or triftazine or triftazinum or trinicalm or triozine or triphtazine or triphthasine or triphthazine).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword]	
48	chemical* restrain*.mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword]	141
49	or/20-48	40114
50	practice guideline/	141513
51	nursing protocol/	118
52	consensus development/	8519
53	exp clinical protocol/	33815
54	policy/	71172
55	organizational policy/	63526
56	health care policy/	84967
57	hospital policy/	1532
58	exp health program/	61418
59	european medicines agency/	478
60	"food and drug administration"/	26792
61	world health organization/	33493

62	systematic review/	92685
63	(guid* or protocol$ or consensus or policy or policies or program$ or programme$ or "food and drug administration" or world health organization or therapeutic goods administration or pan american health organisation or systematic* review*).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword]	1136005
64	(standing adj2 order$).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword]	313
65	or/50-64	1136274
66	exp "Australia and New Zealand"/	66022
67	exp united kingdom/	125153
68	exp canada/	53826
69	exp United States/	315679
70	(australia or united kingdom or UK or new zealand or NZ or canada or united states or north america or US or USA or britain or england or wales or scotland or northern ireland or south australia or tasmania or victoria or western australia or northern territory or queensland or new south wales or australian capital territory or quebec or ontario or nova scotia or new brunswick or manitoba or british columbia or prince edward island or alberta or new foundland or labrador or saskatchewan or alaska or hawaii or alabama or arizona or arkansas or california or colorado or connecticut or delaware or florida or georgia or idaho or illinois or indiana or iowa or kansas or kentucky or louisiana or maine or maryland or massachusetts or michican or minnesota or mississippi or missouri or montana or nebraska or nevada or new hampshire or new jersey or new mexico or new york or north carolina or north dakota or ohio or oklahoma or oregon or pennsylvania or rhode island or south carolina or south dakota or tennessee or texas or utah or vermont or virginia or washington or west virginia or wisconsin or wyoming).mp. [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword]	926754
71	or/66-70	927144
72	19 and 49 and 65 and 71	163
73	limit 72 to (english language and yr="2014 -Current")	60

JBI

Database(s): **Joanna Briggs Institute EBP Database -** Current to May 15, 2019
Search Strategy:

#	Searches	Results
1	(aged patient$ or aged person or aged people or aged subject$ or "the aged" or elder* or senior citi?en$ or seniors or geriatric$ or old* adult$ or old* person or old* people or old* patient$ or old* subject$ or gerontopsychiatry or ageing or aging).mp. [mp=text, heading word, subject area node, title]	2683
2	(lewy bod* or dementia$ or Alzheimer* or pick* disease or huntington* or BPSD or delirium or senility).mp. [mp=text, heading word, subject area node, title]	630
3	1 and 2	542
4	(amisulpride or aktiprol or amilia or aminosultopride or amiprid or amisan or amissulprida or amisulgen or amisulid or amisulpiride or amisulpisan or amisulprid or amisulprida or amisulpridlich or amisulpridum or amitrex or amsulgen or aposuprid or aracalm or "dan 2163" or dan2163 or deniban or isofredil or nodasic or pridosil or sertol or socian or solian or sulamid or aripiprazole or abilify or abilitat or "opc 14597" or opc14597 or real one or asenapine or "org 5222" or org5222 or saphris or sycrest or lurasidone or latuda or "mk 3756" or mk3756 or "sm 13496" or sm13496 or "smp 13496" or smp13496 or olanzapine or anzatric or dopin tab or jolyon md or lanopin or lanzac or "ly 170053" or ly170053 or meltolan or midax or olace or oladay or olan or olandus or olanex or olansek or olanzapine mylan or olapin or olazax or oleanz or olexar or oltal or olzap or onza or ozapin md or psychozap or relprevv or zalasta or zelta or zypadhera or zyprex or zyprexa or zyprexav or paliperidone or invega or "r 76477" or r76477 or "ro 76477" or "ro 92670" or ro76477 or ro92670 or trevicta or xeplion or quetiapine or alcreno or alzen or biquelle or desiquet or "ici 204636" or "ici 204646" or ici204636 or ici204646 or ketileppt or ketilept or ketipinor or kvelux or kventiax or psicotric or quetex or seresano or seroquel or setinin or socalm or tienapine or tomel or xeroquel or risperidone or belivon or consta or eperon or neripros or noprenia or "r 64766" or r64766 or riperidon or risolept or rispen or risperdal or risperdalconsta lp or risperdaloro or risperidone or rispid or rispolept or rispolet or rispolux neo or rizodal or sequinan or zargus or zofredal or ziprasidone or "cp 88059" or "cp 88059?01" or "cp 88059?27" or cp88059 or cp88059?01 or cp88059?27 or geodon or zeldox or zeldrox or zipsydon or anti?psychotic agent$ or antipsychotic drug or anti?psychotics or butyrophenone tranquil?i?er$ or classical anti?psychotic$ or long acting neuroleptic$ or major tranquil?i?er$ or neuroleptic$ or neurolepticum or phenothiazine tranquil?i?er$ or tranquil?i?ing agent$ or typical anti?psychotic$ or chlorpromazine or "2601 a" or "4560 r p" or aminasin or aminasine or aminazin or aminazine or ampliactil or amplictil or ancholactil or aspersinal or bellacina or cepezet or chlomazine or "chlor pz" or chloractil or chlorbromasin or chlordelazine or chlorderazin or chlormazine or chloropromazine or chlorpromanyl or chlorpromazine or chlorpromed or clonazine or clordelazin or clorpromaz or clorpromazine or clozine or contomin or	251

	duncan or elmarin or esmino or fenactil or hibanil or hibernal or hibernol or "hl 3746" or "hl 5746" or klorproman or klorpromazin or klorpromex or laractyl or largactil or largactyl or matcine or megaphen or megatil or "ml 5746" or neomazine or neurazine or novomazina or phenethyl or plegomazin or plegomazine or proma or promacid or promactil or promapar or promazil or promexin or propaphen or propaphenin or prozil or prozin or psychozine or psynor or "rp 4560" or sanopron or "skf 2601 a" or solidon or sonazine or taroctil or taroctyl or thor prom or thorazene or thorazine or torazina or vegetamin or winsumin or wintamine or wintermin or zuledin or haloperidol or alased or aloperidin or aloperidine or apo?haloperidol or avant or benison or brotopon or celenase or cereen or cerenace or cizoren or depidol or dores or dozic or duraperidol or einalon s or fortunan or govotil or haldol or halidol or halo?p or halojust or halomed or haloneural or haloper or haloperil or haloperin or haloperitol or halopidol or halopol or halosten or haricon or haridol?d or keselan or linton or lodomer?2 or "mcn jr 1625" or "mcn jr1625" or mixidol or novoperidol or "nsc 170973" or nsc170973 or peluces or perida or peridol or peridor or "r 1625" or r1625 or selezyme or seranace or serenace or serenase or serenelfi or siegoperidol or sigaperidol or trancodol?10 or trancodol?5 or Brexpiprazole or "opc 34712" or opc34712 or rexulti or rxulti or Periciazine or aolept or neulactil or neuleptil or neuleptile or periciazinum or periciazine or properciazine or propericiazin or propericiazine or "rp 8909" or "skf 20716" or Zuclopenthixol or cis clopenthixol or cisordinol or sedanxol or z clopenthixol or zuclopenthixol dihydrochloride or zuclopentixol).mp. [mp=text, heading word, subject area node, title]	
5	(Thorazine or Acepromazine or Benperidol or Methotrimeprazine or Pimozide or Promazine or Thiothixene or Trifluoperazine or acetazine or acetylpromazine or notensil or promace or soprintin or vetranquil or benperidone or benz?peridol or "cb 8089" or cb8089 or frenactyl or glianimon or "mcn jr 4584" or "mcn jr4584" or phenactil or "r 4584" or "r4584" or adasuve or "alxz 004" or alxz004 or "az 004" or az004 or "cl 62?362" or "cl62?362" or cloxazepin or cloxazepine or loxapane or loxapin? or "loxitane c" or "loxitane im" or oxilapine or "sum 3170" or sum3170 or desconex or loxapac or loxitane or levomepromazine or "bayer 1213" or "cl 36467" or "cl 39743" or cl36467 or cl39743 or hirnamin or "l mepromazine" or levium or "levo mepromazine" or "levo promazine" or levomeprazine or levopromazin or levopromazine or levoprome or levozin or mepromazine or methotrimeprazine or methozane or milezin or minozinan or neozine or neuractil or neurocil or nirvan or nozinan or "rp 7044" or "rp7044" or sinogan or "sk and f 5116" or "skf 5116" or skf5116 or tis?erin or tisercin or veractil or antalon or "mcn jr 6238" or opiran or orap or pimocide or pimoride or pimozide or pizide or "r 6238" or alofen or alophen or ampazine or amprazim or centractyl or delazin or esparin or lete or liranol or "neo hibernex" or neuroplegil or piarine or prazine or "pro tan" or promantine or promanyl or promilene or promwill or protact?l or romthiazine or romtiazin or "rp 3276" or sediston or sinophenin? or sparine or tomil or v?rophen or "wy 1094" or tiotixene or "cp 12,252 1" or "cp 12252 1" or "cp 122521" or "cp12,252 1" or "cp12252 1" or "cp122521" or navan or navane or "nsc 108165" or nsc108165 or onaven or	9

	orbinamon or "p 4657 b" or "p 4657b" or p4657b or thiothixene or thiothixene or thiotixene or thiotixin or thiotixine or thixit or tiotixene chloride or calmazine or eskazine or eskazinyl or espazine or fluoperazine or fluperin or flurazin or iremo-pierol or jatroneural or leptazine or modalina or modiur or nerolet or nylipton or operzine or oxyperazine or psyrazine or "sk and f 5019" or "skf 5019" or sporalon or stelazine or terfluzin or terfluzine or triflumed or trifluoperazide or trifluoperazine dihydrochloride or trifluoperzine or trifluoroperazine or trifluorperacine or trifluorperazine or trifluperazine or triflurin or triftazin or triftazine or triftazinum or trinicalm or triozine or triphtazine or triphthasine or triphthazine).mp. [mp=text, heading word, subject area node, title]	
6	chemical* restrain*.mp. [mp=text, heading word, subject area node, title]	23
7	or/4-6	267
8	(guid* or protocol$ or consensus or policy or policies or program$ or programme$ or "food and drug administration" or world health organization or therapeutic goods administration or pan american health organisation or systematic* review*).mp. [mp=text, heading word, subject area node, title]	6617
9	(standing adj2 order$).mp. [mp=text, heading word, subject area node, title]	14
10	or/8-9	6617
11	(australia or united kingdom or UK or new zealand or NZ or canada or united states or north america or US or USA or britain or england or wales or scotland or northern ireland or south australia or tasmania or victoria or western australia or northern territory or queensland or new south wales or australian capital territory or quebec or ontario or nova scotia or new brunswick or manitoba or british columbia or prince edward island or alberta or new foundland or labrador or saskatchewan or alaska or hawaii or alabama or arizona or arkansas or california or colorado or connecticut or delaware or florida or georgia or idaho or illinois or indiana or iowa or kansas or kentucky or louisiana or maine or maryland or massachusetts or michican or minnesota or mississippi or missouri or montana or nebraska or nevada or new hampshire or new jersey or new mexico or new york or north carolina or north dakota or ohio or oklahoma or oregon or pennsylvania or rhode island or south carolina or south dakota or tennessee or texas or utah or vermont or virginia or washington or west virginia or wisconsin or wyoming).mp. [mp=text, heading word, subject area node, title]	3170
12	3 and 7 and 10 and 11	72
13	limit 12 to yr="2014 -Current"	34

PsycINFO

Database(s): **PsycINFO** 1806 to May Week 4 2019
Search Strategy:

#	Searches	Results
1	aging/	52787
2	geriatrics/	10657
3	geriatric psychiatry/	1457
4	geriatric patients/	13025
5	(aged patient$ or aged person or aged people or aged subject$ or "the aged" or elder* or senior citi?en$ or seniors or geriatric$ or old* adult$ or old* person or old* people or old* patient$ or old* subject$ or gerontopsychiatry or ageing or aging).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures]	396400
6	or/1-5	396400
7	dementia/	32372
8	alzheimer's disease/	44097
9	dementia with lewy bodies/	1749
10	semantic dementia/	1800
11	Huntingtons disease/	3129
12	Vascular dementia/	2048
13	senile dementia/	1067
14	delirium/	3145
15	Picks disease/	275
16	Presenile dementia/	281
17	(lewy bod* or dementia$ or Alzheimer* or pick* disease or huntington* or BPSD or delirium or senility).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures]	108465
18	or/7-17	108465
19	6 and 18	41404
20	neuroleptic drugs/	20164
21	Risperidone/	3663
22	Olanzapine/	3466
23	Aripiprazole/	1556
24	Haloperidol/	4678
25	chlorpromazine/	1667
26	Loxapine/	83

27	Pimozide/	486
28	Promazine/	28
29	Thiothixene/	104
30	Trifluoperazine/	144
31	(amisulpride or aktiprol or amilia or aminosultopride or amiprid or amisan or amissulprida or amisulgen or amisulid or amisulpiride or amisulpisan or amisulprid or amisulprida or amisulpridlich or amisulpridum or amitrex or amsulgen or aposuprid or aracalm or "dan 2163" or dan2163 or deniban or isofredil or nodasic or pridosil or sertol or socian or solian or sulamid or aripiprazole or abilify or abilitat or "opc 14597" or opc14597 or real one or asenapine or "org 5222" or org5222 or saphris or sycrest or lurasidone or latuda or "mk 3756" or mk3756 or "sm 13496" or sm13496 or "smp 13496" or smp13496 or olanzapine or anzatric or dopin tab or jolyon md or lanopin or lanzac or "ly 170053" or ly170053 or meltolan or midax or olace or oladay or olan or olandus or olanex or olansek or olanzapine mylan or olapin or olazax or oleanz or olexar or oltal or olzap or onza or ozapin md or psychozap or relprevv or zalasta or zelta or zypadhera or zyprex or zyprexa or zyprexav or paliperidone or invega or "r 76477" or r76477 or "ro 76477" or "ro 92670" or ro76477 or ro92670 or trevicta or xeplion or quetiapine or alcreno or alzen or biquelle or desiquet or "ici 204636" or "ici 204646" or ici204636 or ici204646 or ketileppt or ketilept or ketipinor or kvelux or kventiax or psicotric or quetex or seresano or seroquel or setinin or socalm or tienapine or tomel or xeroquel or risperidone or belivon or consta or eperon or neripros or noprenia or "r 64766" or r64766 or riperidon or risolept or rispen or risperdal or risperdalconsta lp or risperdaloro or risperidone or rispid or rispolept or rispolet or rispolux neo or rizodal or sequinan or zargus or zofredal or ziprasidone or "cp 88059" or "cp 88059?01" or "cp 88059?27" or cp88059 or cp88059?01 or cp88059?27 or geodon or zeldox or zeldrox or zipsydon or anti?psychotic agent$ or antipsychotic drug or anti?psychotics or butyrophenone tranquil?i?er$ or classical anti?psychotic$ or long acting neuroleptic$ or major tranquil?i?er$ or neuroleptic$ or neurolepticum or phenothiazine tranquil?i?er$ or tranquil?i?ing agent$ or typical anti?psychotic$ or chlorpromazine or "2601 a" or "4560 r p" or aminasin or aminasine or aminazin or aminazine or ampliactil or amplictil or ancholactil or aspersinal or bellacina or cepezet or chlomazine or "chlor pz" or chloractil or chlorbromasin or chlordelazine or chlorderazin or chlormazine or chloropromazine or chlorpromanyl or chlorpromazine or chlorpromed or clonazine or clordelazin or clorpromaz or clorpromazine or clozine or contomin or duncan or elmarin or esmino or fenactil or hibanil or hibernal or hibernol or "hl 3746" or "hl 5746" or klorproman or klorpromazin or klorpromex or laractyl or largactil or largactyl or matcine or megaphen or megatil or "ml 5746" or neomazine or neurazine or novomazina or phenethyl or plegomazin or plegomazine or proma or promacid or promactil or promapar or promazil or promexin or propaphen or propaphenin or prozil or prozin or psychozine or psynor or "rp 4560" or sanopron or "skf 2601 a" or solidon or sonazine or taroctil or taroctyl or thor prom or thorazene or thorazine or torazina or vegetamin or winsumin or wintamine or wintermin or	49860

	zuledin or haloperidol or alased or aloperidin or aloperidine or apo?haloperidol or avant or benison or brotopon or celenase or cereen or cerenace or cizoren or depidol or dores or dozic or duraperidol or einalon s or fortunan or govotil or haldol or halidol or halo?p or halojust or halomed or haloneural or haloper or haloperil or haloperin or haloperitol or halopidol or halopol or halosten or haricon or haridol?d or keselan or linton or lodomer?2 or "mcn jr 1625" or "mcn jr1625" or mixidol or novoperidol or "nsc 170973" or nsc170973 or peluces or perida or peridol or peridor or "r 1625" or r1625 or selezyme or seranace or serenace or serenase or serenelfi or siegoperidol or sigaperidol or trancodol?10 or trancodol?5 or Brexpiprazole or "opc 34712" or opc34712 or rexulti or rxulti or Periciazine or aolept or neulactil or neuleptil or neuleptile or periciazinum or periciazine or properciazine or propericiazin or propericiazine or "rp 8909" or "skf 20716" or Zuclopenthixol or cis clopenthixol or cisordinol or sedanxol or z clopenthixol or zuclopenthixol dihydrochloride or zuclopentixol).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures]	
32	(Thorazine or Acepromazine or Benperidol or Methotrimeprazine or Pimozide or Promazine or Thiothixene or Trifluoperazine or acetazine or acetylpromazine or notensil or promace or soprintin or vetranquil or benperidone or benz?peridol or "cb 8089" or cb8089 or frenactyl or glianimon or "mcn jr 4584" or "mcn jr4584" or phenactil or "r 4584" or "r4584" or adasuve or "alxz 004" or alxz004 or "az 004" or az004 or "cl 62?362" or "cl62?362" or cloxazepin or cloxazepine or loxapane or loxapin? or "loxitane c" or "loxitane im" or oxilapine or "sum 3170" or sum3170 or desconex or loxapac or loxitane or levomepromazine or "bayer 1213" or "cl 36467" or "cl 39743" or cl36467 or cl39743 or hirnamin or "l mepromazine" or levium or "levo mepromazine" or "levo promazine" or levomeprazine or levopromazin or levopromazine or levoprome or levozin or mepromazine or methotrimeprazine or methozane or milezin or minozinan or neozine or neuractil or neurocil or nirvan or nozinan or "rp 7044" or "rp7044" or sinogan or "sk and f 5116" or "skf 5116" or skf5116 or tis?erin or tisercin or veractil or antalon or "mcn jr 6238" or opiran or orap or pimocide or pimoride or pimozide or pizide or "r 6238" or alofen or alophen or ampazine or amprazim or centractyl or delazin or esparin or lete or liranol or "neo hibernex" or neuroplegil or piarine or prazine or "pro tan" or promantine or promanyl or promilene or promwill or protact?l or romthiazine or romtiazin or "rp 3276" or sediston or sinophenin? or sparine or tomil or v?rophen or "wy 1094" or tiotixene or "cp 12,252 1" or "cp 12252 1" or "cp 122521" or "cp12,252 1" or "cp12252 1" or "cp122521" or navan or navane or "nsc 108165" or nsc108165 or onaven or orbinamon or "p 4657 b" or "p 4657b" or p4657b or thiothixene or thiothixene or thiotixene or thiotixin or thiotixine or thixit or tiotixene chloride or calmazine or eskazine or eskazinyl or espazine or fluoperazine or fluperin or flurazin or iremo-pierol or jatroneural or leptazine or modalina or modiur or nerolet or nylipton or operzine or oxyperazine or psyrazine or "sk and f 5019" or "skf 5019" or sporalon or stelazine or terfluzin or terfluzine or triflumed or trifluoperazide or trifluoperazine dihydrochloride or trifluoperzine or trifluoroperazine or trifluorperacine or trifluorperazine or trifluperazine or triflurin or triftazin or triftazine or triftazinum or trinicalm or	2230

	triozine or triphtazine or triphthasine or triphthazine).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures]	
33	chemical* restrain*.mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures]	121
34	or/20-33	50798
35	treatment guidelines/	6401
36	health care policy/	9981
37	mental health programs/	4614
38	program evaluation/	12235
39	mental health program evaluation/	2066
40	clinical governance/	335
41	(guid* or protocol$ or consensus or policy or policies or program$ or programme$ or "food and drug administration" or world health organization or therapeutic goods administration or pan american health organisation or systematic* review*).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures]	796020
42	(standing adj2 order$).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures]	52
43	or/35-42	796229
44	(australia or united kingdom or UK or new zealand or NZ or canada or united states or north america or US or USA or britain or england or wales or scotland or northern ireland or south australia or tasmania or victoria or western australia or northern territory or queensland or new south wales or australian capital territory or quebec or ontario or nova scotia or new brunswick or manitoba or british columbia or prince edward island or alberta or new foundland or labrador or saskatchewan or alaska or hawaii or alabama or arizona or arkansas or california or colorado or connecticut or delaware or florida or georgia or idaho or illinois or indiana or iowa or kansas or kentucky or louisiana or maine or maryland or massachusetts or michican or minnesota or mississippi or missouri or montana or nebraska or nevada or new hampshire or new jersey or new mexico or new york or north carolina or north dakota or ohio or oklahoma or oregon or pennsylvania or rhode island or south carolina or south dakota or tennessee or texas or utah or vermont or virginia or washington or west virginia or wisconsin or wyoming).mp. [mp=title, abstract, heading word, table of contents, key concepts, original title, tests & measures]	588190
45	19 and 34 and 43 and 44	56
46	limit 45 to (english language and yr="2014 -Current")	10

Web of Science

1 **16** (TS=("aged patient? " or "aged person" or "aged people" or "aged subject?" or "the aged" or elder* or "senior citi?en?" or seniors or "geriatric?" or "old* adult?" or "old* person" or "old* people" or "old* patient?" or "old* subject?" or gerontopsychiatry or ageing or aging) AND TS=("lewy bod*" or dementia? or Alzheimer* or "pick* disease" or huntington* or BPSD or delirium or senility) AND TS=(amisulpride or aktiprol or amilia or aminosultopride or amiprid or amisan or amissulprida or amisulgen or amisulid or amisulpiride or amisulpisan or amisulprid or amisulprida or amisulpridlich or amisulpridum or amitrex or amsulgen or aposuprid or aracalm or "dan 2163" or dan2163 or deniban or isofredil or nodasic or pridosil or sertol or socian or solian or sulamid or aripiprazole or abilify or abilitat or "opc 14597" or opc14597 or "real one" or asenapine or "org 5222" or org5222 or saphris or sycrest or lurasidone or latuda or "mk 3756" or mk3756 or "sm 13496" or sm13496 or "smp 13496" or smp13496 or olanzapine or anzatric or dopin tab or jolyon md or lanopin or lanzac or "ly 170053" or ly170053 or meltolan or midax or olace or oladay or olan or olandus or olanex or olansek or "olanzapine mylan" or olapin or olazax or oleanz or olexar or oltal or olzap or onza or "ozapin md" or psychozap or relprevv or zalasta or zelta or zypadhera or zyprex or zyprexa or zyprexav or paliperidone or invega or "r 76477" or r76477 or "ro 76477" or "ro 92670" or ro76477 or ro92670 or trevicta or xeplion or quetiapine or alcreno or alzen or biquelle or desiquet or "ici 204636" or "ici 204646" or ici204636 or ici204646 or ketileppt or ketilept or ketipinor or kvelux or kventiax or psicotric or quetex or seresano or seroquel or setinin or socalm or tienapine or tomel or xeroquel or risperidone or belivon or consta or eperon or neripros or noprenia or "r 64766" or r64766 or riperidon or risolept or rispen or risperdal or "risperdalconsta lp" or risperdaloro or risperidone or rispid or rispolept or rispolet or "rispolux neo" or rizodal or sequinan or zargus or zofredal or ziprasidone or "cp 88059" or "cp 88059?01" or "cp 88059?27" or cp88059 or cp88059?01 or cp88059?27 or geodon or zeldox or zeldrox or zipsydon or "anti?psychotic agent?" or "antipsychotic drug" or "anti?psychotics" or "butyrophenone tranquil?i?er?" or "classical anti?psychotic?" or "long acting neuroleptic?" or "major tranquil?i?er?" or neuroleptic? or neurolepticum or "phenothiazine tranquil?i?er?" or "tranquil?i?ing agent?" or "typical anti?psychotic?" or chlorpromazine or "2601 a" or "4560 r p" or aminasin or aminasine or aminazin or aminazine or ampliactil or amplictil or ancholactil or aspersinal or bellacina or cepezet or chlomazine or "chlor pz" or chloractil or chlorbromasin or chlordelazine or chlorderazin or chlormazine or chloropromazine or chlorpromanyl or chlorpromazine or chlorpromed or clonazine or clordelazin or clorpromaz or clorpromazine or clozine or contomin or duncan or elmarin or esmino or fenactil or hibanil or hibernal or hibernol or "hl 3746" or "hl 5746" or klorproman or klorpromazin or klorpromex or laractyl or largactil or largactyl or matcine or megaphen or megatil or "ml 5746" or neomazine or neurazine or novomazina or phenethyl or plegomazin or plegomazine or proma or promacid or promactil or promapar or promazil or promexin or propaphen or propaphenin or prozil or prozin or psychozine or psynor or "rp 4560" or sanopron or "skf 2601 a" or solidon or sonazine or taroctil or taroctyl or "thor prom" or thorazene or thorazine or torazina or vegetamin or winsumin or wintamine or wintermin or zuledin or haloperidol or alased or aloperidin or aloperidine or apo?haloperidol or avant or benison or brotopon or celenase or cereen or cerenace or cizoren or depidol or dores or dozic or duraperidol or "einalon s" or fortunan or govotil or haldol or halidol or halo?p or halojust or halomed or haloneural or haloper or haloperil or haloperin or haloperitol or halopidol or halopol or halosten or haricon or haridol?d or keselan or linton or lodomer?2 or "mcn jr 1625" or "mcn jr1625" or mixidol or novoperidol or "nsc 170973" or nsc170973 or peluces or perida or peridol or peridor or "r 1625" or r1625 or selezyme or seranace or serenace or serenase or serenelfi or siegoperidol or sigaperidol or trancodol?10 or trancodol?5 or Brexpiprazole or "opc 34712" or opc34712 or rexulti or rxulti or Periciazine or aolept or neulactil or neuleptil or neuleptile or periciazinum or periciazine or properciazine or propericiazin or propericiazine or "rp 8909" or "skf 20716" or Zuclopenthixol or "cis clopenthixol" or cisordinol or sedanxol or "z clopenthixol" or "zuclopenthixol dihydrochloride" or zuclopentixol or Thorazine or Acepromazine or

Benperidol or Methotrimeprazine or Pimozide or Promazine or Thiothixene or Trifluoperazine or acetazine or acetylpromazine or notensil or promace or soprintin or vetranquil or benperidone or benz?peridol or "cb 8089" or cb8089 or frenactyl or glianimon or "mcn jr 4584" or "mcn jr4584" or phenactil or "r 4584" or "r4584" or adasuve or "alxz 004" or alxz004 or "az 004" or az004 or "cl 62?362" or "cl62?362" or cloxazepin or cloxazepine or loxapane or loxapin? or "loxitane c" or "loxitane im" or oxilapine or "sum 3170" or sum3170 or desconex or loxapac or loxitane or levomepromazine or "bayer 1213" or "cl 36467" or "cl 39743" or cl36467 or cl39743 or hirnamin or "l mepromazine" or levium or "levo mepromazine" or "levo promazine" or levomeprazine or levopromazin or levopromazine or levoprome or levozin or mepromazine or methotrimeprazine or methozane or milezin or minozinan or neozine or neuractil or neurocil or nirvan or nozinan or "rp 7044" or "rp7044" or sinogan or "sk and f 5116" or "skf 5116" or skf5116 or tis?erin or tisercin or veractil or antalon or "mcn jr 6238" or opiran or orap or pimocide or pimoride or pimozide or pizide or "r 6238" or alofen or alophen or ampazine or amprazim or centractyl or delazin or esparin or lete or liranol or "neo hibernex" or neuroplegil or piarine or prazine or "pro tan" or promantine or promanyl or promilene or promwill or protact?l or romthiazine or romtiazin or "rp 3276" or sediston or sinophenin? or sparine or tomil or v?rophen or "wy 1094" or tiotixene or "cp 12,252 1" or "cp 12252 1" or "cp 122521" or "cp12,252 1" or "cp12252 1" or "cp122521" or navan or navane or "nsc 108165" or nsc108165 or onaven or orbinamon or "p 4657 b" or "p 4657b" or p4657b or thiothixene or thiothixene or thiotixene or thiotixin or thiotixine or thixit or "tiotixene chloride" or calmazine or eskazine or eskazinyl or espazine or fluoperazine or fluperin or flurazin or iremo-pierol or jatroneural or leptazine or modalina or modiur or nerolet or nylipton or operzine or oxyperazine or psyrazine or "sk and f 5019" or "skf 5019" or sporalon or stelazine or terfluzin or terfluzine or triflumed or trifluoperazide or "trifluoperazine dihydrochloride" or "trifluoperzine or trifluoroperazine" or trifluorperacine or trifluorperazine or trifluperazine or triflurin or triftazin or triftazine or triftazinum or trinicalm or triozine or triphtazine or triphthasine or triphthazine or "chemical* restrain*") AND TS=(guid* or protocol? or consensus or policy or policies or program? or programme? or "food and drug administration" or "world health organization" or "therapeutic goods administration" or "pan american health organisation" or "systematic* review*" or (standing* NEAR/2 order?)) AND TS=(australia or "united kingdom" or UK or "new zealand" or NZ or canada or "united states" or "north america" or US or USA or britain or england or wales or scotland or "northern ireland" or "south australia" or tasmania or victoria or "western australia" or "northern territory" or queensland or "new south wales" or "australian capital territory" or quebec or ontario or "nova scotia" or "new brunswick" or manitoba or "british columbia" or "prince edward island" or alberta or "new foundland" or labrador or saskatchewan or alaska or hawaii or alabama or arizona or arkansas or california or colorado or connecticut or delaware or florida or georgia or idaho or illinois or indiana or iowa or kansas or kentucky or louisiana or maine or maryland or massachusetts or michican or minnesota or mississippi or missouri or montana or nebraska or nevada or "new hampshire" or "new jersey" or "new mexico" or "new york" or "north carolina" or "north dakota" or ohio or oklahoma or oregon or pennsylvania or "rhode island" or "south carolina" or "south dakota" or tennessee or texas or utah or vermont or virginia or washington or "west virginia" or wisconsin or wyoming)) *AND* **LANGUAGE:** (English)
Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, ESCI Timespan=2014-2019

InfoRMITHealth

searching Health Collection CHANGE DATABASES ((guid* OR protocol? OR consensus OR policy OR policies OR program? OR programme? OR "food and drug administration" OR "world health organization" OR "therapeutic goods administration" OR "pan american health organisation" OR "systematic review"* OR "systematically reviewed") OR (standing %2 order?)) AND (amisulpride OR aktiprol OR amilia OR aminosultopride OR amiprid OR amisan OR amissulprida OR amisulgen OR amisulid OR amisulpiride OR amisulpisan OR amisulprid OR amisulprida OR amisulpridlich OR amisulpridum OR amitrex OR amsulgen OR aposuprid OR aracalm OR "dan 2163" OR dan2163 OR deniban OR isofredil OR nodasic OR pridosil OR sertol OR socian OR solian OR sulamid OR aripiprazole OR abilify OR abilitat OR "opc 14597" OR opc14597 OR "real one" OR asenapine OR "ORg 5222" OR ORg5222 OR saphris OR sycrest OR lurasidone OR latuda OR "mk 3756" OR mk3756 OR "sm 13496" OR sm13496 OR "smp 13496" OR smp13496 OR olanzapine OR anzatric OR "dopin tab" OR "jolyon md" OR lanopin OR lanzac OR "ly 170053" OR ly170053 OR meltolan OR midax OR olace OR oladay OR olan OR olandus OR olanex OR olansek OR "olanzapine mylan" OR olapin OR olazax OR oleanz OR olexar OR oltal OR olzap OR onza OR "ozapin md" OR psychozap OR relprevv OR zalasta OR zelta OR zypadhera OR zyprex OR zyprexa OR zyprexav OR paliperidone OR invega OR "r 76477" OR r76477 OR "ro 76477" OR "ro 92670" OR ro76477 OR ro92670 OR trevicta OR xeplion OR quetiapine OR alcreno OR alzen OR biquelle OR desiquet OR "ici 204636" OR "ici 204646" OR ici204636 OR ici204646 OR ketileppt OR ketilept OR ketipinor OR kvelux OR kventiax OR psicotric OR quetex OR seresano OR seroquel OR setinin OR socalm OR tienapine OR tomel OR xeroquel OR risperidone OR belivon OR consta OR eperon OR neripros OR noprenia OR "r 64766" OR r64766 OR riperidon OR risolept OR rispen OR risperdal OR "risperdalconsta lp" OR risperdaloro OR risperidone OR rispid OR rispolept OR rispolet OR "rispolux neo" OR rizodal OR sequinan OR zargus OR zofredal OR ziprasidone OR "cp 88059" OR "cp 88059?01" OR "cp 88059?27" OR cp88059 OR cp88059?01 OR cp88059?27 OR geodon OR zeldox OR zeldrox OR zipsydon OR "anti?psychotic agent?" OR "antipsychotic drug" OR "antipsychotics" OR "anti-psychotics" OR "butyrophenone tranquilizer"? OR "butyrophenone tranquiliser"? OR "butyrophenone tranquillizer"? OR "butyrophenone tranquilliser"? OR "classical anti-psychotic"? OR "classical antipsychotic"? OR "long acting neuroleptic"? OR "major tranquilizer"? OR "major tranquillizer"? OR "major tranquiliser"? OR "major tranquilliser"? OR neuroleptic? OR neurolepticum OR phenothiazine OR "tranquilizing agent"? OR "tranquillizing agent"? OR "tranquilising agent"? OR "tranquillising agent"? OR "typical anti-psychotic"? OR "typical antipsychotic"? OR chlorpromazine OR "2601 a" OR "4560 r p" OR aminasin OR aminasine OR aminazin OR aminazine OR ampliactil OR amplictil OR ancholactil OR aspersinal OR bellacina OR cepezet OR chlomazine OR "chlor pz" OR chloractil OR chlorbromasin OR chlordelazine OR chlorderazin OR chlormazine OR chloropromazine OR chlorpromanyl OR chlorpromazine OR chlorpromed OR clonazine OR clordelazin OR clorpromaz OR clorpromazine OR clozine OR contomin OR duncan OR elmarin OR esmino OR fenactil OR hibanil OR hibernal OR hibernol OR "hl 3746" OR "hl 5746" OR klorproman OR klorpromazin OR klorpromex OR laractyl OR largactil OR largactyl OR matcine OR megaphen OR megatil OR "ml 5746" OR neomazine OR neurazine OR novomazina OR phenethyl OR plegomazin OR plegomazine OR proma OR promacid OR promactil OR promapar OR promazil OR promexin OR propaphen OR propaphenin OR prozil OR prozin OR psychozine OR psynor OR "rp 4560" OR sanopron OR "skf 2601 a" OR solidon OR sonazine OR taroctil OR taroctyl OR "thor prom" OR thorazene OR thorazine OR torazina OR vegetamin OR winsumin OR wintamine OR wintermin OR zuledin OR haloperidol OR alased OR aloperidin OR aloperidine OR apo-haloperidol OR avant OR benison OR brotopon OR celenase OR cereen OR cerenace OR cizoren OR depidol OR dores OR dozic OR duraperidol OR "einalon s" OR fortunan OR govotil OR haldol OR halidol OR halo-p OR halojust OR halomed OR haloneural OR haloper OR haloperil OR haloperin OR haloperitol OR

halopidol OR halopol OR halosten OR haricon OR haridol-d OR keselan OR linton OR lodomer-2 OR "mcn jr 1625" OR "mcn jr1625" OR mixidol OR novoperidol OR "nsc 170973" OR nsc170973 OR peluces OR perida OR peridol OR peridor OR "r 1625" OR r1625 OR selezyme OR seranace OR serenace OR serenase OR serenelfi OR siegoperidol OR sigaperidol OR trancodol-10 OR trancodol-5 OR Brexpiprazole OR "opc 34712" OR opc34712 OR rexulti OR rxulti OR Periciazine OR aolept OR neulactil OR neuleptil OR neuleptile OR periciazinum OR periciazine OR properciazine OR propericiazin OR propericiazine OR "rp 8909" OR "skf 20716" OR Zuclopenthixol OR "cis clopenthixol" OR cisordinol OR sedanxol OR "z clopenthixol" OR "zuclopenthixol dihydrochlorde" OR zuclopentixol OR ThORazine OR Acepromazine OR Benperidol OR Methotrimeprazine OR Pimozide OR Promazine OR Thiothixene OR Trifluoperazine OR acetazine OR acetylpromazine OR notensil OR promace OR soprintin OR vetranquil OR benperidone OR benzoperidol OR "cb 8089" OR cb8089 OR frenactyl OR glianimon OR "mcn jr 4584" OR "mcn jr4584" OR phenactil OR "r 4584" OR "r4584" OR adasuve OR "alxz 004" OR alxz004 OR "az 004" OR az004 OR "cl 62?362" OR "cl62362" OR cloxazepin OR cloxazepine OR loxapane OR loxapin? OR "loxitane c" OR "loxitane im" OR oxilapine OR "sum 3170" OR sum3170 OR desconex OR loxapac OR loxitane OR levomepromazine OR "bayer 1213" OR "cl 36467" OR "cl 39743" OR cl36467 OR cl39743 OR hirnamin OR "l mepromazine" OR levium OR "levo mepromazine" OR "levo promazine" OR levomeprazine OR levopromazin OR levopromazine OR levoprome OR levozin OR mepromazine OR methotrimeprazine OR methozane OR milezin OR minozinan OR neozine OR neuractil OR neurocil OR nirvan OR nozinan OR "rp 7044" OR "rp7044" OR sinogan OR "sk and f 5116" OR "skf 5116" OR skf5116 OR tis?erin OR tisercin OR veractil OR antalon OR "mcn jr 6238" OR opiran OR orap OR pimocide OR pimoride OR pimozide OR pizide OR "r 6238" OR alofen OR alophen OR ampazine OR amprazim OR centractyl OR delazin OR esparin OR lete OR liranol OR "neo hibernex" OR neuroplegil OR piarine OR prazine OR "pro tan" OR promantine OR promanyl OR promilene OR promwill OR protact?l OR romthiazine OR romtiazin OR "rp 3276" OR sediston OR sinophenin? OR sparine OR tomil OR v?rophen OR "wy 1094" OR tiotixene OR "cp 12,252 1" OR "cp 12252 1" OR "cp 122521" OR "cp12,252 1" OR "cp12252 1" OR "cp122521" OR navan OR navane OR "nsc 108165" OR nsc108165 OR onaven OR orbinamon OR "p 4657 b" OR "p 4657b" OR p4657b OR thiothixene OR thiotixene OR thiotixin OR thiotixine OR thixit OR "tiotixene chloride" OR calmazine OR eskazine OR eskazinyl OR espazine OR fluoperazine OR fluperin OR flurazin OR iremo-pierol OR jatroneural OR leptazine OR modalina OR modiur OR nerolet OR nylipton OR operzine OR oxyperazine OR psyrazine OR "sk and f 5019" OR "skf 5019" OR sporalon OR stelazine OR terfluzin OR terfluzine OR triflumed OR trifluoperazide OR "trifluoperazine dihydrochloride" OR trifluoperzine OR trifluoroperazine OR trifluorperacine OR trifluorperazine OR trifluperazine OR triflurin OR triftazin OR triftazine OR triftazinum OR trinicalm OR triozine OR triphtazine OR triphthasine OR triphthazine OR "chemical restrain"* OR "chemically restrain"*) AND ("lewy bod"* OR dementia? OR Alzheimer* OR "pick disease" OR "picks disease" OR "pick's disease" OR huntington* OR BPSD OR delirium OR senility) AND ("aged patient"? OR "aged person" OR "aged people" OR "aged subject"? OR "the aged" OR elder* OR "senior citizen"? OR "senior citisen"? OR seniors OR "geriatric"? OR "old adult"? OR "older adult"? OR "old person" OR "older person" OR "old people" OR "older people" OR "old patient"? OR "older patient"? OR "old subject"? OR "older subject"? OR gerontopsychiatry OR ageing OR aging) AND (australia OR "united kingdom" OR UK OR "new zealand" OR NZ OR canada OR "united states" OR "north america" OR US OR USA OR britain OR england OR wales OR scotland OR "northern ireland" OR "south australia" OR tasmania OR victoria OR "western australia" OR "northern territory" OR queensland OR "new south wales" OR "australian capital territory" OR quebec OR ontario OR "nova scotia" OR "new brunswick" OR manitoba OR "british columbia" OR "prince edward island" OR alberta OR "new foundland" OR labrador OR saskatchewan OR alaska OR hawaii OR alabama OR arizona OR arkansas OR california OR colorado OR connecticut OR delaware OR florida OR georgia OR idaho OR illinois OR indiana OR

iowa OR kansas OR kentucky OR louisiana OR maine OR maryland OR massachusetts OR michican OR minnesota OR mississippi OR missouri OR montana OR nebraska OR nevada OR "new hampshire" OR "new jersey" OR "new mexico" OR "new york" OR "north carolina" OR "north dakota" OR ohio OR oklahoma OR oregon OR pennsylvania OR "rhode island" OR "south carolina" OR "south dakota" OR tennessee OR texas OR utah OR vermont OR virginia OR washington OR "west virginia" OR wisconsin OR Wyoming)

0 results

DRUG (InfoRMIT)

searching Health Collection CHANGE DATABASES ((guid* OR protocol? OR consensus OR policy OR policies OR program? OR programme? OR "food and drug administration" OR "world health organization" OR "therapeutic goods administration" OR "pan american health organisation" OR "systematic review"* OR "systematically reviewed") OR (standing %2 order?)) AND (amisulpride OR aktiprol OR amilia OR aminosultopride OR amiprid OR amisan OR amissulprida OR amisulgen OR amisulid OR amisulpiride OR amisulpisan OR amisulprid OR amisulprida OR amisulpridlich OR amisulpridum OR amitrex OR amsulgen OR aposuprid OR aracalm OR "dan 2163" OR dan2163 OR deniban OR isofredil OR nodasic OR pridosil OR sertol OR socian OR solian OR sulamid OR aripiprazole OR abilify OR abilitat OR "opc 14597" OR opc14597 OR "real one" OR asenapine OR "ORg 5222" OR ORg5222 OR saphris OR sycrest OR lurasidone OR latuda OR "mk 3756" OR mk3756 OR "sm 13496" OR sm13496 OR "smp 13496" OR smp13496 OR olanzapine OR anzatric OR "dopin tab" OR "jolyon md" OR lanopin OR lanzac OR "ly 170053" OR ly170053 OR meltolan OR midax OR olace OR oladay OR olan OR olandus OR olanex OR olansek OR "olanzapine mylan" OR olapin OR olazax OR oleanz OR olexar OR oltal OR olzap OR onza OR "ozapin md" OR psychozap OR relprevv OR zalasta OR zelta OR zypadhera OR zyprex OR zyprexa OR zyprexav OR paliperidone OR invega OR "r 76477" OR r76477 OR "ro 76477" OR "ro 92670" OR ro76477 OR ro92670 OR trevicta OR xeplion OR quetiapine OR alcreno OR alzen OR biquelle OR desiquet OR "ici 204636" OR "ici 204646" OR ici204636 OR ici204646 OR ketileppt OR ketilept OR ketipinor OR kvelux OR kventiax OR psicotric OR quetex OR seresano OR seroquel OR setinin OR socalm OR tienapine OR tomel OR xeroquel OR risperidone OR belivon OR consta OR eperon OR neripros OR noprenia OR "r 64766" OR r64766 OR riperidon OR risolept OR rispen OR risperdal OR "risperdalconsta lp" OR risperdaloro OR risperidone OR rispid OR rispolept OR rispolet OR "rispolux neo" OR rizodal OR sequinan OR zargus OR zofredal OR ziprasidone OR "cp 88059" OR "cp 88059?01" OR "cp 88059?27" OR cp88059 OR cp88059?01 OR cp88059?27 OR geodon OR zeldox OR zeldrox OR zipsydon OR "anti?psychotic agent?" OR "antipsychotic drug" OR "antipsychotics" OR "anti-psychotics" OR "butyrophenone tranquilizer"? OR "butyrophenone tranquiliser"? OR "butyrophenone tranquillizer"? OR "butyrophenone tranquilliser"? OR "classical anti-psychotic"? OR "classical antipsychotic"? OR "long acting neuroleptic"? OR "major tranquilizer"? OR "major tranquillizer"? OR "major tranquiliser"? OR "major tranquilliser"? OR neuroleptic? OR neurolepticum OR phenothiazine OR "tranquilizing agent"? OR "tranquillizing agent"? OR "tranquilising agent"? OR "tranquillising agent"? OR "typical anti-psychotic"? OR "typical antipsychotic"? OR chlorpromazine OR "2601 a" OR "4560 r p" OR aminasin OR aminasine OR aminazin OR aminazine OR ampliactil OR amplictil OR ancholactil OR aspersinal OR bellacina OR cepezet OR chlomazine OR "chlor pz" OR chloractil OR chlorbromasin OR chlordelazine OR chlorderazin OR chlormazine OR chloropromazine OR chlorpromanyl OR chlorpromazine OR chlorpromed OR clonazine OR clordelazin OR clorpromaz OR clorpromazine OR clozine OR contomin OR duncan OR elmarin OR esmino OR fenactil OR hibanil OR hibernal OR hibernol OR "hl 3746" OR "hl 5746" OR klorproman OR klorpromazin OR klorpromex OR laractyl OR largactil OR largactyl OR matcine OR megaphen OR megatil OR "ml 5746" OR neomazine OR neurazine OR novomazina OR phenethyl OR plegomazin OR plegomazine OR proma OR promacid OR promactil OR promapar OR promazil OR promexin OR propaphen OR propaphenin OR prozil OR prozin OR psychozine OR psynor OR "rp 4560" OR sanopron OR "skf 2601 a" OR solidon OR sonazine OR taroctil OR taroctyl OR "thor prom" OR thorazene OR thorazine OR torazina OR vegetamin OR winsumin OR wintamine OR wintermin OR zuledin OR haloperidol OR alased OR aloperidin OR aloperidine OR apo-haloperidol OR avant OR benison OR brotopon OR celenase OR cereen OR cerenace OR cizoren OR depidol OR dores OR dozic OR duraperidol OR "einalon s" OR fortunan OR govotil OR haldol OR halidol OR halo-p OR halojust OR halomed OR haloneural OR haloper OR haloperil OR haloperin OR haloperitol OR

halopidol OR halopol OR halosten OR haricon OR haridol-d OR keselan OR linton OR lodomer-2 OR "mcn jr 1625" OR "mcn jr1625" OR mixidol OR novoperidol OR "nsc 170973" OR nsc170973 OR peluces OR perida OR peridol OR peridor OR "r 1625" OR r1625 OR selezyme OR seranace OR serenace OR serenase OR serenelfi OR siegoperidol OR sigaperidol OR trancodol-10 OR trancodol-5 OR Brexpiprazole OR "opc 34712" OR opc34712 OR rexulti OR rxulti OR Periciazine OR aolept OR neulactil OR neuleptil OR neuleptile OR periciazinum OR periciazine OR properciazine OR propericiazin OR propericiazine OR "rp 8909" OR "skf 20716" OR Zuclopenthixol OR "cis clopenthixol" OR cisordinol OR sedanxol OR "z clopenthixol" OR "zuclopenthixol dihydrochlorde" OR zuclopentixol OR ThORazine OR Acepromazine OR Benperidol OR Methotrimeprazine OR Pimozide OR Promazine OR Thiothixene OR Trifluoperazine OR acetazine OR acetylpromazine OR notensil OR promace OR soprintin OR vetranquil OR benperidone OR benzoperidol OR "cb 8089" OR cb8089 OR frenactyl OR glianimon OR "mcn jr 4584" OR "mcn jr4584" OR phenactil OR "r 4584" OR "r4584" OR adasuve OR "alxz 004" OR alxz004 OR "az 004" OR az004 OR "cl 62?362" OR "cl62362" OR cloxazepin OR cloxazepine OR loxapane OR loxapin? OR "loxitane c" OR "loxitane im" OR oxilapine OR "sum 3170" OR sum3170 OR desconex OR loxapac OR loxitane OR levomepromazine OR "bayer 1213" OR "cl 36467" OR "cl 39743" OR cl36467 OR cl39743 OR hirnamin OR "l mepromazine" OR levium OR "levo mepromazine" OR "levo promazine" OR levomeprazine OR levopromazin OR levopromazine OR levoprome OR levozin OR mepromazine OR methotrimeprazine OR methozane OR milezin OR minozinan OR neozine OR neuractil OR neurocil OR nirvan OR nozinan OR "rp 7044" OR "rp7044" OR sinogan OR "sk and f 5116" OR "skf 5116" OR skf5116 OR tis?erin OR tisercin OR veractil OR antalon OR "mcn jr 6238" OR opiran OR orap OR pimocide OR pimoride OR pimozide OR pizide OR "r 6238" OR alofen OR alophen OR ampazine OR amprazim OR centractyl OR delazin OR esparin OR lete OR liranol OR "neo hibernex" OR neuroplegil OR piarine OR prazine OR "pro tan" OR promantine OR promanyl OR promilene OR promwill OR protact?l OR romthiazine OR romtiazin OR "rp 3276" OR sediston OR sinophenin? OR sparine OR tomil OR v?rophen OR "wy 1094" OR tiotixene OR "cp 12,252 1" OR "cp 12252 1" OR "cp 122521" OR "cp12,252 1" OR "cp12252 1" OR "cp122521" OR navan OR navane OR "nsc 108165" OR nsc108165 OR onaven OR orbinamon OR "p 4657 b" OR "p 4657b" OR p4657b OR thiothixene OR thiotixene OR thiotixin OR thiotixine OR thixit OR "tiotixene chloride" OR calmazine OR eskazine OR eskazinyl OR espazine OR fluoperazine OR fluperin OR flurazin OR iremo-pierol OR jatroneural OR leptazine OR modalina OR modiur OR nerolet OR nylipton OR operzine OR oxyperazine OR psyrazine OR "sk and f 5019" OR "skf 5019" OR sporalon OR stelazine OR terfluzin OR terfluzine OR triflumed OR trifluoperazide OR "trifluoperazine dihydrochloride" OR trifluoperzine OR trifluoroperazine OR trifluorperacine OR trifluorperazine OR trifluperazine OR triflurin OR triftazin OR triftazine OR triftazinum OR trinicalm OR triozine OR triphtazine OR triphthasine OR triphthazine OR "chemical restrain"* OR "chemically restrain"*) AND ("lewy bod"* OR dementia? OR Alzheimer* OR "pick disease" OR "picks disease" OR "pick's disease" OR huntington* OR BPSD OR delirium OR senility) AND ("aged patient"? OR "aged person" OR "aged people" OR "aged subject"? OR "the aged" OR elder* OR "senior citizen"? OR "senior citisen"? OR seniors OR "geriatric"? OR "old adult"? OR "older adult"? OR "old person" OR "older person" OR "old people" OR "older people" OR "old patient"? OR "older patient"? OR "old subject"? OR "older subject"? OR gerontopsychiatry OR ageing OR aging) AND (australia OR "united kingdom" OR UK OR "new zealand" OR NZ OR canada OR "united states" OR "north america" OR US OR USA OR britain OR england OR wales OR scotland OR "northern ireland" OR "south australia" OR tasmania OR victoria OR "western australia" OR "northern territory" OR queensland OR "new south wales" OR "australian capital territory" OR quebec OR ontario OR "nova scotia" OR "new brunswick" OR manitoba OR "british columbia" OR "prince edward island" OR alberta OR "new foundland" OR labrador OR saskatchewan OR alaska OR hawaii OR alabama OR arizona OR arkansas OR california OR colorado OR connecticut OR delaware OR florida OR georgia OR idaho OR illinois OR indiana OR

iowa OR kansas OR kentucky OR louisiana OR maine OR maryland OR massachusetts OR michican OR minnesota OR mississippi OR missouri OR montana OR nebraska OR nevada OR "new hampshire" OR "new jersey" OR "new mexico" OR "new york" OR "north carolina" OR "north dakota" OR ohio OR oklahoma OR oregon OR pennsylvania OR "rhode island" OR "south carolina" OR "south dakota" OR tennessee OR texas OR utah OR vermont OR virginia OR washington OR "west virginia" OR wisconsin OR Wyoming)

0 results

Cochrane Library (exported CDBSR & Central)

Search Name: Dementia Guidelines 24 May 2019

Date Run: 31/05/2019 09:02:32

Comment:

ID	Search	Hits
#1	MeSH descriptor: [Aged] explode all trees	1197
#2	MeSH descriptor: [Geriatrics] this term only	196
#3	MeSH descriptor: [Geriatric Psychiatry] this term only	38
#4	aged NEXT patient* or "aged person" or "aged people" or aged NEXT subject* or "the aged" or elder* or senior NEXT citizen* or seniors or geriatric* or old* NEXT adult* or old* NEXT person or old* NEXT people or old* NEXT patient* or old* NEXT subject* or gerontopsychiatry or ageing or aging	80421
#5	#1 or #2 or #3 or #4	80654
#6	MeSH descriptor: [Dementia] this term only	1977
#7	MeSH descriptor: [Alzheimer Disease] this term only	2997
#8	MeSH descriptor: [Lewy Body Disease] this term only	72
#9	MeSH descriptor: [Frontotemporal Dementia] this term only	34
#10	MeSH descriptor: [Huntington Disease] this term only	228
#11	MeSH descriptor: [Dementia, Multi-Infarct] this term only	63
#12	MeSH descriptor: [Dementia, Vascular] this term only	264
#13	MeSH descriptor: [Delirium] this term only	515
#14	MeSH descriptor: [Pick Disease of the Brain] this term only	19
#15	lewy NEXT bod* or dementia* or Alzheimer* or pick* NEXT disease or huntington* or BPSD or delirium or senility	27188
#16	#6 or #7 or #8 or #9 or #10 or #11 or #12 or #13 or #14 or #15	27188
#17	#5 and #16	9690
#18	MeSH descriptor: [Antipsychotic Agents] this term only	4376
#19	MeSH descriptor: [Risperidone] this term only	1280
#20	MeSH descriptor: [Quetiapine Fumarate] this term only	620
#21	MeSH descriptor: [Paliperidone Palmitate] this term only	201
#22	MeSH descriptor: [Olanzapine] this term only	924

#23 MeSH descriptor: [Lurasidone Hydrochloride] this term only 81

#24 MeSH descriptor: [Aripiprazole] this term only 495

#25 MeSH descriptor: [Amisulpride] this term only 119

#26 MeSH descriptor: [Clopenthixol] this term only 57

#27 MeSH descriptor: [Haloperidol] this term only 1343

#28 MeSH descriptor: [Chlorpromazine] this term only 596

#29 MeSH descriptor: [Acepromazine] this term only2

#30 MeSH descriptor: [Benperidol] this term only 40

#31 MeSH descriptor: [Loxapine] this term only 62

#32 MeSH descriptor: [Methotrimeprazine] this term only 35

#33 MeSH descriptor: [Pimozide] this term only 106

#34 MeSH descriptor: [Promazine] this term only 44

#35 MeSH descriptor: [Thiothixene] this term only 70

#36 MeSH descriptor: [Trifluoperazine] this term only 115

#37 amisulpride or aktiprol or amilia or aminosultopride or amiprid or amisan or amissulprida or amisulgen or amisulid or amisulpiride or amisulpisan or amisulprid or amisulprida or amisulpridlich or amisulpridum or amitrex or amsulgen or aposuprid or aracalm or "dan 2163" or dan2163 or deniban or isofredil or nodasic or pridosil or sertol or socian or solian or sulamid or aripiprazole or abilify or abilitat or "opc 14597" or opc14597 or "real one" or asenapine or "org 5222" or org5222 or saphris or sycrest or lurasidone or latuda or "mk 3756" or mk3756 or "sm 13496" or sm13496 or "smp 13496" or smp13496 or olanzapine or anzatric or dopin tab or jolyon md or lanopin or lanzac or "ly 170053" or ly170053 or meltolan or midax or olace or oladay or olan or olandus or olanex or olansek or "olanzapine mylan" or olapin or olazax or oleanz or olexar or oltal or olzap or onza or "ozapin md" or psychozap or relprevv or zalasta or zelta or zypadhera or zyprex or zyprexa or zyprexav or paliperidone or invega or "r 76477" or r76477 or "ro 76477" or "ro 92670" or ro76477 or ro92670 or trevicta or xeplion or quetiapine or alcreno or alzen or biquelle or desiquet or "ici 204636" or "ici 204646" or ici204636 or ici204646 or ketileppt or ketilept or ketipinor or kvelux or kventiax or psicotric or quetex or seresano or seroquel or setinin or socalm or tienapine or tomel or xeroquel or risperidone or belivon or consta or eperon or neripros or noprenia or "r 64766" or r64766 or riperidon or risolept or rispen or risperdal or "risperdalconsta lp" or risperdaloro or risperidone or rispid or rispolept or rispolet or "rispolux neo" or rizodal or sequinan or zargus or zofredal or ziprasidone or "cp 88059" or "cp 88059-01" or "cp 88059-27" or cp88059 or cp88059?01 or cp88059?27 or geodon or zeldox or zeldrox or zipsydon or antipsychotic NEXT agent* or anti-psychotic NEXT agent* or "antipsychotic drug" or antipsychotics or anti-psychotics or butyrophenone NEXT tranquil?i?er? or classical NEXT anti?psychotic? or "long acting" NEXT neuroleptic? or major NEXT tranquil?i?er? or neuroleptic? or neurolepticum or phenothiazine NEXT tranquil?i?er? or tranquil?i?ing NEXT agent? or typical NEXT anti?psychotic? or chlorpromazine or "2601 a" or "4560 r p" or aminasin or aminasine or aminazin or aminazine or ampliactil or amplictil or ancholactil or aspersinal or bellacina or cepezet or chlomazine or "chlor pz" or chloractil or chlorbromasin or chlordelazine or chlorderazin or chlormazine or chloropromazine or chlorpromanyl

or chlorpromazine or chlorpromed or clonazine or clordelazin or clorpromaz or clorpromazine or clozine or contomin or duncan or elmarin or esmino or fenactil or hibanil or hibernal or hibernol or "hl 3746" or "hl 5746" or klorproman or klorpromazin or klorpromex or laractyl or largactil or largactyl or matcine or megaphen or megatil or "ml 5746" or neomazine or neurazine or novomazina or phenethyl or plegomazin or plegomazine or proma or promacid or promactil or promapar or promazil or promexin or propaphen or propaphenin or prozil or prozin or psychozine or psynor or "rp 4560" or sanopron or "skf 2601 a" or solidon or sonazine or taroctil or taroctyl or "thor prom" or thorazene or thorazine or torazina or vegetamin or winsumin or wintamine or wintermin or zuledin or haloperidol or alased or aloperidin or aloperidine or apo?haloperidol or avant or benison or brotopon or celenase or cereen or cerenace or cizoren or depidol or dores or dozic or duraperidol or "einalon s" or fortunan or govotil or haldol or halidol or halo-p or halojust or halomed or haloneural or haloper or haloperil or haloperin or haloperitol or halopidol or halopol or halosten or haricon or haridol-d or keselan or linton or lodomer-2 or "mcn jr 1625" or "mcn jr1625" or mixidol or novoperidol or "nsc 170973" or nsc170973 or peluces or perida or peridol or peridor or "r 1625" or r1625 or selezyme or seranace or serenace or serenase or serenelfi or siegoperidol or sigaperidol or trancodol-10 or trancodol-5 or Brexpiprazole or "opc 34712" or opc34712 or rexulti or rxulti or Periciazine or aolept or neulactil or neuleptil or neuleptile or periciazinum or periciazine or properciazine or propericiazin or propericiazine or "rp 8909" or "skf 20716" or Zuclopenthixol or "cis clopenthixol" or cisordinol or sedanxol or "z clopenthixol" or "zuclopenthixol dihydrochloride" or zuclopentixol or Thorazine or Acepromazine or Benperidol or Methotrimeprazine or Pimozide or Promazine or Thiothixene or Trifluoperazine or acetazine or acetylpromazine or notensil or promace or soprintin or vetranquil or benperidone or benz?peridol or "cb 8089" or cb8089 or frenactyl or glianimon or "mcn jr 4584" or "mcn jr4584" or phenactil or "r 4584" or "r4584" or adasuve or "alxz 004" or alxz004 or "az 004" or az004 or "cl" NEXT 62?362 or cl62?362 or cloxazepin or cloxazepine or loxapane or loxapin? or "loxitane c" or "loxitane im" or oxilapine or "sum 3170" or sum3170 or desconex or loxapac or loxitane or levomepromazine or "bayer 1213" or "cl 36467" or "cl 39743" or cl36467 or cl39743 or hirnamin or "l mepromazine" or levium or "levo mepromazine" or "levo promazine" or levomeprazine or levopromazin or levopromazine or levoprome or levozin or mepromazine or methotrimeprazine or methozane or milezin or minozinan or neozine or neuractil or neurocil or nirvan or nozinan or "rp 7044" or "rp7044" or sinogan or "sk and f 5116" or "skf 5116" or skf5116 or tis?erin or tisercin or veractil or antalon or "mcn jr 6238" or opiran or orap or pimocide or pimoride or pimozide or pizide or "r 6238" or alofen or alophen or ampazine or amprazim or centractyl or delazin or esparin or lete or liranol or "neo hibernex" or neuroplegil or piarine or prazine or "pro tan" or promantine or promanyl or promilene or promwill or protact?l or romthiazine or romtiazin or "rp 3276" or sediston or sinophenin? or sparine or tomil or v?rophen or "wy 1094" or tiotixene or "cp 12,252 1" or "cp 12252 1" or "cp 122521" or "cp12,252 1" or "cp12252 1" or "cp122521" or navan or navane or "nsc 108165" or nsc108165 or onaven or orbinamon or "p 4657 b" or "p 4657b" or p4657b or thiothixene or thiothixene or thiotixene or thiotixin or thiotixine or thixit or "tiotixene chloride" or calmazine or eskazine or eskazinyl or espazine or fluoperazine or fluperin or flurazin or iremo-pierol or jatroneural or leptazine or modalina or modiur or nerolet or nylipton or operzine or oxyperazine or psyrazine or "sk and f 5019" or "skf 5019" or sporalon or stelazine or terfluzin or terfluzine or triflumed or trifluoperazide or "trifluoperazine dihydrochloride" or trifluoperzine or trifluoroperazine or trifluorperacine or trifluorperazine or trifluperazine or triflurin or triftazin or triftazine or triftazinum or trinicalm or triozine or triphtazine or triphthasine or triphthazine or chemical* NEXT restrain* 19975

#38 #18 or #19 or #20 or #21 or #22 or #23 or #24 or #25 or #26 or #27 or #28 or #29 or #30 or #31 or #32 or #33 or #34 or #35 or #36 or #37 19981

#39 MeSH descriptor: [Guideline] this term only 0

#40 MeSH descriptor: [Practice Guideline] this term only 0

#41 MeSH descriptor: [Nursing Assessment] this term only 473

#42 MeSH descriptor: [Consensus] this term only 48

#43 MeSH descriptor: [Clinical Protocols] this term only 4543

#44 MeSH descriptor: [Standing Orders] this term only 0

#45 MeSH descriptor: [Policy] this term only 11

#46 MeSH descriptor: [Organizational Policy] this term only 86

#47 MeSH descriptor: [Health Policy] this term only 177

#48 MeSH descriptor: [Program Evaluation] this term only 5634

#49 MeSH descriptor: [Clinical Governance] this term only 3

#50 MeSH descriptor: [United States Food and Drug Administration] this term only 200

#51 MeSH descriptor: [World Health Organization] this term only 276

#52 MeSH descriptor: [Systematic Review] this term only 0

#53 guid* or protocol? or consensus or policy or policies or program? or programme? or "food and drug administration" or "world health organization" or "therapeutic goods administration" or "pan american health organisation" or systematic* NEXT review* 290861

#54 standing* NEAR/2 order? 70

#55 #39 or #40 or #41 or #42 or #43 or #44 or #45 or #46 or #47 or #48 or #49 or #50 or #51 or #52 or #53 or #54 291176

#56 MeSH descriptor: [New Zealand] this term only 879

#57 MeSH descriptor: [Australia] explode all trees 3849

#58 MeSH descriptor: [United Kingdom] this term only 2933

#59 MeSH descriptor: [Northern Ireland] this term only 91

#60 MeSH descriptor: [England] explode all trees 2360

#61 MeSH descriptor: [Scotland] this term only 494

#62 MeSH descriptor: [Wales] this term only 202

#63 MeSH descriptor: [Canada] this term only 1738

#64 MeSH descriptor: [United States] explode all trees 18177

#65 australia or "united kingdom" or UK or "new zealand" or NZ or canada or "united states" or "north america" or US or USA or britain or england or wales or scotland or "northern ireland" or "south australia" or tasmania or victoria or "western australia" or "northern territory" or queensland or "new south wales" or "australian capital territory" or quebec or ontario or "nova scotia" or "new

brunswick" or manitoba or "british columbia" or "prince edward island" or alberta or "new foundland" or labrador or saskatchewan or alaska or hawaii or alabama or arizona or arkansas or california or colorado or connecticut or delaware or florida or georgia or idaho or illinois or indiana or iowa or kansas or kentucky or louisiana or maine or maryland or massachusetts or michican or minnesota or mississippi or missouri or montana or nebraska or nevada or "new hampshire" or "new jersey" or "new mexico" or "new york" or "north carolina" or "north dakota" or ohio or oklahoma or oregon or pennsylvania or "rhode island" or "south carolina" or "south dakota" or tennessee or texas or utah or vermont or virginia or washington or "west virginia" or wisconsin or Wyoming 1547172

#66 #56 or #57 or #58 or #59 or #60 or #61 or #62 or #63 or #64 or #65 1547172

#67 #17 and #38 and #55 and #66 with Cochrane Library publication date Between Jan 2014 and Dec 2019 178

ANZ Clinical Trials (Including ClinicalTrials.gov) -56 results

"lewy body" OR dementia OR Alzheimer OR "pick disease" OR huntington OR BPSD OR delirium OR senility

Intervention: Drug therapy

Condition Category: Neurological

Registration date: 2014 - today

Search Strategy for Therapeutic Guidelines

ETG Complete

Browse subject heading : Psychotropics (22)

- Special considerations with psychotropic treatment
- Nonpharmacological therapies for psychiatric illness
- Depression in adults
- Bipolar disorder
- Schizophrenia and related psychoses
- Behavioural emergencies
- Delirium
- Dementia
- Anxiety and associated disorders
- Insomnia, parasomnias and jet lag
- Eating disorders
- Personality disorders
- Alcohol and other drug problems
- Gambling problems
- Smoking cessation
- Disorders usually first diagnosed in childhood and adolescence
- Psychiatric conditions in pregnancy and the postpartum
- Psychiatric disorders: patient resources and support organisations (Appendix 8.1)
- Psychiatric disorders: sources of information and assistance for health professionals (Appendix 8.2)
- Dietary guidelines for patients taking irreversible nonselective monoamine oxidase inhibitors (Appendix 8.3)
- Management of common adverse effects of psychotropic drugs (Appendix 8.4)
- Tables, boxes and figures

Browse subject heading : Palliative care (29)

- Overview of palliative care
- Advance care planning
- Decision-making and ethical challenges in palliative care
- Communicating with the patient in palliative care
- Providing palliative care in the community
- Support for families and carers in palliative care
- Caring for dying patients: impact on healthcare providers
- Loss, grief and bereavement
- Principles of paediatric palliative care
- Emergency care presentations in palliative care
- Principles of symptom management in palliative care
- Managing comorbidities and deprescribing in palliative care
- Palliative care for life-limiting illnesses other than cancer
- Pain: assessment in palliative care
- Pain: management in palliative care
- Pain: opioid therapy in palliative care
- Fatigue in palliative care
- Respiratory symptoms in palliative care

- Gastrointestinal symptoms in palliative care
- Psychological symptoms in palliative care
- Neurological and neuromuscular symptoms in palliative care
- Dermatological symptoms in palliative care
- Genitourinary symptoms in palliative care
- Haematological problems in palliative care
- Paraneoplastic syndromes
- Terminal care: care in the last days of life
- Subcutaneous drug administration in palliative care (Appendix 10.1)
- Drug availability in palliative care (Appendix 10.2)
- Tables, boxes and figures

Browse subject heading: Toxicology and Wilderness (64)

- Toxicology: general approach
- Toxicology: toxidromes
- Toxicology: paediatric poisoning
- Toxicology: alcohol (toxic)
- Toxicology: angiotensin converting enzyme inhibitors and angiotensin II receptor blockers
- Toxicology: antiepileptic drugs
- Toxicology: antihistamines, less sedating
- Toxicology: antihistamines, sedating
- Toxicology: antipsychotics
- Toxicology: arsenic
- Toxicology: aspirin (acetyl salicylate)
- Toxicology: baclofen
- Toxicology: barbiturates
- Toxicology: benzodiazepines
- Toxicology: beta blockers
- Toxicology: bupropion
- Toxicology: calcium channel blockers
- Toxicology: carbamazepine
- Toxicology: carbon monoxide
- Toxicology: caustic ingestions
- Toxicology: chloroquine, hydroxychloroquine and quinine
- Toxicology: clonidine
- Toxicology: colchicine
- Toxicology: cyanide
- Toxicology: digoxin
- Toxicology: essential oils
- Toxicology: flecainide
- Toxicology: gamma-hydroxybutyrate
- Toxicology: herbicides
- Toxicology: hydrofluoric acid (hydrogen fluoride)
- Toxicology: hypoglycaemic drugs
- Toxicology: iron
- Toxicology: lead
- Toxicology: lithium
- Toxicology: long-acting anticoagulant rodenticides (superwarfarins)

- Toxicology: metformin
- Toxicology: methotrexate
- Toxicology: mirtazapine
- Toxicology: nicotine
- Toxicology: nonsteroidal anti-inflammatory drugs
- Toxicology: opioids
- Toxicology: organophosphates
- Toxicology: paracetamol
- Toxicology: potassium (oral overdose)
- Toxicology: selective serotonin reuptake inhibitors
- Toxicology: serotonin and noradrenaline reuptake inhibitors
- Toxicology: sodium valproate
- Toxicology: stimulant drugs
- Toxicology: theophylline and caffeine
- Toxicology: tricyclic antidepressants
- Toxicology: warfarin
- Snake bite
- Spider bite
- Marine envenoming
- Marine poisoning
- Tick bite
- Altitude illness
- Cold-related illness
- Diving medicine
- Electrical injury
- Heat-related illness
- Near drowning
- Intravenous inotrope infusion calculations (Appendix 17.1)
- Tables, boxes and figures

Grey literature search strategy for Questions 3 and 4

Grey literature search terms:

(elderly OR aged OR seniors OR 65)

AND

(antipsychotic OR risperidone OR quetiapine OR haloperidol OR olanzapine OR "chemical restraint")

AND

(dementia OR BPSD OR delirium OR Alzheimer)

AND

(guideline OR protocol OR policy OR strategy OR "health program")

AND

(Australia OR Canada OR USA OR "United States" OR "United States of America" OR UK OR "United Kingdom" OR "New Zealand" OR NZ)

The grey literature search strategy:

1. Using the grey literature search terms listed above, we will search the websites of key organisations, government bodies, healthcare facilities (hospitals and aged care providers) and other websites (see table 1 below for examples) to identify guidelines, policies and procedures, health programs or strategy documents relating to the prescription and use of antipsychotics for BPSD
2. After searching the grey literature, we will contact key authors and experts in the fields of BPSD and delirium (see table 2 for examples of people we may contact) to see if they are aware of any additional relevant guidelines/ policies and procedures/ health programs / strategy documents that were not identified in the grey literature search.
3. We will search the reference lists of papers identified in the black and grey literature search to identify any other relevant outputs, not identified in any of the earlier steps.

Website search of key agencies and organisations:

Table 1. Websites for key agencies, to be searched for relevant grey literature

Organisation name / Website name	**Web address**	**Comments**
Dementia Australia	https://www.dementia.org.au/	
Australia and New Zealand	http://www.anzsgm.org/	

Society for Geriatric Medicine	Other relevant websites: http://www.anzsgm.org/websites.asp	
Dementia Training Australia	https://www.dta.com.au/	
Dementia Centre for Research Collaboration (DCRC)	http://www.dementiaresearch.org.au/	
Australian Institute of Health and Welfare	http://www.aihw.gov.au/	
National Health and Medical Research Council (NHMRC)	http://www.clinicalguidelines.gov.au/	
Clinical Excellence Commission	http://www.cec.health.nsw.gov.au/	
National Ageing Research Institute (NARI)	https://www.nari.net.au/	
Dementia Enabling Environment Project (DEEP)	http://www.enablingenvironments.com.au/	
Australian Indigenous HealthInfoNet	http://www.healthinfonet.ecu.edu.au/	
Australian Centre for	https://www.healthinnovation.org.au/	

Health Innovation		
Dementia Australia	https://www.dementia.org.au/vic	
Alzheimer Research Forum	http://www.alzforum.org	
American Geriatrics Society	http://www.americangeriatrics.org/	
Agency for Healthcare Research and Quality	https://www.ahrq.gov/gam/index.html	
Gerontological Society of America	http://www.geron.org/	
Alzheimer's Association	http://www.alz.org/	
Alzheimer's and related Dementias Education and Referral Center	https://www.nia.nih.gov/health/alzheimers	
Agency for Healthcare Research and Quality	http://www.ahrq.gov/	
Australian Medicines Handbook: Aged Care Companion	https://agedcare.amh.net.au/	
Trip database	http://www.tripdatabase.com/	
Canadian Geriatrics Society	https://canadiangeriatrics.ca/	
Canadian Gerontologi	http://www.cgna.net/	

cal Nursing Association		
Canadian Institutes of Health Research Institute of Aging	http://www.cihr-irsc.gc.ca/e/8671.html	
Alzheimer Society of Canada	http://www.alzheimer.ca/en	
British Geriatrics Society	https://www.bgs.org.uk/	
Social Care Institute for Excellence	http://www.scie.org.uk/	
Alzheimer's Society - United against dementia	http://www.alzheimers.org.uk/	
Royal College of Nursing UK	https://www.rcn.org.uk/ https://www.rcn.org.uk/clinical-topics/dementia/professional-resources	
National Institute for Health and Clinical Excellence (NICE)	http://www.nice.org.uk/	
Care Quality Commission	http://www.cqc.org.uk/	
Centre for Reviews and Dissemination (University of York)	https://www.york.ac.uk/crd/	

The Portal of Geriatrics Online Education (POGOe)	http://www.pogoe.org/	
The Evidence for Policy and Practice Information and Co-ordinating Centre (EPPI-Centre)	http://eppi.ioe.ac.uk/cms/	
Healthcare Quality Improvement Partnership	http://www.hqip.org.uk/	
The King's Fund	http://www.kingsfund.org.uk/	
Alzheimers New Zealand	http://www.alzheimers.org.nz/	
Alzheimer's Disease International	http://www.alz.co.uk/	
European Collaboration on Dementia	https://www.alzheimer-europe.org/Research/European-Collaboration-on-Dementia	

Google Scholar Google	http://scholar.google.com.au/ https://www.google.com.au/	
Cognitive Decline Partnership Centre	https://sydney.edu.au/medicine/cdpc/	
NPS MedicineWise	https://www.nps.org.au/	
Veterans' MATES	https://www.veteransmates.net.au/	https://www.veteransmates.net.au/topic-44 Also other topics relevant to BPSD + antipsychotics, but older than 2014
Therapeutic Goods Administration Medicines Safety Update	https://www.tga.gov.au/publication/medicines-safety-update	https://www.tga.gov.au/publication-issue/medicines-safety-update-volume-6-number-4-august-2015 August 2015 issue has info relevant to use of risperidone for BPSD and increased risk of cerebrovascular events
RACGP Royal Australian College of General	https://www.racgp.org.au/clinical-resources/clinical-guidelines	

Practitioners		
Australian College of Rural and Remote Medicine	https://www.acrrm.org.au/home	
Royal Commission into Aged Care Quality and Safety	https://agedcare.royalcommission.gov.au/Pages/default.aspx See also the publications page, https://agedcare.royalcommission.gov.au/publications/Pages/default.aspx	
SA Health	www.sahealth.sa.gov.au *See also the challenging behaviour policy/framework which includes people with dementia (web link as a footnote to the table)	
Health Vic	https://www2.health.vic.gov.au/	
Government of Western Australia, Department of Health	https://ww2.health.wa.gov.au/	
NSW Health	https://www.health.nsw.gov.au	
NSW Health – Northern Sydney Local Health District Carer Support	https://www.nslhd.health.nsw.gov.au/Services/Directory/Pages/Carer-Support.aspx	
Northern Territory Government Department of Health	https://health.nt.gov.au/	
Queensland Health	https://www.health.qld.gov.au/	

Tasmanian Government Department of Health and Human Services	https://www.dhhs.tas.gov.au/	
ACT Government Health	https://www.health.act.gov.au/	
Australian Government Department of Health and Ageing	http://www.health.gov.au/	
Deprescribing.org	https://deprescribing.org/ See also: (this should be identified in our web search) http://www.cfp.ca/content/64/1/17?etoc	
Canadian Deprescribing Network	https://www.deprescribingnetwork.ca/canadian-deprescribing-network	
Research Gate	https://www.researchgate.net/	
Grey Matters	https://www.cadth.ca/resources/finding-evidence/grey-matters This is the link to the grey literature search guide: https://www.cadth.ca/sites/default/files/is/Grey%20Matters_EN-2019.doc	The guide has a list of websites that can be searched for grey literature – a number of them are duplicates of ones we already have in the list, but many are not. The document is protected so I cant copy and paste the web pages into this table. I suggest we go through this list and search the Australian / Canada / USA / UK websites that aren't in the table. Exclude sources specific to children and those

		from countries other than those above.
Choosing Wisely Australia	http://www.choosingwisely.org.au/home	
Choosing Wisely (USA)	https://www.choosingwisely.org/	
Choosing Wisely Canada	https://choosingwiselycanada.org/	
Choosing Wisely UK	https://www.choosingwisely.co.uk/about-choosing-wisely-uk/	
Royal Australian College of Physicians	https://www.racp.edu.au/	
Royal Australian and New Zealand College of Psychiatrists (RANZCP)	https://www.ranzcp.org/home	
Australian Medicines Handbook	https://amhonline-amh-net-au.access.library.unisa.edu.au/	
The Council of Australian Therapeutic Advisory Groups (CATAG)	http://www.catag.org.au/	
NSW Therapeutic Advisory Group (NSW TAG)	http://www.nswtag.org.au/	These are all member organisations of CATAG
Queensland Health	https://www.health.qld.gov.au/clinical-practice/guidelines-procedures	

Medicines Advisory Committee (QHMAC)		
South Australian Medicines Advisory Committee (SAMAC)	**See footnote to table	
Victorian Therapeutics Advisory Group (VicTAG)	https://www.victag.org.au/	
Western Australian Therapeutics Advisory Group (WATAG)	https://ww2.health.wa.gov.au/Articles/U_Z/Western-Australian-Therapeutics-Advisory-Group-WATAG	
Society of Hospital Pharmacists of Australia SHPA	https://www.shpa.org.au/	
Pharmaceutical Society of Australia PSA	https://www.psa.org.au/	
Leading Age Services Australia	https://lasa.asn.au/	
Agency for Clinical Innovation (NSW Health)	https://www.aci.health.nsw.gov.au/	
Psychogeriatric Nurses Association Australia	http://pgna.org.au/	

National Aged Care Alliance	https://naca.asn.au/	
Australian Medical Association (AMA)	https://ama.com.au/	

*https://www.sahealth.sa.gov.au/wps/wcm/connect/public+content/sa+health+internet/clinical+resources/clinical+topics/challenging+behaviour+strategy/challenging+behaviour+policy+framework

**
https://www.sahealth.sa.gov.au/wps/wcm/connect/public+content/sa+health+internet/about+us/about+sa+health/reporting+and+advisory+groups/south+australian+medicines+committees/south+australian+medicines+advisory+committee+samac

Table 2 – Key authors and experts, or groups of experts in the field of BPSD and delirium to contact

Expert name	Employer / organisation	Email address / web address
Dr Juanita Westbury (Pharmacist, aged care / antipsychotic / BPSD expert)	Wicking Dementia Research and Education Centre, University of Tasmania	Juanita.Westbury@utas.edu.au
Dr Chris Freeman (Pharmacist)	University of Queensland	c.freeman4@uq.edu.au
Assoc. Prof Michael Woodward (Geriatrician)	Austin Health	Michael.WOODWARD@austin.org.au
Dr Rohan Elliott (Pharmacist – geriatrics)	Austin Health / Monash University	Rohan.Elliott@monash.edu
Professor Henry Brodaty (Dementia expert)	UNSW	h.brodaty@unsw.edu.au
A/Prof John Cullen (Geriatrician)	Sydney Local Health District and University of Sydney	John.cullen@health.nsw.gov.au

A/Prof Gideon Caplan (Delirium expert)	Prince of Wales Hospital, UNSW	g.caplan@unsw.edu.au
Professor Lyn Chenoweth (Nurse expert)	UNSW	L.chenoweth@unsw.edu.au
Anthea Temple (Nurse expert)	NSW Health ACI	anthea.temple@health.nsw.gov.au

Appendix B. Supplementary results for research question 2.

Appendix B Supplementary Table 1. Results of search of Australian medical, pharmacy and nursing clinical publications in the past 12 months.

Journal	Number of results	Number of articles with any term for Behavioural and Psychological Symptoms of Dementia (References)	Number of articles with any term for delirium (References)
Medical Journal of Australia (MJA)	29	4 (45-48)	1 (45)
Internal Medicine Journal (IMJ)	6	1 (49)	4 (49-52)
Medicine Today	1	1 (53)	0
Australian Journal of General Practice (AJGP)	2	1 (54)	2 (54, 55)
Journal of Pharmacy Practice and Research (JPPR)	4	2 (56, 57)	0
Australian Pharmacist	17	7 (58-64)	4 (59, 65-67)
Australian Prescriber	1	0	0
Australian Nursing and Midwifery Journal	0, 3[1]	1 (68)	1 (69)
Australian Journal of Advanced Nursing	1	1 (70)	1 (70)
Contemporary nurse	1	1 (71)	0

[1] National Center for Biotechnology Information (NCBI) search yielded 0 results, hand searching of all issues for the past 12 months identified 2 news articles and 1 educational article

Appendix B Supplementary Table2. Terms used for BPSD in Australian consumer resources.

Developing organisation	**Date of development / publication**	**Name of document**	**Intended audience of document**	**Term(s) used**	**Website**
Dementia Australia	Developed in 2002, reviewed in 2015	Help Sheet: Changed behaviours	Public (likely targeted at carer, family member, or friend)	Behaviour and behavioural/ behaviour changes (plus specific symptoms mentioned including hoarding, aggression, repetitive behaviour, catastrophic reactions)	https://www.dementia.org.au/files/helpsheets/Helpsheet-ChangedBehaviours01-ChangedBehaviours_english.pdf
Dementia Australia	Developed in 2006, reviewed in 2016	Dementia QandA: Drugs used to relieve behavioural and psychological symptoms of dementia	Public	Behavioural and psychological symptoms of dementia	https://www.dementia.org.au/files/helpsheets/Helpsheet-DementiaQandA04-DrugsUsedToRelieveBehaviouralAndPsychologicalSympoms_english.pdf
NPS MedicineWise	2016	Medicines and dementia: what you need to know	People with dementia and their carers	Changed behaviours Expressions of distress (it is noted that: 'Health professionals refer to expressions of distress as behavioural and psychological symptoms of dementia (BPSD).')	https://www.nps.org.au/consumers/medicines-and-dementia-what-you-need-to-know https://www.nps.org.au/assets/a9c3afd6e83b6c5a-7fc837ad91bf-Medicines-and-dementia-consumer-booklet-Oct-2016.pdf

Dementia Collaborative Research Centre	2014	A Guide for Family Carers Dealing with Behaviours in People with Dementia	Family carers of people living with dementia	Behavioural and psychological symptoms of dementia	http://www.dementiaresearch.org.au/images/dcrc/pdf/A_Guide_for_Family_Carers_Dealing_with_Behaviours_in_People_with_Dementia_2014.pdf
My Aged Care	Dec 2016	Quality indicator – use of physical restraint	Public	Behavioural and psychological symptoms	https://www.myagedcare.gov.au/quality-and-complaints/quality-indicators-in-aged-care/quality-indicator-use-of-physical-restraint
Cognitive Decline Partnership Centre	Sep 2016	Diagnosis, treatment and care for people with dementia: A consumer companion guide to the clinical practice guidelines and principles of care for people with dementia	Consumers	Changed behaviours	https://sydney.edu.au/medicine/cdpc/documents/resources/Dementia-Guideline-Guide-2017-WEB.pdf
Dementia Support Australia	Unclear (webpage states copyright 2019 but date of document not provided)	Dementia: Things to do: Activity ideas for carers	Carers (outlines activities to use with people living with dementia from Aboriginal and Torres Strait Islander backgrounds.)	Behavioural and Psychological symptoms of dementia	https://www.dementia.com.au/getattachment/e83e8065-5a7c-442a-92b3-54ee52667271/Things-to-do-Activity-ideas-for-carers.aspx

Veterans MATES	Aug 2016	Dementia and changes in behaviour: Carers brochure	Carers	Behaviour (changes in behaviour)	https://www.veteransmates.net.au/documents/10184/23464/VeteransMates_Brochure_Topic-1-2016_F3_web.pdf/97f8fdb6-1eef-48db-ad8f-66187eea6fe7?version=1.0
Health Direct	Oct 2018	Dementia treatment and care	Consumers	Behavioural and psychological symptoms of dementia	https://www.healthdirect.gov.au/dementia-treatments-and-care

Appendix B Supplementary Table3. Terms used for delirium in Australian consumer resources.

Developing organisation	**Date of development/ publication**	**Name of document**	**Intended audience of document**	**Term(s) used**	**Website**
Dementia Australia	Dec 2015	Dementia QandA: Delirium and dementia	Public	Delirium Acute confusion	https://www.dementia.org.au/files/helpsheets/Helpsheet-DementiaQandA21_Delirium_english.pdf
NPS MedicineWise	Feb 2017	Other conditions with dementia: what to ask your doctor	Consumers	'Older people with UTIs may show signs of increased confusion, agitation or withdrawal (also known as delirium).'	https://www.nps.org.au/assets/26fd7b8ae82c7d01-e84b1cb1814a-Dementia-other-conditions-fact-sheet-2016-v2.pdf
Dementia Collaborative Research Centre	2014	A Guide for Family Carers Dealing with Behaviours in People with Dementia	Family carers of people living with dementia	Delirium	http://www.dementiaresearch.org.au/images/dcrc/pdf/A_Guide_for_Family_Carers_Dealing_with_Behaviours_in_People_with_Dementia_2014.pdf

My Aged Care	Jun 2015	Preventing Falls in the Elderly	Public	Delirium	https://www.myagedcare.gov.au/getting-started/healthy-and-active-ageing/preventing-falls-in-elderly
Cognitive Decline Partnership Centre	Sep 2016	Diagnosis, treatment and care for people with dementia: A consumer companion guide to the clinical practice guidelines and principles of care for people with dementia	Consumers	Delirium	https://sydney.edu.au/medicine/cdpc/documents/resources/Dementia-Guideline-Guide-2017-WEB.pdf
Health Direct	April 2018	Delirium and Dementia	Consumers	Delirium	https://www.healthdirect.gov.au/delirium-and-dementia

Appendix C. Guidance Identified from Search for Research Questions 3 and 4.

Appendix C Supplementary Table 1. Australian guidance selected for research questions 3 and 4.

DEMENTIA											
Organisation name / Website name	**Web address**	**Guideline Title, Year (comments)**	**Guideline URL**	**Dementia All Settings/ NOS**	**Dementia RACF**	**Dementia Hosp**	**Dementia Home**	**Highest endorsement**	**Non-pharmacol**	**Team classification re final inclusion in review**	**AGREE II info**
NHMRC Cognitive Decline Partnership Centre	https://www.dementia.org.au/	Clinical Practice Guidelines and Principles of Care for People with Dementia. 2016	http://sydney.edu.au/medicine/cdpc/documents/resources/Dementia-Guideline-Recommendations-WEB-version.pdf	All				National std. Endorsed by NHMRC & 8 Professional colleges	Yes	Include - main guidance: clinical guideline	https://www.nhmrc.gov.au/health-advice/guidelines

Australian Commission on on Safety and Quality in Health Care (ACSQH)	https://www.safetyandquality.gov.au/	Standards guide for hospitals, 2017. Preventing delirium and managing cognitive impairment (Action 5.29, P.211 - both delirium and dementia)	https://www.safetyandquality.gov.au/wp-content/uploads/2017/12/National-Safety-and-Quality-Health-Service-Standards-Guide-for-Hospitals.pdf			Yes		National standard for health policy and procedures published by the (ACSQH)	Yes	Include - main guidance: policy document	
Australian Commission for Safety and Quality in Healthcare (ACSQH)	https://www.safetyandquality.gov.au/	A better way to care: Safe and high-quality care for patients with cognitive impairment	https://www.safetyandquality.gov.au/wp-content/uploads/2014/11/A-better-way-to-care-			Yes		National std for health policy and procedures published by the (ACSQH)	Yes	Include - main guidance: policy document	

		(dementia and delirium) in hospital - Actions for health service managers. 2014	Actions-for-health-service-managers.pdf								
Australia and New Zealand Society for Geriatric Medicine	http://www.anzsgm.org/	Management of Behavioural and Psychological Symptoms of Dementia (BPSD), 2016	http://www.anzsgm.org/documents/26PSBPSD12Aug2016.pdf	All				National college consensus guideline	Yes	Include - main guidance: clinical guideline/ position statement	http://www.anzsgm.org/posstate.asp#guide
Royal Australian and New Zealand College of Psychiatrists (RANZCP)	https://www.ranzcp.org/home	Professional Practice Guideline 10 Antipsychotic medications as a treatment	https://www.ranzcp.org/files/resources/college_statements/practice_guideline	All				National college consensus guideline	Yes	Include - main guidance: clinical guideline	

		of behavioural and psychological symptoms of dementia. 2016	s/pg10-pdf.aspx								
eTG - therapeutic guidelines	https://tgldcdp.tg.org.au/index	eTG April 2019 edition; Psychotropic guidelines: Dementia: treatment of mood and behavioural disturances in dementia	https://tgldcdp-tg-org-au.wwwproxy1.library.unsw.edu.au/viewTopic?etgAccess=true&guidelinePage=Psychotropic&topicfile=dementia&guidelineName=Psychotropic&sectionId=toc_d	All				Multidisciplinary expert group consensus guidelines produced by national independent not for profit organisation	Yes	Include - main guidance: clinical guidelines	https://www-tg-org-au.ezproxy1.library.usyd.edu.au/how-therapeutic-guidelines-are-produced/

			1e277#toc_d1e277								
Veterans' MATES	https://www.veteransmates.net.au/	Dementia and changes in behaviour. 2016	https://www.veteransmates.net.au/topic-44	All				Endorsed by national government department: The Department of Veterans' Affairs	Yes	Include - other guidance (aimed at Veterans - a subset of total population)	
Health Vic	https://www2.health.vic.gov.au/	Managing behavioural and psychological symptoms of dementia. 2018	https://www2.health.vic.gov.au/hospitals-and-health-services/patient-care/older-people/cognition/dementia/dementia-bpsd			Yes		State Government	Yes	Include - other guidance (Victorian hospital pts - a subset of total population)	

Agency for Clinical Innovation (NSW Health)	https://www.aci.health.nsw.gov.au/	Key Principles for Care of Confused Hospitalised Older Persons. 2014, revised 2015	https://www.aci.health.nsw.gov.au/__data/assets/pdf_file/0006/249171/CHOPS-key-principles1-2-web.pdf			Yes		State based organisation under auspices of NSW Health	Yes	Include - other guidance (NSW hospital pts - a subset of total population)	
Choosing Wisely Australia	Australian and New Zealand Society for Geriatric Medicine	#1. Do not use antipsychotics as the first choice to treat behavioural and psychological symptoms of dementia	http://www.choosingwisely.org.au/recommendations/anzsgm#1537	All				National college consensus	Yes	Include - other guidance (in separate Choosing Wisely summary table)	

Choosing Wisely Australia	Australian and New Zealand Society for Geriatric Medicine	# 2. Do not prescribe benzodiazepines or other sedativehypnotics to older adults as first choice for insomnia, agitation or delirium	http://www.choosingwisely.org.au/recommendations/anzsgm#1537	All				National college consensus (for Choosing Wisely)	Yes	Include - other guidance (in separate Choosing Wisely summary table)	
Choosing Wisely Australia	The Society of Hospital Pharmacists of Australia, 2016	#3. Don't initiate and continue antipsychotic medicines for behavioural and psychological symptoms	http://www.choosingwisely.org.au/recommendations/shpa#1361	All				National college consensus (for Choosing Wisely)		Include - other guidance (in separate Choosing Wisely summary table)	

		of dementia for more than 3 months									
Choosing Wisely Australia	Pharmaceutical Society of Australia, 2018	#5. Do not continue benzodiazepines, other sedative hypnotics or antipsychotics in older adults for insomnia, agitation or delirium for more than three months without review	http://www.choosingwisely.org.au/recommendations/pharmaceutical-society-of-australia	All				National college consensus (for Choosing Wisely)		Include - other guidance (in separate Choosing Wisely summary table)	

NSW Health Translational Research Grant 274/ NSW Therapeutic Advisory Group (NSW TAG)	http://www.nswtag.org.au/	Deprescribing guide for antipsychotics for treatment of BPSD. 2018	-	All				Output of translational research project funded by NSW Health		Include - other guidance (not comprehensive guidance - only addresses deprescribing)	
DELIRIUM											
Organisation name / Website name	**Web address**	**Guideline Title, Year (comments)**	**Guideline URL**	**Delirium all settings/ NOS**	**Delirium RACF**	**Delirium Hospital**	**Delirium Home**	**Highest endorsement**	**Non-pharmacol**	**Team classification re final inclusion in review**	**AGREE II info**
Australian Commission for Quality and Safety in Healthcare (ACSQH)	https://www.safetyandquality.gov.au/	Delirium Clinical Care Standard, 2016	https://www.safetyandquality.gov.au/wp-content/uploads/2016/07/Delirium-Clinical-	All				National std for health policy and procedures published by the (ACSQH)	Yes	Include - main guidance: clinical guideline	

			Care-Standard-Web-PDF.pdf								
Australian Commission for Safety and Quality in Healthcare (ACSQHC)	https://www.safetyandquality.gov.au/	A better way to care: Safe and high-quality care for patients with cognitive impairment (dementia and delirium) in hospital - Actions for health service managers. 2014	https://www.safetyandquality.gov.au/wp-content/uploads/2014/11/A-better-way-to-care-Actions-for-health-service-managers.pdf	-	-	Yes	-	National standard for health policy and procedures published by the (ACSQHC)	Yes	Include - main guidance: policy document	

Australian Commission for Safety and Quality in Healthcare (ACSQH)	https://www.safetyandquality.gov.au/	Standards guide for hospitals, 2017. Preventing delirium and managing cognitive impairment (Action 5.29, P.211 - both delirium and dementia))	https://www.safetyandquality.gov.au/wp-content/uploads/2017/12/National-Safety-and-Quality-Health-Service-Standards-Guide-for-Hospitals.pdf			Yes		National std for health policy and procedures published by the (ACSQH)	Yes	Include - main guidance – policy document	
eTG - therapeutic guidelines	https://tgldcdp.tg.org.au/index	eTG April 2019 edition; Psychotropic guidelines: Delirium: Management of delirium	https://tgldcdp-tg-org-au.wwwproxy1.library.unsw.edu.au/viewTopic?topicfile=delirium&guidelineNa	All				Multidisciplinary expert group consensus guidelines produced by national independent not	Yes	Include - main guidance: clinical guideline	https://www-tg-org-au.ezproxy1.library.usyd.edu.au/how-therapeutic-guidelines-are-

			me=Psychotropic#toc_d1e304					for profit organisation			produced/
Health Vic	https://www2.health.vic.gov.au/	Preventing and managing delirium. 2018	https://www2.health.vic.gov.au/hospitals-and-health-services/patient-care/older-people/cognition/delirium/delirium-preventing			Yes		State Government		Include - other guidance (Victorian hospital pts - a subset of total population)	

Agency for Clinical Innovation (NSW Health)	https://www.aci.health.nsw.gov.au/	Key Principles for Care of Confused Hospitalised Older Persons. 2014, revised 2015	https://www.aci.health.nsw.gov.au/__data/assets/pdf_file/0006/249171/CHOPS-key-principles1-2-web.pdf			Yes		State based organisation under auspices of NSW Health		Include - other guidance (NSW hospital pts - a subset of total population)	
Choosing Wisely Australia	Australian and New Zealand Society for Geriatric Medicine	# 2. Do not prescribe benzodiazepines or other sedative hypnotics to older adults as first choice for insomnia, agitation or delirium	http://www.choosingwisely.org.au/recommendations/anzsgm#1537	All				National college consensus (for Choosing Wisely)		Include - other guidance (in separate Choosing Wisely summary table)	

Choosing Wisely Australia	Australian and New Zealand Society for Geriatric Medicine	#5. Do not use physical restraints to manage behavioural symptoms of hospitalized older adults with delirium except as a last resort	http://www.choosingwisely.org.au/recommendations/anzsgm#1537	All				National college consensus (for Choosing Wisely)		Include - other guidance (in separate Choosing Wisely summary table)	
Choosing Wisely Australia	Pharmaceutical Society of Australia, 2018	#5. Do not continue benzodiazepines, other sedative hypnotics or antipsychotics in older adults for	http://www.choosingwisely.org.au/recommendations/pharmaceutical-society-of-australia	All				National college consensus (for Choosing Wisely)		Include - other guidance (in separate Choosing Wisely summary table)	

		insomnia, agitation or delirium for more than three months without review									

Appendix C Supplementary Table2. International guidance selected for review questions 3 and 4.

DEMENTIA											
Organisation name / Website name	**Web address**	**Guideline Title, Year (comments)**	**Guideline URL**	**Dementia all settings/ NOS**	**Dementia RACF**	**Dementia Hospital**	**Dementia Home**	**Highest endorsement**	**Non-pharmacological**	**Team classification re final inclusion in review**	**AGREE II info**
National Institute for Health and Clinical Excellence (NICE)	http://www.nice.org.uk/	Dementia: assessment, management and support for people living with dementia and their carers. NICE guideline [NG97] 2018	https://www.nice.org.uk/guidance/ng97	All				National guidance developed by NICE (UK)		Include - main guidance: clinical guideline	https://www.nice.org.uk/about/what-we-do/our-programmes/nice-guidance/nice-guidelines/how-we-develop-nice-guidelines
Alzheimer Society of Canada	http://www.alzheimer.ca/en	Use of antipsychotic medications to treat people with dementia in long-term care	https://alzheimer.ca/sites/default/files/files/national/position-statements/use%20of%20anti		Yes			National college guideline (Canada)		Include - main guidance: position statement	No readily identifiable info. On methods

		homes. Alzheimer Society of Canada. Position Statement June 2017	psychotic%20medications%20to%20treat%20people%20with%20dementia%20in%20long-term%20care%20homes.pdf								
American Psychiatric Association	https://www.psychiatry.org/	The American Psychiatric Association Practice Guideline on the Use of Antipsychotics to Treat Agitation or Psychosis in Patients With Dementia. 2016	https://ajp.psychiatryonline.org/doi/pdf/10.1176/appi.ajp.201517350 1	All				National college guideline (US)		Include - main guidance – clinical guidelines	Methods P.543 (includes GRADE)

International Psychogeriatric Association	https://www.ipa-online.org/	A consensus guideline for antipsychotic drug use for dementia in care homes. Bridging the gap between scientific evidence and clinical practice. 2015. International Psychogeriatric Association (Zuidema, Johansson, Selbaek et al. Int Psychogeriatrics 2015, 27:11)	https://www.cambridge.org/core/services/aop-cambridge-core/content/view/2EDA7ADF3E62D0358FA928029FFCB643/S1041610215000745a.pdf/consensus_guideline_for_antipsychotic_drug_use_for_dementia_in_care_homes_bridging_the_gap_between_scientific_evidence_and_clinical_practice.pdf		Yes			International college guideline (International)		Include - main guidance – clinical guidelines	Methods P.1850

Canadian Family Physician.	https://www.cfpc.ca/CanadianFamilyPhysician/	Deprescribing antipsychotics for behavioural and psychological symptoms of dementia and insomnia. 2018. Canadian Family Physician.	https://www.cfp.ca/content/cfp/64/1/17.full.pdf	All				National college journal (Canada)		Include - other guidance (not comprehensive guidance - only addresses deprescribing)	Info on guideline devlopment method in article
Choosing Wisely (USA)	American Academy of Nursing	# 24. Don't use physical or chemical restraints, outside of emergency situations, when caring for long-term care residents with	http://www.choosingwisely.org/societies/american-academy-of-nursing/		Yes			National college consensus (for Choosing Wisely) (US)		Include - other guidance (in separate Choosing Wisely summary table)	

		dementia who display behavioral and psychological symptoms of distress; instead assess for unmet needs or environmental triggers and intervene using non-pharmacological approaches as the first approach to care whenever possible.									

Choosing Wisely (USA)	American Academy of Nursing	#15. Don't assume a diagnosis of dementia in an older adult who presents with an altered mental status and/or symptoms of confusion without assessing for delirium or delirium superimposed on dementia using a brief, sensitive, validated assessment tool.	http://www.choosingwisely.org/societies/american-academy-of-nursing/	All				National college consensus (for Choosing Wisely) (US)		Include - other guidance (in separate Choosing Wisely summary table)	

Choosing Wisely (USA)	American Geriatrics Society	#2. Don't use antipsychotics as the first choice to treat behavioral and psychological symptoms of dementia.	http://www.choosingwisely.org/societies/american-geriatrics-society/	All				National college consensus (for Choosing Wisely) (US)		Include - other guidance (in separate Choosing Wisely summary table)	
Choosing Wisely (USA)	American Geriatrics Society	#4. Don't use benzodiazepines or other sedative-hypnotics in older adults as first choice for insomnia, agitation or delirium.	http://www.choosingwisely.org/societies/american-geriatrics-society/	All				National college consensus (for Choosing Wisely) (US)		Include - other guidance (in separate Choosing Wisely summary table)	

Choosing Wisely (USA)	American Psychiatric Association	#3, Don't routinely use antipsychotics as first choice to treat behavioral and psychological symptoms of dementia	http://www.choosingwisely.org/societies/american-psychiatric-association/	All				National college consensus (for Choosing Wisely) (US)		Include - other guidance (in separate Choosing Wisely summary table)	
Choosing Wisely (USA)	AMDA – The Society for Post-Acute and Long-Term Care Medicine	#4, Don't prescribe antipsychotic medications for behavioral and psychological symptoms of dementia (BPSD) in individuals with dementia without	http://www.choosingwisely.org/societies/amda-the-society-for-post-acute-and-long-term-care-medicine/	All				National college consensus (for Choosing Wisely) (US)		Include - other guidance (in separate Chooing Wisely summary table)	

		an assessment for an underlying cause of the behavior									
DELIRIUM											
Organisation name / Website name	**Web address**	**Guideline Title, Year (comments)**	**Guideline URL**	**Delirium all settings/ NOS**	**Delirium RACF**	**Delirium Hosp**	**Delirium Home**	**Highest endorsement**	**Non-pharmacol**	**Team classification re final inclusion in review**	**AGREE II info**
Scottish Intercollegiate Guidelines Network (SIGN)	https://www.sign.ac.uk/	Risk reduction and management of delirium. 2019 (SIGN 157)	https://www.sign.ac.uk/assets/sign157.pdf	All				National guidance (Scotland) NICE has accredited the process used by SIGN to produce clinical guidelines		Include - main guidance – clinical guidelines	https://www.sign.ac.uk/how-are-guidelines-developed.html

National Institute for Health and Clinical Excellence (NICE)	http://www.nice.org.uk/	Delirium: prevention, diagnosis and management Clinical guideline [CG103] Published: July 2010 Last updated: March 2019	https://www.nice.org.uk/guidance/cg103					National guidance developed by NICE (UK)		Include - main guidance – clinical guidelines	https://www.nice.org.uk/about/what-we-do/our-programmes/nice-guidance/nice-guidelines/how-we-develop-nice-guidelines
American Geriatrics Society	http://www.americangeriatrics.org/	American Geriatrics Society Clinical Practice Guideline for Postoperative Delirium in Older Adults. 2014	https://geriatricscareonline.org/ProductAbstract/american-geriatrics-society-clinical-practice-guideline-for-postoperative-delirium-in-older-			Yes		National college guideline		Include - main guidance – clinical guidelines	Methods listed on page 5 of guideline

			adults/CL018								
Choosing Wisely (USA)	American Academy of Nursing	#14. Don't administer "prn" (i.e., as needed) sedative, antipsychotic or hypnotic medications to prevent and/or treat delirium without first assessing for, removing and treating the underlying causes of delirium and using nonpharmacologic delirium	http://www.choosingwisely.org/societies/american-academy-of-nursing/	All				National college consensus (for Choosing Wisely) (US)		Include - other guidance (in separate Choosing Wisely summary table)	

		preventio n and treatment approach es.									
Choosing Wisely (USA)	American Academy of Nursing	#15. Don't assume a diagnosis of dementia in an older adult who presents with an altered mental status and/or symptoms of confusion without assessing for delirium or delirium superimp osed on dementia using a brief,	http://ww w.choosin gwisely.or g/societie s/america n-academy-of-nursing/	All				National college consensus (for Choosing Wisely) (US)		Include - other guidance (in separate Choosing Wisely summary table)	

		sensitive, validated assessment tool.									
Choosing Wisely (USA)	American Geriatrics Society	#4. Don't use benzodiazepines or other sedative-hypnotics in older adults as first choice for insomnia, agitation or delirium.	http://www.choosingwisely.org/societies/american-geriatrics-society/	All				National college consensus (for Choosing Wisely) (US)		Include - other guidance (in separate Choosing Wisely summary table)	
Choosing Wisely (USA)	American Geriatrics Society	#10. Don't use physical restraints to manage behavioral symptoms of hospitalized older adults with delirium	http://www.choosingwisely.org/societies/american-geriatrics-society/			Yes		National college consensus (for Choosing Wisely) (US)		Include - other guidance (in separate Choosing Wisely summary table)	

DEMENTIA											
Organisation name / Website name	**Web address**	**Guideline Title, Year (comments)**	**Guideline URL**	**Dementia all settings/ NOS**	**Dementia RACF**	**Dementia Hosp**	**Dementia Home**	**Highest endorsement**	**Non-pharmacological**	**Team classification re final inclusion in review**	**AGREE II info**
National Institute for Health and Clinical Excellence (NICE)	http://www.nice.org.uk/	Dementia: assessment, management and support for people living with dementia and their carers. NICE guideline [NG97] 2018	https://www.nice.org.uk/guidance/ng97	All				National guidance developed by NICE (UK)		Include - main guidance – clinical guidelines	https://www.nice.org.uk/about/what-we-do/our-programmes/nice-guidance/nice-guidelines/how-we-develop-nice-guidelines
Alzheimer Society of Canada	http://www.alzheimer.ca/en	Use of antipsychotic medications to treat people with dementia in long-term care	https://alzheimer.ca/sites/default/files/files/national/position-statements/use%20of%20anti		Yes			National college guideline (Canada)		Include - main guidance – position statement	No readily identifiable info. On methods

		homes. Alzheimer Society of Canada. Position Statement June 2017	psychotic%20medications%20to%20treat%20people%20with%20dementia%20in%20long-term%20care%20homes.pdf								
American Psychiatric Association	https://www.psychiatry.org/	The American Psychiatric Association Practice Guideline on the Use of Antipsychotics to Treat Agitation or Psychosis in Patients With Dementia. 2016	https://ajp.psychiatryonline.org/doi/pdf/10.1176/appi.ajp.201517350 1	All				National college guideline (US)		Include - main guidance – clinical guidelines	Methods P.543 (includes GRADE!!)

International Psychogeriatric Association	https://www.ipa-online.org/	A consensus guideline for antipsychotic drug use for dementia in care homes. Bridging the gap between scientific evidence and clinical practice. 2015. International Psychogeriatric Association (Zuidema, Johansson, Selbaek et al. Int Psychogeriatrics 2015, 27:11)	https://www.cambridge.org/core/services/aop-cambridge-core/content/view/2EDA7ADF3E62D0358FA928029FFCB643/S1041610215000745a.pdf/consensus_guideline_for_antipsychotic_drug_use_for_dementia_in_care_homes_bridging_the_gap_between_scientific_evidence_and_clinical_practice.pdf		Yes			International college guideline (International)		Include - main guidance – clinical guidelines	Methods P.1850

Canadian Family Physician.	https://www.cfpc.ca/CanadianFamilyPhysician/	Deprescribing antipsychotics for behavioural and psychological symptoms of dementia and insomnia. 2018. Canadian Family Physician.	https://www.cfp.ca/content/cfp/64/1/17.full.pdf	All				National college journal (Canada)		Include - other guidance (not comprehensive guidance - only addresses deprescribing)	Info on guideline devlopment method in article
Choosing Wisely (USA)	American Academy of Nursing	# 24. Don't use physical or chemical restraints, outside of emergency situations, when caring for long-term care residents with	http://www.choosingwisely.org/societies/american-academy-of-nursing/		Yes			National college consensus (for Choosing Wisely) (US)		Include - other guidance (in separate Choosing Wisely summary table)	

		dementia who display behavioral and psychological symptoms of distress; instead assess for unmet needs or environmental triggers and intervene using non-pharmacological approaches as the first approach to care whenever possible.									

Choosing Wisely (USA)	American Academy of Nursing	#15. Don't assume a diagnosis of dementia in an older adult who presents with an altered mental status and/or symptoms of confusion without assessing for delirium or delirium superimposed on dementia using a brief, sensitive, validated assessment tool.	http://www.choosingwisely.org/societies/american-academy-of-nursing/	All				National college consensus (for Choosing Wisely) (US)		Include - other guidance (in separate Choosing Wisely summary table)	

Choosing Wisely (USA)	American Geriatrics Society	#2. Don't use antipsychotics as the first choice to treat behavioral and psychological symptoms of dementia.	http://www.choosingwisely.org/societies/american-geriatrics-society/	All				National college consensus (for Choosing Wisely) (US)		Include - other guidance (in separate Choosing Wisely summary table)	
Choosing Wisely (USA)	American Geriatrics Society	#4. Don't use benzodiazepines or other sedative-hypnotics in older adults as first choice for insomnia, agitation or delirium.	http://www.choosingwisely.org/societies/american-geriatrics-society/	All				National college consensus (for Choosing Wisely) (US)		Include - other guidance (in separate Choosing Wisely summary table)	

Choosing Wisely (USA)	American Psychiatric Association	#3, Don't routinely use antipsychotics as first choice to treat behavioral and psychological symptoms of dementia	http://www.choosingwisely.org/societies/american-psychiatric-association/	All				National college consensus (for Choosing Wisely) (US)		Include - other guidance (in separate Choosing Wisely summary table)	
Choosing Wisely (USA)	AMDA – The Society for Post-Acute and Long-Term Care Medicine	#4, Don't prescribe antipsychotic medications for behavioral and psychological symptoms of dementia (BPSD) in individuals with dementia without	http://www.choosingwisely.org/societies/amda-the-society-for-post-acute-and-long-term-care-medicine/	All				National college consensus (for Choosing Wisely) (US)		Include - other guidance (in separate Choosing Wisely summary table)	

		an assessment for an underlying cause of the behavior									
DELIRIUM											
Organisation name / Website name	**Web address**	**Guideline Title, Year (comments)**	**Guideline URL**	**Delirium all settings/ NOS**	**Delirium RACF**	**Delirium Hospital**	**Delirium Home**	**Highest endorsement**	**Non-pharmacological**	**Team classification re final inclusion in review**	**AGREE II info**
Scottish Intercollegiate Guidelines Network (SIGN)	https://www.sign.ac.uk/	Risk reduction and management of delirium. 2019 (SIGN 157)	https://www.sign.ac.uk/assets/sign157.pdf	All				National guidance (Scotland) NICE has accredited the process used by SIGN to produce clinical guidelines		Include - main guidance – clinial guidelines	https://www.sign.ac.uk/how-are-guidelines-developed.html

National Institute for Health and Clinical Excellence (NICE)	http://www.nice.org.uk/	Delirium: prevention, diagnosis and management Clinical guideline [CG103] Published date: July 2010 Last updated: March 2019	https://www.nice.org.uk/guidance/cg103					National guidance developed by NICE (UK)		Include - main guidance – clinical guidelines	https://www.nice.org.uk/about/what-we-do/our-programmes/nice-guidance/nice-guidelines/how-we-develop-nice-guidelines
American Geriatrics Society	http://www.americangeriatrics.org/	American Geriatrics Society Clinical Practice Guideline for Postoperative Delirium in Older Adults. 2014	https://geriatricscareonline.org/ProductAbstract/american-geriatrics-society-clinical-practice-guideline-for-postoperative-delirium-in-older-			Yes		National college guideline		Include - main guidance – clinical guidelines	Methods listed on page 5 of guideline

			adults/CL018								
Choosing Wisely (USA)	American Academy of Nursing	#14. Don't administer "prn" (i.e., as needed) sedative, antipsychotic or hypnotic medications to prevent and/or treat delirium without first assessing for, removing and treating the underlying causes of delirium and using nonpharmacologic delirium	http://www.choosingwisely.org/societies/american-academy-of-nursing/	All				National college consensus (for Choosing Wisely) (US)		Include - other guidance (in separate Choosing Wisely summary table)	

		preventio n and treatment approach es.									
Choosing Wisely (USA)	American Academy of Nursing	#15. Don't assume a diagnosis of dementia in an older adult who presents with an altered mental status and/or symptoms of confusion without assessing for delirium or delirium superimp osed on dementia using a brief,	http://ww w.choosin gwisely.or g/societie s/america n-academy-of-nursing/	All				National college consensus (for Choosing Wisely) (US)		Include - other guidance (in separate Choosing Wisely summary table)	

		sensitive, validated assessment tool.									
Choosing Wisely (USA)	American Geriatrics Society	#4. Don't use benzodiazepines or other sedative-hypnotics in older adults as first choice for insomnia, agitation or delirium.	http://www.choosingwisely.org/societies/american-geriatrics-society/	All				National college consensus (for Choosing Wisely) (US)		Include - other guidance (in separate Choosing Wisely summary table)	
Choosing Wisely (USA)	American Geriatrics Society	#10. Don't use physical restraints to manage behavioral symptoms of hospitalized older adults with delirium	http://www.choosingwisely.org/societies/american-geriatrics-society/			Yes		National college consensus (for Choosing Wisely) (US)		Include - other guidance (in separate Choosing Wisely summary table)	

Appendix D. Data extracted from guidance to address research question 4.

Box 1. Main guidance for management of behavioural and psychological symptoms of dementia and delirium and their recommendations on use of antipsychotics. Strength of recommendations and evidence have been extracted from the guidance documents, and quality of the clinical guidelines assessed using AGREE II. Main guidance documents are listed for each condition in order of decreasing AGREE II score. The AGREE II score was designed to assess clinical guidelines and should be interpreted with caution when applied to policy documents and position statements.

MAIN GUIDANCE

DEMENTIA MAIN GUIDANCE

Reference type	National college practice guideline (US)	
Reference	The American Psychiatric Association Practice Guideline on the Use of Antipsychotics to Treat Agitation or Psychosis in Patients With Dementia. 2016. https://psychiatryonline.org/doi/pdf/10.1176/appi.books.9780890426807 (accessed 11/6/19)	
Title	Practice Guideline on the Use of Antipsychotics to Treat Agitation or Psychosis in Patients With Dementia. 2016	
Authors / Organisation	The American Psychiatric Association	
Date of most recent update	2016	
Target group (e.g. clinician vs nurse vs GP vs consumer)	Care delivered by specialist and generalist clinicians.	
Patient population or setting (e.g. hospital vs community vs aged care)	All settings	
Study design / Methods	This guideline was developed to meet standards for the development of "trustworthy" practice guidelines recommended by the Institute of Medicine (IOM) in 2011, the Principles for the Development of Specialty Society Clinical Guidelines of the Council of Medical Specialty Societies (2012) and the requirements of the Agency for Healthcare Research and Quality (AHRQ) for inclusion of a guideline in the National Guidelines Clearinghouse. The standards address transparency, management of conflicts of interest, composition of work groups, use of systematic reviews of evidence, articulation and rating of recommendations, external review, and updating.	
Recommendations relating to prescription and use of antipsychotic medicines for people aged 65 years and over for the	**Recommendations relating to:**	**Level of evidence:** **Rating the Strength of Research Evidence and Recommendations** *Rating the Strength of Recommendations:* "Recommendation" (1 after the guideline statement) indicates

treatment of BPSD and delirium		confidence that the benefits of the intervention clearly outweigh harms. "Suggestion" (2 after the guideline statement) indicates uncertainty (i.e., the balance of benefits and harms is difficult to judge or either the benefits or the harms are unclear). *Rating the Strength of Supporting Research Evidence:* High (denoted by the letter A) = High confidence that the evidence reflects the true effect. Further research is very unlikely to change our confidence in the estimate of effect. Moderate (B) = Moderate confidence that the evidence reflects the true effect. Further research may change our confidence in the estimate of effect and may change the estimate. Low (C) = Low confidence that the evidence reflects the true effect. Further research is likely to change our confidence in the estimate of effect and is likely to change the estimate.
	Indication:	
	Patients with dementia be assessed for pain and other potentially modifiable contributors to symptoms as well as for factors, such as the subtype of dementia, that may influence choices of treatment.	1C
	Patients with dementia with agitation or psychosis, response to treatment be assessed with a quantitative measure.	1C
	Patients with dementia have a documented comprehensive treatment plan that includes	1C

	appropriate person-centered nonpharmacological and pharmacological interventions, as indicated.	
	Nonemergency antipsychotic medication should only be used for the treatment of agitation or psychosis in patients with dementia when symptoms are severe, are dangerous, and/or cause significant distress to the patient.	1B
	Review the clinical response to nonpharmacological interventions prior to nonemergency use of an antipsychotic medication to treat agitation or psychosis in patients with dementia.	1C
	Drug dose:	
	If a risk/benefit assessment favors the use of an antipsychotic for behavioral/psychological symptoms in patients with dementia, treatment should be initiated at a low dose to be titrated up to the minimum effective dose as tolerated.	1B
	In the absence of delirium, if nonemergency antipsychotic medication treatment is indicated, haloperidol should not be used as a first-line agent.	1B
	In patients with dementia with agitation or psychosis, a long-acting injectable antipsychotic medication should not be utilized unless it is otherwise indicated for a co-occurring chronic psychotic disorder.	1B
	If a patient with dementia experiences a clinically significant side effect of antipsychotic treatment, the potential risks and	1C

	benefits of antipsychotic medication should be reviewed by the clinician to determine if tapering and discontinuing of the medication is indicated.	
	Duration of use:	
	In patients with dementia with agitation or psychosis, if there is no clinically significant response after a 4-week trial of an adequate dose of an antipsychotic drug, the medication should be tapered and withdrawn.	1B
	In patients with dementia who show adequate response of BPSD to treatment with an antipsychotic drug, an attempt to taper and withdraw the drug should be made within 4 months of initiation, unless the patient experienced a recurrence of symptoms with prior attempts at tapering of antipsychotic medication	1C
	In patients with dementia whose antipsychotic medication is being tapered, assessment of symptoms should occur at least monthly during the taper and for at least 4 months after medication discontinuation to identify signs of recurrence and trigger a reassessment of the benefits and risks of antipsychotic treatment.	1C
	Contraindications:	
	Second line options:	
	Recommendations around consent:	
	Before nonemergency treatment with an antipsychotic is initiated in patients with dementia, the	1C

	potential risks and benefits from antipsychotic medication be assessed by the clinician and discussed with the patient (if clinically feasible) as well as with the patient's surrogate decision maker (if relevant) with input from family or others involved with the patient.	
	In a patient who has shown a positive response to treatment, decision making about possible tapering of antipsychotic medication should be accompanied by a discussion with the patient (if clinically feasible) as well as with the patient's surrogate decision maker (if relevant) with input from family or others involved with the patient. The aim of such a discussion is to elicit their preferences and concerns and to review the initial goals, observed benefits and side effects of antipsychotic treatment, and potential risks of continued exposure to antipsychotics, as well as past experience with antipsychotic medication trials and tapering attempts.	1C
AGREE II Assessment	**Domain**	**Score (%)**
	Scope and purpose	100
	Stakeholder involvement	100
	Rigour of development	97
	Clarity of presentation	100
	Applicability	95
	Editorial independence	100

Reference type	National guidance (UK)	
Reference	National Institute for Health and Care Excellence (NICE*), Dementia: assessment, management and support for people living with dementia and their carers. NICE guideline [NG97]. Published date:* June 2018 https://www.nice.org.uk/guidance/ng97 (accessed 11/6/19)	
Title	Dementia: assessment, management and support for people living with dementia and their carers. 2018	
Authors / Organisation	National Institute for Health and Clinical Excellence (NICE)	
Date of most recent update	2018	
Target group (e.g. clinician vs nurse vs GP vs consumer)	NHS staff responsible for patients in hospital and long-term residential care settings (including primary care healthcare professionals). Family and carers of people with dementia.	
Patient population or setting (e.g. hospital vs community vs aged care)	All settings	
Study design / Methods	NICE guideline development process	
Recommendations relating to prescription and use of antipsychotic medicines for people aged 65 years and over for the treatment of BPSD and delirium	**Recommendations relating to:** **Indication** As initial and ongoing management, offer psychosocial and environmental interventions to reduce distress in people living with dementia. Only offer antipsychotics for people living with dementia who are either: • at risk of harming themselves or others or • experiencing agitation, hallucinations or delusions that are causing them severe distress.	**Level of evidence:** Moderate- to high-quality evidence from up to 17 RCTs (N= 5,028 people) found improvements in the NPI, Brief Psychiatric Rating Scale, Cohen-Mansfield Agitation Inventory and Clinical Global Impression of Change with atypical antipsychotics versus placebo, but higher rates of mortality, somnolence, and extrapyramidal and cerebrovascular adverse events.

Ensure that people living with dementia can continue to access psychosocial and environmental interventions for distress while they are taking antipsychotics and after they have stopped taking them.

Drug dose:

Use the lowest effective dose of antipsychotics and use them for the shortest possible time.

Duration of use:

Reassess the person at least every 6 weeks, to check whether they still need medication.

Stop treatment with antipsychotics:

- if the person is not getting a clear ongoing benefit from taking them and
- after discussion with the person taking them and their family members or carers (as appropriate).

Contraindications:

For people with dementia with Lewy bodies or Parkinson's disease dementia, antipsychotics can worsen the motor features of the condition, and in some cases cause severe antipsychotic sensitivity reactions.

Second line options:

Recommendations around consent:

Before starting antipsychotics, discuss the benefits and harms with the person and their family members or carers (as appropriate). Consider using a

	decision aid to support this discussion. NICE has produced a patient decision aid on antipsychotic medicines for treating agitation, aggression and distress in people living with dementia.	
AGREE II Assessment	Domain	Score (%)
	Scope and purpose	100
	Stakeholder involvement	100
	Rigour of development	97
	Clarity of presentation	100
	Applicability	93
	Editorial independence	100

Reference type	International college guideline	
Reference	Zuidema, S.U., et al., *A consensus guideline for antipsychotic drug use for dementia in care homes. Bridging the gap between scientific evidence and clinical practice.* Int Psychogeriatr, 2015. **27**(11): p. 1849-59.	
Title	A consensus guideline for antipsychotic drug use for dementia in care homes. Bridging the gap between scientific evidence and clinical practice. 2015.	
Authors / Organisation	International Psychogeriatric Association	
Date of most recent update	2015	
Target group (e.g. clinician vs nurse vs GP vs consumer)	Clinicians (physicians, prescribers)	
Patient population or setting (e.g. hospital vs community vs aged care)	Residential aged care facilities/long term care	
Study design / Methods	Modified Delphi consensus procedure	
Q4: Recommendations relating to prescription and use of antipsychotic medicines for people aged 65 years and over for the treatment of BPSD and delirium	**Recommendations relating to:** **Indication** Antipsychotics should never be used as a first-line approach. Non-pharmacological interventions should be tried first. The benefits should be expected to outweigh the adverse events. Antipsychotics should only be prescribed in: (a) symptoms caused by underlying psychotic disorder that causes severe distress to patient/risk to others, (b) in non-psychotic patients in an extreme and acute situation with risk i.e. severe and harmful physical aggression to oneself or other, severe physical exhaustion, and severe eating/drinking	**Level of evidence:**

disorders with a risk of malnourishment or dehydration.

Only antipsychotics with proven evidence should be prescribed

Drug dose:

Start low, go slow

Duration of use:

Discontinuation should be a standard principle as part of a withdrawal plan.

If antipsychotics are prescribed for sedative purposes, drug should be withdrawn when situation has calmed down.

Discontinuation through tapering rather than immediate discontinuation unless Malignant Neuroleptic Syndrome, cardiovascular complication, infections, severe side effect at low dose.

Long-term antipsychotic treatment (>12 weeks) is only acceptable in patients with

◦ long history or high severity of psychotics/concurrent schizophrenia,

◦ at least two unsuccessful discontinuation attempts + psychosocial interventions have been shown not to be effective + alternative medication is not available/has been shown ineffective/expected to cause severe adverse events.

Contraindications:

Risk groups that may affect the decision to prescribe antipsychotics or not in the first place (cardiovascular diseases, cardiac arrhythmia, Lewy Body

	Dementia (LBD) and Parkinson's disease). **Second line options** **Recommendations around consent** Family caregiver should be informed and consulted throughout treatment and discontinuation. **Other:**	
AGREE II Assessment	Domain	Score (%)
	Scope and purpose	100
	Stakeholder involvement	100
	Rigour of development	84
	Clarity of presentation	100
	Applicability	80
	Editorial independence	100

Reference type	Clinical practice guideline	
Reference	Guideline Adaptation Committee. Clinical Practice Guidelines and Principles of Care for People with Dementia. Sydney. Guideline Adaptation Committee; 2016. http://sydney.edu.au/medicine/cdpc/documents/resources/Dementia-Guideline-Recommendations-WEB-version.pdf (accessed 9/6/19)	
Title	Clinical Practice Guidelines and Principles of Care for People with Dementia. 2016	
Authors / Organisation	NHMRC Cognitive Decline Partnership Centre	
Date of most recent update	2016	
Target group (e.g. clinician vs nurse vs GP vs consumer)	Clinicians: health and aged care staff (doctors, nurses, allied health and care workers) who work with people with dementia in community, residential and hospital settings.	
Patient population or setting (e.g. hospital vs community vs aged care)	Across all settings	
Study design / Methods	ADAPTE process: recommendations from an existing high quality guideline (the NICE Guideline developed by the National Collaborating Centre for Mental Health in the United Kingdom) were adapted to suit the Australian context. The adaptation process included conducting systematic reviews to ensure that the Clinical Guideline reflects the most recent research evidence. Recommendations are classed as 'evidence-based recommendations', 'consensus based recommendations' or 'practice points'. Each evidence based recommendation is supported by a grade reflecting the quality of the evidence. The grades range from very low to high and were assigned using the Grading of Recommendations Assessment, Development and Evaluation (GRADE) approach	
Recommendations relating to prescription and use of antipsychotic medicines for people aged 65 years and over for the treatment of BPSD and delirium	**Recommendations relating to:** **Indication** People with dementia who develop behavioural and psychological symptoms of dementia should usually be treated using non-pharmacological approaches in the first instance. Pharmacological intervention should usually only be offered first if the person, their carer(s) or family is severely	**Level of evidence:** Practice points

	distressed, pain is the suspected cause, or there is an immediate risk of harm to the person with dementia or others (i.e., very severe symptoms). If pharmacological management is used, this should complement, not replace, non-pharmacological approaches.	
	People with dementia and severe behavioural and psychological symptoms of dementia (i.e., psychosis and/or agitation/aggression) causing significant distress to themselves or others, may be offered treatment with an antipsychotic medication. Risperidone has the strongest evidence for treating psychosis. Risperidone and olanzapine have the strongest evidence for treating agitation/aggression, with weaker evidence for aripiprazole.	Evidence based recommendation - *moderate*
	Drug dose:	
	If antipsychotics are used for severe behavioural and psychological symptoms of dementia, atypical or second generation antipsychotics with low propensity to cause extrapyramidal side effects should be used; quetiapine and olanzapine are considered to have the best tolerability. Healthcare professionals should use low dosage and closely monitor for adverse effects.	Practice point
	The dose should be initially low and titrated upwards if necessary	Evidence based recommendation - *moderate*
	Duration of use:	

	If there is no efficacy observed within a relatively short timeframe (usually one to two weeks), treatment should be discontinued.	Evidence based recommendation - *moderate*
	Treatment should be reviewed every four to 12 weeks, considering the need for antipsychotics and possible cessation of medication. Review should include regular assessment and recording of changes in cognition and target symptoms.	
	Contraindications:	
	People with Alzheimer's disease, vascular dementia or mixed dementias with mild to-moderate behavioural and psychological symptoms of dementia should not usually be prescribed antipsychotic medications because of the increased risk of cerebrovascular adverse events and death.	Evidence based recommendation - *moderate*
	As far as possible, antipsychotics should be avoided in people with Dementia with Lewy Bodies due to the risk of severe untoward reactions, particularly extrapyramidal side effects	Practice point
	Second line options	
	Where people with dementia have moderate to severe behavioural and psychological symptoms that puts themselves or others at risk, referral to a specialist service for the management of behavioural and psychological symptoms should occur.	Practice point

	There is a paucity of evidence regarding the efficacy and safety of parenteral medication in behavioural emergencies. If parenteral medication is necessary for the control of violence, aggression and extreme agitation in people with dementia, olanzapine or lorazepam are preferred. Wherever possible, a single agent should be used in preference to a combination.	Practice point
	Recommendations around consent	
	There should be a full discussion with the person with dementia and their carers and family about the possible benefits and risks of treatment. In particular, cerebrovascular risk factors should be assessed and the possible increased risk of stroke/transient ischaemic attack and possible adverse effects on cognition discussed.	Evidence based recommendation - *moderate*
	People with dementia who have received involuntary sedation should be offered the opportunity, along with their carer(s) and family, to discuss their experiences and be provided with a clear explanation of the decision to use urgent sedation. This should be documented in their notes.	Practice point
	Other: People with dementia who experience agitation should be offered a trial of selective serotonin reuptake inhibitor (SSRI) antidepressants (the strongest evidence for effectiveness exists for citalopram) if non-	Evidence based recommendation - *moderate*

	pharmacological treatments are inappropriate or have failed.	
AGREE II Assessment	Domain	Score (%)
	Scope and purpose	100
	Stakeholder involvement	100
	Rigour of development	98
	Clarity of presentation	100
	Applicability	64
	Editorial independence	96

Reference type	Therapeutic guidelines
Reference	eTG complete [Internet]. Melbourne (VIC); Therapeutic Guidelines Ltd; (eTG April 2019 edition); *Psychotropic: Treatment of mood and behavioural disturbances in dementia*. 2015. Available from: https://tgldcdp-tg-org-au.wwwproxy1.library.unsw.edu.au/viewTopic?etgAccess=true&guidelinePage=Psychotropic&topicfile=dementia&guidelineName=Psychotropic&sectionId=toc_d1e277#toc_d1e277. (Accessed 9/6/19)
Title	eTG April 2019 edition; Psychotropic guidelines: Dementia: treatment of mood and behavioural disturbances in dementia
Authors / Organisation	eTG - therapeutic guidelines
Date of most recent update	2015
Target group (e.g. clinician vs nurse vs GP vs consumer)	Prescribers
Patient population or setting (e.g. hospital vs community vs aged care)	All settings
Study design / Methods	Multidisciplinary expert group consensus guidelines produced by national independent not for profit organisation
Q4: Recommendations relating to prescription and use of antipsychotic medicines for people aged 65 years and over for the treatment of BPSD and delirium	**Recommendations relating to:** **Indication** The mainstay of the treatment of mood and behavioural disturbances is nonpharmacological, with an emphasis on supporting families and carers. Psychotropic drugs should only be given for specific indications, based on assessment of specific symptoms and when nonpharmacological interventions have not **Level of evidence:**

alleviated symptoms distressing for the patient, their family or co-residents

Risperidone is licensed in Australia for the treatment of psychotic symptoms, or persistent agitation or aggression unresponsive to nonpharmacological approaches, in patients with moderate to severe Alzheimer disease. Maximum licensed treatment duration 12 weeks.

Drug dose:

Use low starting doses for all psychotropic drugs in people with dementia and increase slowly as necessary. In the early treatment phase there should be at least weekly review of the target behaviour or symptoms and close observation for adverse effects including sedation, postural hypotension, extrapyramidal symptoms and anticholinergic effects

If pharmacotherapy is considered necessary to control hallucinations, delusions or seriously disturbed behaviour, use:

risperidone 0.25 mg orally, twice daily initially. Increase if needed by 0.25 mg

every 2 or more days. Maximum dose 2 mg daily

OR

olanzapine 2.5 mg orally, daily initially. Increase if needed by 2.5 mg every 2 or more days to maximum of 10 mg daily in 1 or 2 divided doses

To relieve symptoms of severe anxiety and agitation, use:

oxazepam 7.5 mg orally, 1 to 3 times daily.

Duration of use:

Behavioural and psychological symptoms in patients with dementia will often be temporary. Psychotropic drugs should be reviewed after no more than 3 months and the dose reduced and stopped when possible, with the goal of using the lowest effective dose for the shortest period of time.

Benzodiazepines should not be used for longer than 2 weeks. They exacerbate cognitive impairment and increase the risk of falls and associated injuries in older people.

	Contraindications:	
	Never use first-generation antipsychotics if dementia with Lewy bodies is suspected, or for patients with Parkinson disease.	
	In dementia, second-generation antipsychotics, such as risperidone and olanzapine, have fewer extrapyramidal adverse effects and they have been more extensively studied in this population than the first-generation drugs, such as haloperidol.	
	Second line options	
	Recommendations around consent	
	Other:	
AGREE II Assessment	Domain	Score (%)
	Scope and purpose	100
	Stakeholder involvement	83
	Rigour of development	63
	Clarity of presentation	100
	Applicability	38
	Editorial independence	100

Reference type	Hospital safety and quality national clinical pathway
Reference	Australian Commission on Safety and Quality in Health Care. A better way to care: Safe and high-quality care for patients with cognitive impairment (dementia and delirium) in hospital - Actions for health service managers. Sydney; ACSQHC, 2014. https://www.safetyandquality.gov.au/wp-content/uploads/2014/11/A-better-way-to-care-Actions-for-health-service-managers.pdf (accessed 11/6/19)
Title	A better way to care: Safe and high-quality care for patients with cognitive impairment (dementia and delirium) in hospital - Actions for health service managers. 2014
Authors / Organisation	Australian Commission on Safety and Quality in Health Care
Date of most recent update	2014
Target group (e.g. clinician vs nurse vs GP vs consumer)	Hospital based health service managers
Patient population or setting (e.g. hospital vs community vs aged care)	Hospital
Study design / Methods	The strategies in this resource reflect evidence-based practice and incorporate existing models of care. Details of the literature review providing evidence supporting the strategies described in the resource is provided. An earlier draft of this resource was the subject of an extensive national consultation with public and private sector providers, and people with cognitive impairment and their carers. This resource incorporates the feedback from the consultation.
Recommendations relating to prescription and use of antipsychotic medicines for people aged 65 years and over for the treatment of BPSD and delirium	**Recommendations relating to:** **Level of evidence:** **Indication** Antipsychotic medication is avoided unless non-pharmacological interventions have been ineffective, the patient is severely distressed and/or the patient is at immediate risk of harm to themselves or others

	When prescribing antipsychotics, target symptoms that will potentially respond.	
	Drug dose:	
	Start low and increase slowly.	
	Duration of use:	
	Limit the time the patient is on the medicine.	
	Contraindications:	
	Second line options:	
	Advice should be sought from clinical experts when presentation is complex or beyond the skill level of receiving clinicians. Experts may include geriatricians, psycho-geriatricians and nurse practitioners, clinical nurse consultants, and staff from Dementia Behaviour Advisory Services.	
	Recommendations around consent:	
	Obtain consent.	
	Other:	
AGREE II Assessment	Domain	Score (%)
	Scope and purpose	100
	Stakeholder involvement	83
	Rigour of development	82
	Clarity of presentation	86
	Applicability	75
	Editorial independence	50

Reference type	National college consensus guideline
Reference	ANZSGM, *Management of Behavioural and Psychological Symptoms of Dementia (BPSD)*, in *Position Statement 26*. 2016. (77) http://www.anzsgm.org/documents/26PSBPSD12Aug2016.pdf (accessed 9/6/19)
Title	Management of Behavioural and Psychological Symptoms of Dementia (BPSD), 2016
Authors / Organisation	Australia and New Zealand Society for Geriatric Medicine
Date of most recent update	2016
Target group (e.g. clinician vs nurse vs GP vs consumer)	Clinicians
Patient population or setting (e.g. hospital vs community vs aged care)	All settings
Study design / Methods	Position Statements represents the views of the Australian and New Zealand Society for Geriatric Medicine.
Q4: Recommendations relating to prescription and use of antipsychotic medicines for people aged 65 years and over for the treatment of BPSD and delirium	**Recommendations relating to:** **Level of evidence:** **Indication** Judicious use of medications by people with expertise in this area may be necessary as an adjuvant therapy or when non-pharmacological management has failed. Careful monitoring for side effects is an essential part of care. Non-pharmacological individualised strategies should be the first line of management of BPSD used by the family, relatives and paid carers in the community and in the hospital setting. **Drug dose:** **Duration of use:** **Contraindications:**

	Second line options	
	Access to Geriatric, Old Age Psychiatry and Psychology services should be freely available to manage difficult cases of BPSD and collaboration between specialists, primary care physicians, aged care facilities, community care providers and all health professionals involved in care of older people with dementia is important.	
	Recommendations around consent	
	Other:	
AGREE II Assessment	Domain	Score (%)
	Scope and purpose	76
	Stakeholder involvement	43
	Rigour of development	53
	Clarity of presentation	100
	Applicability	89
	Editorial independence	57

Reference type	Hospital safety and quality national standards	
Reference	Australian Commission on Safety and Quality in Health Care. National Safety and Quality Health Service Standards guide for hospitals. Sydney: ACSQHC; 2017. https://www.safetyandquality.gov.au/wp-content/uploads/2017/12/National-Safety-and-Quality-Health-Service-Standards-Guide-for-Hospitals.pdf (accessed 11/6/19)	
Title	National Safety and Quality Health Service Standards guide for hospitals, 2017. (Action 5.29: Preventing delirium and managing cognitive impairment)	
Authors / Organisation	Australian Commission on Safety and Quality in Health Care (ACSQHC)	
Date of most recent update	2017	
Target group (e.g. clinician vs nurse vs GP vs consumer)	Health care staff (doctors, nurses, allied health and other workers) who work in hospital settings.	
Patient population or setting (e.g. hospital vs community vs aged care)	Hospital	
Study design / Methods	The National Safety and Quality Health Service Standards were developed by the Australian Commission on Safety and Quality in Health Care (the Commission) in collaboration with the Australian Government, states and territories, the private sector, clinical experts, patients and carers.	
Q4: Recommendations relating to prescription and use of antipsychotic medicines for people aged 65 years and over for the treatment of BPSD and delirium	**Recommendations relating to:** **Indication** **Preventing delirium and managing cognitive impairment**: The health service organisation providing services to patients who have cognitive impairment or are at risk of developing delirium has a system for caring for patients with cognitive impairment to: a. Incorporate best-practice strategies for early recognition, prevention, treatment and	**Level of evidence:**

management of cognitive impairment in the care plan, including the Delirium Clinical Care Standard (ACSQHC; 2016) where relevant.

b. Manage the use of antipsychotics and other psychoactive medicines, in accordance with best practice and legislation.

Managing the use of antipsychotic medicines:

• Conduct a comprehensive, formal assessment of any behavioural symptoms or changes, including assessment of potential unmet needs

• Communicate effectively and understand the person

• Involve carers and family members

• Create a supportive environment

• Manage training and education of the workforce

• Avoid physical restraint, if possible, and following guidance to minimise restraint

• Trying non-pharmacological approaches in the first instance

• Seek behavioural management advice when required

• Start pharmacological treatment only if a patient is severely distressed, or is at immediate risk of harm to themselves or others, and non-pharmacological interventions have been ineffective

• Monitor and collect feedback on the use of antipsychotics and other psychoactive medicines.

Drug dose:

If pharmacological interventions are prescribed:

- follow 'start low, go slow, time limit and review'
- select the agent based on evidence according to diagnosis, severity and patient factors such as comorbidities
- avoid multiple agents
- consider evidence and pharmacokinetics when selecting dose, frequency and timing
- document indications for use and providing instructions for community prescribers

Duration of use:

- follow 'start low, go slow, time limit and review'

Contraindications:

Second line options:

Seek behavioural management advice when required

Recommendations around consent:

• Communicate effectively and understand the person

• Involve carers and family members

Other:

Monitor and collect feedback on the use of antipsychotics and other psychoactive medicines.

AGREE II Assessment	Domain	Score (%)
	Scope and purpose	100
	Stakeholder involvement	50
	Rigour of development	47
	Clarity of presentation	98
	Applicability	64
	Editorial independence	50

Reference type	National college consensus guideline	
Reference	Antipsychotic medications as a treatment of behavioural and psychological symptoms of dementia. Professional Practice Guideline 10. 2016. https://www.ranzcp.org/files/resources/college_statements/practice_guidelines/pg10-pdf.aspx (accessed 11/6/19)	
Title	Antipsychotic medications as a treatment of behavioural and psychological symptoms of dementia. The Royal Australian and New Zealand College of Psychiatrists. Professional Practice Guideline 10. 2016.	
Authors / Organisation	The Royal Australian and New Zealand College of Psychiatrists	
Date of most recent update	2016	
Target group (e.g. clinician vs nurse vs GP vs consumer)	Prescribers	
Patient population or setting (e.g. hospital vs community vs aged care)	All settings	
Study design / Methods	Responsible Committee: Faculty of Psychiatry of Old Age and Committee for Therapeutic Interventions and Evidence-Based Practice. No other details available.	
Q4: Recommendations relating to prescription and use of antipsychotic medicines for people aged 65 years and over for the treatment of BPSD and delirium	**Recommendations relating to:** **Indication** Behavioural interventions should always be used prior to considering the use of any class of psychotropic medications for BPSD management. Antipsychotic medications are recommended when BPSD are psychotic in nature, unresponsive to psychosocial interventions or there is a severe and complex risk of harm. When considering the use of antipsychotics, clinicians should target specific symptoms.	**Level of evidence:**

Antipsychotic medications are **not** recommended and are unlikely to be effective in certain symptoms such as wandering, undressing, inappropriate voiding, verbal aggression or screaming.

Drug and Dose

- Risperidone is the only oral medication approved in Australia and New Zealand for use in behavioural disturbances associated with Alzheimer's type dementia.
- Other antipsychotics such as quetiapine, olanzapine or aripiprazole if used for BPSD are off label and should only be considered if risperidone is not tolerated or is not appropriate.
- Olanzapine is the only antipsychotic approved for parenteral (intramuscular) use in Australia for patients with BPSD. It is noted that this medication is intended for patients who are orally non-compliant or in an acute emergency setting.
- Consider alternative medications – there is some evidence supporting the efficacy of citalopram, cholinesterase inhibitors (ChEIs) and memantine in the management of psychotic symptoms in dementia.

Drug dose:

- When psychotropics are indicated, the start low, go slow strategy should be used and there is a need for systematic, sequential trialling of one drug at a time with side effects being monitored regularly and with the drug ceased immediately if significant adverse effects are noted.
- It is recommended that risperidone doses of up to a maximum of 2mg should be prescribed for this population.
- An instrument designed to rate and monitor BPSD symptoms such as the

Neuropsychiatric Inventory, the Behave-AD or the Cohen–Mansfield Agitation Inventory is useful.

Duration of use:

Since the natural history of BPSD is variable, it is recommended that the use of antipsychotics is time limited and reviewed for their potential discontinuation at least three-monthly.

Contraindications:

The use of antipsychotics in patients with dementia is associated with an increased risk of cerebrovascular events (including stroke) and death due to any cause.

The presence of cardiovascular disease and vascular risk factors (e.g. stroke history, hypertension, diabetes), QTc interval on electrocardiogram, electrolytic imbalances, family history of torsades des pointes, concomitant treatments and use of other drugs which lengthen QTc may confer additional risk. A thorough history should be obtained before commencement of pharmacological treatments.

Second line options:

Recommendations around consent:

When prescription of a medication is being considered, informed consent is essential. Therefore, it is necessary that information about the risks and benefits of prescribing a medication to a person with dementia is conveyed to the person or their substitute decision maker, and that this is understood.

Acute situations:

In an acute situation, when the safety of the patient or significant others are at risk, the common law principle of necessity allows a doctor to act in an

	emergency in the best interests of a patient unable to provide valid consent to their own treatment. In such circumstances, treatment should be initiated quickly and targeted appropriately with the object of minimising distress and injury. Informed consent from the appropriate individual(s) should then be obtained as soon as practicable if treatment is to be continued. Non-acute situations: In non-acute situations, informed consent for the use of antipsychotics should always be obtained from the person themselves where possible. The person with dementia should receive an explanation of suggested treatments offered in such a way as to maximise his/her understanding of what is involved. Commonly, the person with dementia is unable to consent but is not objecting to the treatment and informed consent should then be obtained from either the 'person responsible' or a legal guardian. Where the person with dementia is unable to provide informed consent and is objecting to taking antipsychotic medication, management should follow local guardianship or mental health legislative guidelines. **Other:**	
AGREE II Assessment	Domain	Score (%)
	Scope and purpose	88
	Stakeholder involvement	31
	Rigour of development	63
	Clarity of presentation	86
	Applicability	46
	Editorial independence	61

Reference type	National college position statement (Canada)	
Reference	Use of antipsychotic medications to treat people with dementia in long-term care homes. Alzheimer Society of Canada. Position Statement. 2017 https://alzheimer.ca/sites/default/files/files/national/position-statements/use%20of%20antipsychotic%20medications%20to%20treat%20people%20with%20dementia%20in%20long-term%20care%20homes.pdf (accessed 11/6/2019)	
Title	Use of antipsychotic medications to treat people with dementia in long-term care homes. 2017	
Authors / Organisation	Alzheimer Society of Canada	
Date of most recent update	2017	
Target group (e.g. clinician vs nurse vs GP vs consumer)	Health care professionals in all settings	
Patient population or setting (e.g. hospital vs community vs aged care)	Residential aged care facilities	
Study design / Methods	No details available.	
Q4: Recommendations relating to prescription and use of antipsychotic medicines for people	**Recommendations relating to:** **Indication:** Antipsychotics should only be used as a last resort to treat behavioural and psychological symptoms of dementia, especially in older adults.	**Level of evidence:**

aged 65 years and over for the treatment of BPSD and delirium	**Drug dose**: Recommended practice guidelines should be followed to assess the efficacy of any antipsychotic medications and to cease their use if no obvious benefit for the person is noted. Antipsychotics should be monitored regularly and discontinued immediately if adverse effects occur. **Contraindications:** **Second line options:** **Recommendations around consent:** Staff, family members and the person with dementia should be informed of the risks, benefits and side effects of antipsychotics. **Other:**	
AGREE II Assessment	Domain	Score (%)
	Scope and purpose	64
	Stakeholder involvement	36
	Rigour of development	23
	Clarity of presentation	74
	Applicability	29
	Editorial independence	18

DELIRIUM MAIN GUIDANCE

Reference type	National guidance (Scotland)	
Reference	Scottish Intercollegiate Guidelines Network (SIGN), *Risk reduction and management of delirium. SIGN 157.* 2019. https://www.sign.ac.uk/assets/sign157.pdf (accessed 11/6/2019)	
Title	Risk reduction and management of delirium. 2019	
Authors / Organisation	Scottish Intercollegiate Guidelines Network (SIGN)	
Date of most recent update	2019	
Target group (e.g. clinician vs nurse vs GP vs consumer)	Primary and secondary healthcare professionals, community and care home staff involved in the care of patients at risk of, or experiencing, delirium, as well as patients and carers	
Patient population or setting (e.g. hospital vs community vs aged care)	All settings	
Study design / Methods	SIGN guidelines are developed using an explicit methodology based on three core principles: Development is carried out by multidisciplinary, nationally representative groups A systematic review is conducted to identify and critically appraise the evidence Recommendations are explicitly linked to the supporting evidence. GRADE approach implemented for guideline development	
Q4: Recommendations relating to prescription and use of antipsychotic medicines for people aged 65 years and over for the treatment of BPSD and delirium	**Recommendations relating to:** **Indication**	**Level of evidence:**
	Specifically detect, assess causes of, and treat agitation and/or distress, using nonpharmacological means only if possible. A Cochrane review concluded that antipsychotics did not reduce delirium severity, resolve symptoms or alter mortality in the acute care setting	Well-conducted meta-analyses, systematic reviews, or RCTs with a low risk of bias

	Drug dose:	
	Duration of use:	
	antipsychotics prescribed for delirium should be reviewed on a daily basis and stopped as soon as the clinical situation allows, typically within 1–2 days	
	Contraindications:	Well-conducted case-control or cohort studies with a low risk of confounding or bias and a moderate probability that the relationship is causal
	Haloperidol is contraindicated in combination with any drug that is associated with QTc prolongation	
	Second line options	
	Recommendations around consent:	
	Other:	
AGREE II Assessment	Domain	Score (%)
	Scope and purpose	100
	Stakeholder involvement	95
	Rigour of development	100
	Clarity of presentation	100
	Applicability	100
	Editorial independence	100

Reference type	National guidance (UK)	
Reference	National Institute for Health and Care Excellence (NICE), *Delirium: prevention, diagnosis and management Clinical guideline [CG103] Published date: July 2010 Last updated: March 2019.* 2019 https://www.nice.org.uk/guidance/cg103 (accessed 11/6/19)	
Title	Risk reduction and management of delirium. 2019	
Authors / Organisation	National Institute for Health and Clinical Excellence (NICE)	
Date of most recent update	2019	
Target group (e.g. clinician vs nurse vs GP vs consumer)	NHS staff responsible for patients in hospital (including critical care) and long-term residential care settings (including primary care healthcare professionals). Family and carers of people with or at high risk of developing delirium.	
Patient population or setting (e.g. hospital vs community vs aged care)	All settings	
Study design / Methods	NICE guideline development process	
Recommendations relating to prescription and use of antipsychotic medicines for people aged 65 years and over for the treatment of BPSD and delirium	**Recommendations relating to:** **Indication** In people diagnosed with delirium, identify and manage the possible underlying cause or combination of causes. If a person with delirium is distressed or considered a risk to themselves or others, first use verbal and non-verbal techniques to de-escalate the situation. If a person with delirium is distressed or considered a risk to themselves or others and verbal and non-verbal de-escalation techniques are ineffective or inappropriate, consider giving short-term (usually for 1 week or less) haloperidol.	**Level of evidence:** There is moderate quality evidence from one RCT showing a: significant improvement in delirium and a significantly lower severity of delirium (an indirect measure of delirium was used) in the haloperidol group compared with no treatment at 7 days. There is some uncertainty around this result. Haloperidol has UK marketing authorisation for delirium treatment.

	Drug dose:	
	Start at the lowest clinically appropriate dose and titrate cautiously according to symptoms	
	Duration of use:	
	Short-term (usually for 1 week or less)	
	Contraindications:	
	Use antipsychotic drugs with caution or not at all for people with conditions such as Parkinson's disease or dementia with Lewy bodies	
	Second line options	
	Recommendations around consent:	
	Other:	
	Pharmacological treatment of delirium was identified as a research recommendation by NICE, to improve NICE guidance and patient care in the future	
AGREE II Assessment	Domain	Score (%)
	Scope and purpose	100
	Stakeholder involvement	98
	Rigour of development	100
	Clarity of presentation	100
	Applicability	82
	Editorial independence	100

Reference type	National clinical care standard
Reference	Australian Commission on Safety and Quality in Health Care. Delirium Clinical Care Standard. Sydney: ACSQHC, 2016. https://www.safetyandquality.gov.au/wp-content/uploads/2016/07/Delirium-Clinical-Care-Standard-Web-PDF.pdf (accessed 11/6/19)`
Title	Delirium Clinical Care Standard. ACSQHC, 2016.
Authors / Organisation	Australian Commission on Safety and Quality in Health Care (ACSQHC)
Date of most recent update	2016
Target group (e.g. clinician vs nurse vs GP vs consumer)	Everyone: patients, their families, carers, consumers, health care professionals, health service managers, health care planners
Patient population or setting (e.g. hospital vs community vs aged care)	Hospital through to transition to primary care
Study design / Methods	A Clinical Care Standard is a small number of quality statements that describe the clinical care that a patient should be offered for a specific clinical condition. It differs from a clinical practice guideline: rather than describing all the components of care for managing a clinical condition, a Clinical Care Standard addresses priority areas for quality improvement. This Clinical Care Standard was developed by the Australian Commission on Safety and Quality in Health Care (the Commission) in collaboration with consumers, clinicians, researchers and health organisations. It complements the Commission's resource, *A better way to care: safe and high quality care for patients with cognitive impairment (dementia and delirium) in hospital*, and builds on existing state and territory-based initiatives. Each Clinical Care Standard is developed in collaboration with a topic working group of clinicians, researchers and consumers. The group use the most current evidence from guidelines and standards, information about gaps between evidence and practice, their expertise and knowledge of the issues affecting the appropriate delivery of care, and consideration of issues that are important to consumers.

	The topic working groups are supported by a Clinical Care Standards Advisory Committee that provides advice on the development process of the Clinical Care Standards program. A public consultation process is also conducted on each draft Clinical Care Standard and associated documents before finalisation and publication.	
Recommendations relating to prescription and use of antipsychotic medicines for people aged 65 years and over for the treatment of BPSD and delirium	**Recommendations relating to:** **Indication** Treatment with an antipsychotic medicine is only considered if a patient with delirium is distressed and the cause of their distress cannot be addressed and non-drug strategies have failed to ease their symptoms. Reserve antipsychotic medicines for patients who are distressed despite non-drug strategies, such as patients whose behavioural or emotional disturbance is a threat to themselves or others. Before prescribing, refer to guidelines, such as *The AMH aged care companion* or the *Therapeutic guidelines: psychotropic* **Drug dose:** Use a low dose, closely monitor response before considering any dose increases. **Duration of use:** Limit use for as short a period as possible. **Contraindications:** Use antipsychotic medicines with caution or not at all for people with Parkinson's disease or dementia with Lewy Bodies. **Second line options:**	**Level of evidence:**

	Recommendations around consent: Discuss with the patient and carer the choice of antipsychotic medicine, the risks and benefits, dosage, and duration.	
AGREE II Assessment	Domain	Score (%)
	Scope and purpose	100
	Stakeholder involvement	100
	Rigour of development	77
	Clarity of presentation	100
	Applicability	64
	Editorial independence	100

Reference type	National college guideline	
Reference	American Geriatrics Society, *Clinical Practice Guideline for Postoperative Delirium in Older Adults.* 2014. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5901697/	
Title	American Geriatrics Society Clinical Practice Guideline for Postoperative Delirium in Older Adults. 2014	
Authors / Organisation	American Geriatrics Society	
Date of most recent update	2014	
Target group (e.g. clinician vs nurse vs GP vs consumer)	Clinicians	
Patient population or setting (e.g. hospital vs community vs aged care)	Hospital, post-operative setting	
Study design / Methods	Three components - An interdisciplinary expert panel on delirium was first created. Second, a development process was conducted that included a systematic literature review and evaluation of the evidence by the expert panel. The quality rating system was based on the Cochrane Risk of Bias and Jadad scoring system. The Institute of Medicine (IOM) reports on Systematic Reviews and Trustworthy Clinical Guideline provided the standards followed throughout the process and guided the framework. Third, the guideline document was written and revised initially through committee subgroups and subsequently achieved full consensus of the panel on all recommendation statements. Following manuscript preparation, the panel solicited an external peer review and completed an open comment period.	
Recommendations relating to prescription and use of antipsychotic medicines for people aged 65 years and over for the treatment of BPSD and delirium	**Recommendations relating to:** **Indication** There is insufficient evidence to recommend for or against the use of antipsychotic medications prophylactically in older surgical patients to prevent delirium The prescribing practitioner may use antipsychotics at the lowest effective dose for the shortest possible duration to treat patients who are severely agitated or	**Level of evidence:** Low

	distressed, and are threatening substantial harm to self and/or others. In all cases, treatment with antipsychotics should be employed only if behavioral interventions have failed or are not possible, and ongoing use should be evaluated daily with in-person examination of patients	
	Drug dose:	
	Lowest effective dose	
	Duration of use:	
	Shortest possible duration	
	Contraindications:	
	Second line options:	
	Recommendations around consent:	
	Other:	
AGREE II Assessment	Domain	Score (%)
	Scope and purpose	100
	Stakeholder involvement	71
	Rigour of development	97
	Clarity of presentation	100
	Applicability	43
	Editorial independence	100

Reference type	Therapeutic guidelines	
Reference	eTG complete [Internet]. Melbourne (VIC); Therapeutic Guidelines Ltd; (eTG April 2019 edition); *Psychotropic: Management of delirium*. 2015. Available from: https://tgldcdp-tg-org-au.wwwproxy1.library.unsw.edu.au/viewTopic?topicfile=delirium&guidelineName=Psychotropic#toc_d1e304. Accessed 9/6/19	
Title	eTG April 2019 edition; Psychotropic guidelines: Delirium: Management of delirium	
Authors / Organisation	eTG - therapeutic guidelines	
Date of most recent update	2015	
Target group (e.g. clinician vs nurse vs GP vs consumer)	Prescribers	
Patient population or setting (e.g. hospital vs community vs aged care)	All settings	
Study design / Methods	Multidisciplinary expert group consensus guidelines produced by national independent not for profit organisation	
Recommendations relating to prescription and use of antipsychotic medicines for people aged 65 years and over for the treatment of BPSD and delirium	**Recommendations relating to:** **Indication** Frequently no medication will be needed to manage delirium if there is prompt treatment of underlying cause(s) and good nonpharmacological management. While pharmacotherapy is unnecessary for most delirious patients, it is sometimes required to control anxiety, agitation, aggression, delusions and/or hallucinations. There are no drugs specifically approved by the Australian Therapeutic Goods Administration (TGA) for the treatment of delirium and high quality evidence for their use is also lacking. However, clinical	**Level of evidence:**

experience indicates that there is a place for pharmacological intervention in patients with delirium where distress or agitation is significant.

If delusions or hallucinations are causing distress, or if behavioural disturbance threatens the patient's treatment or care, or is causing significant threat to others, an antipsychotic is indicated.

Drug dose:

haloperidol 0.5 mg orally, as a single dose OR

olanzapine 2.5 mg orally, as a single dose OR

risperidone 0.5 mg orally, as a single dose

If oral administration is impossible and symptoms are severe, use:

haloperidol 0.5 mg IM, as a single dose OR

olanzapine 2.5 mg IM, as a single dose.

Half of the above doses may be adequate in the very frail and elderly person.

Duration of use:

A single dose of the indicated antipsychotic is usually adequate. Further doses may be required. Onset of action can be delayed from 30 to 60 minutes after administration, second doses should not be given for at least 30 minutes

Contraindications:

Second line options:

Except for the specific indications of delirium related to alcohol withdrawal or to seizures, **benzodiazepines should be avoided** because complications are common and long-acting benzodiazepines increase the risk of delirium.

Recommendations around consent:

Other:

Delirium can sometimes be caused by alcohol withdrawal, so a therapeutic trial of thiamine should always be considered when the cause of the delirium is unknown.

AGREE II Assessment	Domain	Score (%)
	Scope and purpose	100
	Stakeholder involvement	83
	Rigour of development	63
	Clarity of presentation	100
	Applicability	36
	Editorial independence	100

Reference type	Hospital safety and quality national clinical pathway
Reference	Australian Commission on Safety and Quality in Health Care. A better way to care: Safe and high-quality care for patients with cognitive impairment (dementia and delirium) in hospital - Actions for health service managers. Sydney; ACSQHC, 2014. https://www.safetyandquality.gov.au/wp-content/uploads/2014/11/A-better-way-to-care-Actions-for-health-service-managers.pdf (accessed 11/6/19)
Title	A better way to care: Safe and high-quality care for patients with cognitive impairment (dementia and delirium) in hospital - Actions for health service managers. 2014
Authors / Organisation	Australian Commission on Safety and Quality in Health Care
Date of most recent update	2014
Target group (e.g. clinician vs nurse vs GP vs consumer)	Hospital based health service managers
Patient population or setting (e.g. hospital vs community vs aged care)	Hospital
Study design / Methods	The strategies in this resource reflect evidence-based practice and incorporate existing models of care. Details of the literature review providing evidence supporting the strategies described in the resource is provided. An earlier draft of this resource was the subject of an extensive national consultation with public and private sector providers, and people with cognitive impairment and their carers. This resource incorporates the feedback from the consultation.
Recommendations relating to prescription and use of antipsychotic medicines for people aged 65 years and over for the treatment of BPSD and delirium	**Recommendations relating to:** **Level of evidence:** **Indication** Antipsychotic medication is avoided unless non-pharmacological interventions have been ineffective, the patient is severely distressed and/or the patient is at immediate risk of harm to themselves or others

	When prescribing antipsychotics, target symptoms that will potentially respond. **Drug dose**: Start low and increase slowly. **Duration of use:** Limit the time the patient is on the medicine. **Contraindications:** **Second line options:** Advice should be sought from clinical experts when presentation is complex or beyond the skill level of receiving clinicians. Experts may include geriatricians, psycho-geriatricians and nurse practitioners, clinical nurse consultants, and staff from Dementia Behaviour Advisory Services. **Recommendations around consent:** Obtain consent. **Other:**	
AGREE II Assessment	Domain	Score (%)
	Scope and purpose	100
	Stakeholder involvement	83
	Rigour of development	82
	Clarity of presentation	86
	Applicability	75
	Editorial independence	50

Reference type	Hospital safety and quality national standards	
Reference	Australian Commission on Safety and Quality in Health Care. National Safety and Quality Health Service Standards guide for hospitals. Sydney: ACSQHC; 2017. https://www.safetyandquality.gov.au/wp-content/uploads/2017/12/National-Safety-and-Quality-Health-Service-Standards-Guide-for-Hospitals.pdf (accessed 11/6/19)	
Title	National Safety and Quality Health Service Standards guide for hospitals, 2017. (Action 5.29: Preventing delirium and managing cognitive impairment)	
Authors / Organisation	Australian Commission on Safety and Quality in Health Care (ACSQHC)	
Date of most recent update	2017	
Target group (e.g. clinician vs nurse vs GP vs consumer)	Health care staff (doctors, nurses, allied health and other workers) who work in hospital settings.	
Patient population or setting (e.g. hospital vs community vs aged care)	Hospital	
Study design / Methods	The National Safety and Quality Health Service Standards were developed by the Australian Commission on Safety and Quality in Health Care (the Commission) in collaboration with the Australian Government, states and territories, the private sector, clinical experts, patients and carers.	
Recommendations relating to prescription and use of antipsychotic medicines for people aged 65 years and over for the treatment of BPSD and delirium	**Recommendations relating to:** **Indication** *Preventing delirium and managing cognitive impairment* The health service organisation providing services to patients who have cognitive impairment or are at risk of developing delirium has a system for caring for patients with cognitive impairment to: a. Incorporate best-practice strategies for early recognition, prevention, treatment and	**Level of evidence:**

management of cognitive impairment in the care plan, including the Delirium Clinical Care Standard (ACSQHC; 2016) where relevant.

b. Manage the use of antipsychotics and other psychoactive medicines, in accordance with best practice and legislation.

Managing the use of antipsychotic medicines:

• Conduct a comprehensive, formal assessment of any behavioural symptoms or changes, including assessment of potential unmet needs

• Communicate effectively and understand the person

• Involve carers and family members

• Create a supportive environment

• Manage training and education of the workforce

• Avoid physical restraint, if possible, and follow guidance to minimise restraint

• Trying non-pharmacological approaches in the first instance

• Seek behavioural management advice when required

• Start pharmacological treatment only if a patient is severely distressed, or is at immediate risk of harm to themselves or others, and non-pharmacological interventions have been ineffective

• Monitor and collect feedback on the use of antipsychotics and other psychoactive medicines.

Drug dose:

If pharmacological interventions are prescribed:

- follow 'start low, go slow, time limit and review'
- select the agent based on evidence according to diagnosis, severity and patient factors such as comorbidities
- avoid multiple agents
- consider evidence and pharmacokinetics when selecting dose, frequency and timing
- document indications for use and providing instructions for community prescribers

Duration of use:

- follow 'start low, go slow, time limit and review'

Contraindications:

Second line options:

Seek behavioural management advice when required

Recommendations around consent:

• Communicate effectively and understand the person

• Involve carers and family members

Other:

Monitor and collect feedback on the use of antipsychotics and other psychoactive medicines.

AGREE II Assessment	Domain	Score (%)
	Scope and purpose	100
	Stakeholder involvement	50
	Rigour of development	47
	Clarity of presentation	98
	Applicability	64
	Editorial independence	50

Box 2. Other guidance documents for management of behavioural and psychological symptoms dementia and delirium and their recommendations on use of antipsychotics.

OTHER GUIDANCE

DEMENTIA OTHER GUIDANCE

Reference type	AMH Aged Care Companion - a companion volume to the Australian Medicines Handbook (AMH) (considered to be the Australian National Formulary)
Reference	Behavioural & psychological symptoms of dementia. AMH (online). Adelaide: Australian Medicines Handbook Pty Ltd; 2018. https://agedcare.amh.net.au/ (accessed 13/06/19)
Title	Behavioural & psychological symptoms of dementia
Authors / Organisation	AMH Aged Care Companion. Australian Medicines Handbook Pty Ltd
Date of most recent update	2019
Target group (e.g. clinician vs nurse vs GP vs consumer)	Health professionals (medical practitioners, pharmacists, nurses) involved in providing health services to the older people
Patient population or setting (e.g. hospital vs community vs aged care)	All settings
Study design / Methods	AMH Pty Ltd is independent of government and industry and does not accept advertising, sponsorship or editorial input from outside sources. AMH follows strict and robust editorial processes: https://shop.amh.net.au/about/editorial-process Content is originally researched and written by staff editors, all of whom have minimum qualifications of a degree in pharmacy or medicine, and is subject to peer review by Australian experts and practising health professionals from across the country (specialists, general practitioners, nurses, pharmacists).
Recommendations relating to prescription and use of antipsychotic medicines for people aged 65 years and over	**Recommendations relating to:** **Level of evidence:** **Indication**: Consider secondary causes of behavioural disturbance, e.g. intercurrent physical illness, depression, pain, faecal

for the treatment of BPSD and delirium	impaction, infection. Environmental factors (e.g. boredom, loud noise, unfamiliar surroundings) may also cause disturbed behaviour. Prevent or treat these if possible. The main approach to the management of behavioural disturbance is nursing and/or carer based. Try interventions, such as behavioural therapies and changes to the environment, first. Evidence for efficacy of drugs is limited and risk of adverse effects (including death with antipsychotics) is significant. Consider drugs only after excluding secondary causes and if non-drug measures have failed or been insufficient. Limit drug treatment to short-term use. Base decision of whether to start drug treatment on the person's physical and psychological state, and the risk of harm to the patient or carer with and without treatment. Symptoms that appear most responsive to antipsychotic medications are physical aggression, violent behaviours, agitation, hostility and psychosis (hallucinations, delusions). If parkinsonism is present, consider an antipsychotic thought to cause fewer EPSE, e.g. quetiapine (non-marketed indication) or low-dose risperidone. Anticholinesterases or possibly quetiapine may be considered in people with Lewy body dementia.

Risperidone is the only newer antipsychotic with a TGA-approved indication for use in behavioural disturbance (in moderate-to-severe Alzheimer's dementia) and is subsidised under the PBS.

Use of more than one antipsychotic is not recommended

Document the behaviour of concern being targeted and the response to all attempted non-drug and drug interventions; an individualised approach is essential and numerous trials may be needed to find a successful strategy.

Drug dose:

Risperidone:

0.25 mg orally twice daily, increasing daily dose by 0.25 mg every 2 or more days, if necessary. Usual dose 1 mg daily (in 1 or 2 doses); up to 2 mg daily may be required in some patients.

Olanzapine (non-marketed indication):

2.5 mg orally once daily; may be increased, depending on response, to a maximum of 10 mg daily.

Quetiapine (non-marketed indication):

12.5 mg orally daily for 7 days, then increase to 12.5 mg twice daily. If required, increase daily dose by 12.5 mg, with at least 7 days between increases in dose. Maximum 50 mg twice daily.

	Haloperidol: 0.25–0.5 mg orally daily. If no response, increase dose at weekly intervals by 0.25 mg once or twice daily, up to a maximum of 2 mg daily. Limit to short-term use only; monitor for EPSE. For people with swallowing difficulty, risperidone, olanzapine and haloperidol are available in forms which dissolve in the mouth or as oral liquids. **Duration of use:** Assess and monitor the response to treatment. Review the need for ongoing antipsychotic medication frequently as challenging behaviours are often transient. Attempt a dose reduction or trial withdrawal after 6–12 weeks, or earlier if ineffective. Withdraw regular antipsychotics slowly, especially those with prominent anticholinergic effects, to avoid withdrawal symptoms (tachycardia, sweating, insomnia) **Contraindications:** Antipsychotics and benzodiazepines can cause sedation and confusion, increasing the risk of harm from falls. Antipsychotic drugs have a wide range of potentially serious adverse effects, some of which may be irreversible including possible worsening of cognitive function or precipitation of delirium, postural hypotension, increased risk of death (mainly cardiovascular events) In patients with Lewy body dementia, antipsychotics (even	

low doses) commonly cause deterioration in cognitive and motor function and may paradoxically increase agitation and worsen behaviour:

- anticholinesterases may help
- if an antipsychotic is considered necessary, seek specialist advice.

Second line options:

Consider referral to a behavioural advisory service to assist in assessment and management of behavioural and psychological symptoms of dementia

Pain commonly contributes to agitation. Assess adequacy of pain relief. If pain is suspected, consider a trial of regular paracetamol:

1 g orally 3 or 4 times a day. Maximum 4 g daily.

Short-term use of benzodiazepines may be helpful for behavioural symptoms, such as anxiety, tension, irritability and insomnia.

Benzodiazepines may also be useful as single doses to allay anxiety and agitation when they can be anticipated, e.g. minor surgical procedure or dental visit.

e.g. oxazepam 7.5–15 mg orally when required to a maximum of 60 mg daily.

Some (but not all) small studies with carbamazepine have shown improvement in agitation and aggression. Valproate is also used, however, current evidence suggests that it is not effective; valproate has fewer adverse

	effects and drug interactions than carbamazepine. In general, antiepileptics are well tolerated and less toxic than antipsychotics, but lack of convincing evidence limits use to situations where other treatment has been ineffective. Seek specialist advice. **Recommendations around consent:** **Other:**	

Reference type	Health Vic	
Reference	Managing behavioural and psychological symptoms of dementia.2018 https://www2.health.vic.gov.au/hospitals-and-health-services/patient-care/older-people/cognition/dementia/dementia-bpsd (accessed 13/6/19)	
Title	Managing behavioural and psychological symptoms of dementia.2018	
Authors / Organisation	Health.Vic – Department of Health & Human Services, State Government of Victoria, Australia	
Date of most recent update	2018	
Target group (e.g. clinician vs nurse vs GP vs consumer)	Clinicians in hospital	
Patient population or setting (e.g. hospital vs community vs aged care)	Older people in hospital	
Study design / Methods	Part of the third edition of the 'Best care for older people everywhere: the toolkit'. It has been developed in collaboration with Victorian health services, the Clinical Leadership Group on Care of Older People in Hospital, the National Ageing Research Institute, and a number of subject matter experts	
Recommendations relating to prescription and use of antipsychotic medicines for people aged 65 years and over for the treatment of BPSD and delirium	**Recommendations relating to:** **Indication** Non-pharmacological strategies are the first line of action and require us to identify and address internal and external stressors Pharmacological strategies should be avoided where possible and used only if there is a risk of self-harm or harm to others, and only after a thorough examination **Drug dose**: medications should be administered orally, in low doses and for a limited time **Duration of use:**	**Level of evidence:**

	usage should be monitored (for effectiveness and side effects) and adjusted accordingly; medication should be ceased if not effective or if side effects are evident **Contraindications:** **Second line options:** **Recommendations around consent:** **Other:** Pharmacological treatment should always be used in conjunction with a consistent, non-pharmacological management plan	

Reference type	Agency for Clinical Innovation (NSW Health)	
Reference	Key Principles for Care of Confused Hospitalised Older Persons. 2014, revised 2015 https://www.aci.health.nsw.gov.au/__data/assets/pdf_file/0006/249171/CHOPS-key-principles1-2-web.pdf (accessed 13/6/19)	
Title	Key Principles for Care of Confused Hospitalised Older Persons	
Authors / Organisation	Agency for Clinical Innovation (NSW Health)	
Date of most recent update	2015	
Target group (e.g. clinician vs nurse vs GP vs consumer)	Clinicians in hospital	
Patient population or setting (e.g. hospital vs community vs aged care)	Older people in hospital	
Study design / Methods	Developed by the Agency for Clinical Innovation (ACI) in collaboration with the Confused Hospitalised Older Persons (CHOPs) Steering Committee, utilising evidence based practice and expert opinion	
Q4: Recommendations relating to prescription and use of antipsychotic medicines for people aged 65 years and over for the treatment of BPSD and delirium	**Recommendations relating to:** **Indication** Antipsychotics are not effective in the treatment of confusion. Non-pharmacological strategies are more effective Antipsychotic medications can be useful for severe behavioural disturbance. They should be used under medical supervision and reviewed. **Drug dose:** **Duration of use:** **Contraindications:** **Second line options:** **Recommendations around consent:** **Other:**	**Level of evidence:**

Reference type	Educational material for health professionals (endorsed by national government department: The Department of Veterans' Affairs) (Australia)	
Reference	Veteran's MATES: Dementia and changes in behaviour. Topic 44. 2016 https://www.veteransmates.net.au/topic-44 (accessed 11/6/19)	
Title	Dementia and changes in behaviour. 2016	
Authors / Organisation	University of South Australia. Quality Use of Medicines and Pharmacy Research Centre.	
Date of most recent update	2016	
Target group (e.g. clinician vs nurse vs GP vs consumer)	Health professionals (medical practitioners, pharmacists) involved in providing health services to the armed forces veteran community	
Patient population or setting (e.g. hospital vs community vs aged care)	Armed forces veterans (a sub-set of community patients)	
Study design / Methods	No details available.	
Recommendations relating to prescription and use of antipsychotic medicines for people aged 65 years and over for the treatment of BPSD and delirium	**Recommendations relating to:** **Indication:** Non-pharmacological interventions tend to be the most effective in minimising BPSD, and are recommended as first line treatments. Use non-pharmacological interventions even when using medicines to treat BPSD. Initiate an antipsychotic only in select patients after a risk/benefit analysis has been undertaken. Behaviours that respond poorly to antipsychotics: verbal disruptions, disinhibited behaviours, wandering, pacing, sleep disturbances and repetitive behaviours.	**Level of evidence:**

Short-term antipsychotics may help some patients with: psychotic symptoms, persistent aggression and/or agitation.

An antipsychotic is only indicated for psychotic symptoms or severe and persistent agitation or aggression that is unresponsive to non-pharmacological interventions in people with Alzheimer's dementia.

Use only one antipsychotic at a time

Drug dose:

Start with a low dose and increase slowly according to your patient's response.

Risperidone:

start at 0.25mg once daily. If necessary, increase by 0.25mg daily every two or more days, to a maximum dose of 2mg daily. Total daily dose can be given in one or two doses

Duration of use:

Limit the treatment period to a maximum of 12 weeks. Taper the dose and cease as soon as is clinically appropriate.

Monitor and document responses to the targeted problem behaviours at least weekly, especially in the first few weeks of treatment. Observe for adverse effects including sedation, postural hypotension and extrapyramidal and anticholinergic effects.

Most patients with dementia can have their antipsychotic ceased without detrimental effects on their behaviour, especially if

tapering is done slowly. Even if the antipsychotic cannot be ceased, achieving a lower dose, if symptom control can be maintained, can be beneficial for the person.

Taper and ceasing:

Cease without tapering if risperidone dose is 0.25mg daily, otherwise reduce dose over several week. Monitor weekly for worsening, re-emergence of problems or withdrawal symptoms

If targeted problems return, worsen or withdrawal symptoms occur, do not continue to lower the dose; consider reinstating previous dose and maintain for 2-4 weeks before gradually reducing again.

Contraindications:

Carefully consider the need to use an antipsychotic in any patient with dementia with Lewy bodies as they are at particular risk of extrapyramidal adverse effects. As an alternative, consider acetylcholinesterase inhibitors.

Avoid using an antipsychotic in people with vascular or mixed dementia as they are at a significantly increased risk of cerebrovascular adverse events.

Second line options:

Recommendations around consent:

When considering an antipsychotic, identify and discuss possible risks in relation to benefits, including the risk of transient ischaemic attack and stroke, and possible adverse

	effects on cognition with your patient (if possible), their carers and family members before commencing treatment. Ensure that the patient, family or carer is aware that only short-term treatment is intended. Discuss ceasing the antipsychotic the patient, family, carers and nursing home staff (if patient in an aged-care facility) **Other:**	

Reference type	Deprescribing guide: Output of translational research project funded by NSW Health (Australia)	
Reference	Deprescribing guide for antipsychotics for treatment of behavioural and psychological symptoms of dementia. 2018 http://www.nswtag.org.au/ (accessed 11/6/19)	
Title	Deprescribing guide for antipsychotics for treatment of behavioural and psychological symptoms of dementia. 2018	
Authors / Organisation	Hilmer SN et al., Reducing Inappropriate Polypharmacy in Older Inpatients, NSW Health Translational Research Project 274. NSLHD, SLHD, NSW TAG and University of Sydney.	
Date of most recent update	2018	
Target group (e.g. clinician vs nurse vs GP vs consumer)	Health professionals (medical practitioners, pharmacists)	
Patient population or setting (e.g. hospital vs community vs aged care)	Older hospitalised patients	
Study design / Methods	No details available.	
Recommendations relating to prescription and use of antipsychotic medicines for people aged 65 years and over for the treatment of BPSD and delirium	**Recommendations relating to:** **Indication:** **Drug dose:** **Duration of use:** **Contraindications:** **Second line options:** **Recommendations around consent:** Following provision of information, discussion and shared-decision making, the patient or carer has communicated that they would like to proceed with or decline the deprescribing recommendation.	**Level of evidence:**

	Other: Accompany weaning with non-pharmacological therapy based on person-centred psychosocial assessment. In general, wean gradually by 25% of the daily dose every 1-4 weeks. Consider slower weaning (e.g. 12.5%) when reducing to the final lowest dose. End treatment 2 weeks after administering the lowest dose. If reason for deprescribing is due to serious adverse effects, consider weaning faster. Provide advice to patient/carer on self-monitoring and what to do if symptoms re-occur. Organise appropriate follow up appointments with general practitioner (GP) (frequency determined by rate of weaning). In the case of recurrent/withdrawal symptoms, revert to the previous lowest tolerated dose and consult psychiatrist for review. Recommence weaning after 6-12 weeks at a lower weaning rate (e.g. 5-12.5% of daily dose each month) then stop. If severe BPSD relapses and non-drug approaches fail, restart the antipsychotic at the lowest possible dose with retrial of deprescribing in 3 months

Reference type	National deprescribing guideline (Canada)
Reference	Deprescribing antipsychotics for behavioural and psychological symptoms of dementia and insomnia. Evidence-based clinical practice guideline. 2018 Canadian Family Physician. Vol 64: January 2018. https://www.cfp.ca/content/cfp/64/1/17.full.pdf (accessed 11/6/19)
Title	Deprescribing antipsychotics for behavioural and psychological symptoms of dementia and insomnia. 2018
Authors / Organisation	Bjerre L, Farrell B, Hogel M et al.
Date of most recent update	2018
Target group (e.g. clinician vs nurse vs GP vs consumer)	Prescribers
Patient population or setting (e.g. hospital vs community vs aged care)	All settings
Study design / Methods	A systematic process was used, including the GRADE (Grading of Recommendations Assessment, Development and Evaluation) approach. Evidence was generated from a Cochrane systematic review of antipsychotic deprescribing trials for BPSD, and a systematic review was conducted to assess the evidence behind the benefits of using antipsychotics for insomnia. A review of reviews of the harms of continued antipsychotic use was performed, as well as narrative syntheses of patient preferences and resource implications. This evidence and GRADE quality-of-evidence ratings were used to generate recommendations. The team refined guideline content and recommendation wording through consensus and synthesized clinical considerations to address common front-line clinician questions. The draft guideline was distributed to clinicians and stakeholders for review and revisions were made at each stage.
Q4: Recommendations relating to prescription and use of antipsychotic medicines for people aged 65 years and over	**Recommendations relating to:** **Level of evidence:** **Indication:** **Drug dose:** **Duration of use:**

for the treatment of BPSD and delirium	For adults with BPSD treated for at least 3 months (symptoms stabilized or no response to adequate trial: Taper and stop antipsychotics slowly in collaboration with the patient and caregivers: e.g. 25%-50% dose reduction every 1-2 weeks For patients with severe baseline BPSD symptoms or longstanding use of antipsychotics: taper more slowly, closely monitor for withdrawal symptoms, and establish a clear intervention plan emphasizing the use of nonpharmacologic approaches first, in the event of increased severity or recurrence of neuropsychiatric symptoms'	GRADE rating: strong recommendation, moderate-quality evidence
	For adults with primary insomnia treated for any duration or secondary insomnia in which underlying comorbidities are managed: Stop antipsychotics; tapering is not needed **Contraindications:** **Second line options:** **Recommendations around consent:** Patients and caregivers should understand: The rationale for deprescribing (risk of side effects of continues antipsychotic use) Withdrawal symptoms, including BPSD symptom relapse, may occur	Good practice recommendation.

	They are part of the tapering plan, and can control tapering rate and duration **Other:**

DELIRIUM OTHER GUIDANCE

Reference type	AMH Aged Care Companion - a companion volume to the Australian Medicines Handbook (AMH) (considered to be the Australian National Formulary)	
Reference	Delirium. AMH (online). Adelaide: Australian Medicines Handbook Pty Ltd; 2018 https://agedcare.amh.net.au/ (accessed 13/06/19)	
Title	Delirium	
Authors / Organisation	AMH Aged Care Companion. Australian Medicines Handbook Pty Ltd	
Date of most recent update	2019	
Target group (e.g. clinician vs nurse vs GP vs consumer)	Health professionals (medical practitioners, pharmacists, nurses) involved in providing health services to the older people	
Patient population or setting (e.g. hospital vs community vs aged care)	All settings	
Study design / Methods	AMH Pty Ltd is independent of government and industry and does not accept advertising, sponsorship or editorial input from outside sources. AMH follows strict and robust editorial processes: https://shop.amh.net.au/about/editorial-process Content is originally researched and written by staff editors, all of whom have minimum qualifications of a degree in pharmacy or medicine, and is subject to peer review by Australian experts and practising health professionals from across the country (specialists, general practitioners, nurses, pharmacists).	
Q4: Recommendations relating to prescription and use of antipsychotic medicines for people aged 65 years and over for the treatment of BPSD and delirium	**Recommendations relating to:** **Indication**: Treating the underlying condition (e.g. infection, metabolic disturbances, hypoxia, and alcohol or drug withdrawal) and identifying drug causes are the mainstay of treatment The main approach to managing delirium is nursing/carer based. Use drugs only after non-drug measures have failed or been	**Level of evidence:**

insufficient. There is limited evidence of efficacy of drugs and significant risk of adverse effects. Antipsychotics and benzodiazepines can worsen delirium.

There are no specific drug treatments and, drugs are not helpful for calling out or wandering.

There is no evidence that antipsychotics or sedatives improve prognosis. Only consider drug treatment if:

- the person's degree of agitation/aggression interferes with their (or other people's) ability to receive essential nursing or medical care
- the person's behaviour threatens the safety of self or others
- anxiety/delusions/hallucinations are causing significant distress to the person.

Drug dose:

Haloperidol:

0.25–0.5 mg orally as a single dose.

If further treatment is required, 0.25–0.5 mg can be given twice daily, and the dose increased every 2 or more days up to a total of 1 mg twice daily, if necessary.

Risperidone:

0.25 mg orally as a single dose.

If further treatment is required, 0.25 mg can be given twice daily, increasing by 0.25 mg daily every

2 or more days, if necessary. Usual range 0.5–1 mg twice daily.

For people with swallowing difficulty, risperidone, olanzapine and haloperidol are available in forms which dissolve in the mouth or as oral liquids.

If oral administration is not possible and symptoms are severe, IM administration may be required. e.g.

Haloperidol

0.125–0.25 mg IM as a single dose. This dose may be repeated every 4 hours as necessary up to a total of 2 mg daily.

Duration of use:

A single dose may be adequate but short-term use (e.g. up to 1 week) of a low dose may be required. Frequently monitor for adverse effects and review the need for ongoing antipsychotic medication as most people do not require long-term treatment.

Contraindications:

In patients with Lewy body dementia, antipsychotics (even low doses) can cause deterioration in cognitive and motor function, and may paradoxically increase agitation and worsen behaviour. If an antipsychotic is considered necessary, seek specialist advice.

Second line options:

Benzodiazepines are not recommended first line for treatment of delirium but a single dose may be considered if there is no response to an antipsychotic.

	e.g. oxazepam 7.5–15 mg orally as a single dose. **Recommendations around consent:** **Other:** Medications with CNS effects may precipitate and/or aggravate delirium; where possible withdraw these drugs over a few days. Alcohol or benzodiazepine withdrawal: Benzodiazepines are the preferred treatment option in delirium due to alcohol or benzodiazepine withdrawal	

Reference	Preventing and managing delirium.2018 https://www2.health.vic.gov.au/hospitals-and-health-services/patient-care/older-people/cognition/delirium/delirium-preventing (accessed 13/6/19)	
Title	Preventing and managing delirium.2018	
Authors / Organisation	Health.Vic – Department of Health & Human Services, State Government of Victoria, Australia	
Date of most recent update	2018	
Target group (e.g. clinician vs nurse vs GP vs consumer)	Clinicians in hospital	
Patient population or setting (e.g. hospital vs community vs aged care)	Older people in hospital	
Study design / Methods	Part of the third edition of the Best care for older people everywhere: the toolkit. It has been developed in collaboration with Victorian health services, the Clinical Leadership Group on Care of Older People in Hospital, the National Ageing Research Institute, and a number of subject matter experts	
Recommendations relating to prescription and use of antipsychotic medicines for people aged 65 years and over for the treatment of BPSD and delirium	**Recommendations relating to:** **Indication** Reducing, ceasing or avoiding the use of psychoactive drugs is recommended as they may worsen the delirium Pharmacological therapy – should only be considered in severe cases of behavioural or emotional disturbance because there is no strong evidence they effectively improve prognosis. They may prolong the duration of the delirium and associated cognitive impairments or simply switch the patient's delirium from hyperactive to hypoactive **Drug dose:** It is recommended that only one antipsychotic medication is used at a	**Level of evidence:**

time, start on a low dose, review frequently and use short term only

Duration of use:

Short term only

Contraindications:

Second line options:

Recommendations around consent:

Explain the rationale for starting or stopping any medications with the patient and their family and carer.

Other:

Reference type	Agency for Clinical Innovation (NSW Health)	
Reference	Key Principles for Care of Confused Hospitalised Older Persons. 2014, revised 2015 https://www.aci.health.nsw.gov.au/__data/assets/pdf_file/0006/249171/CHOPS-key-principles1-2-web.pdf (accessed 13/6/19)	
Title	Key Principles for Care of Confused Hospitalised Older Persons	
Authors / Organisation	Agency for Clinical Innovation (NSW Health)	
Date of most recent update	2015	
Target group (e.g. clinician vs nurse vs GP vs consumer)	Clinicians in hospital	
Patient population or setting (e.g. hospital vs community vs aged care)	Older people in hospital	
Study design / Methods	Developed by the Agency for Clinical Innovation (ACI) in collaboration with the Confused Hospitalised Older Persons (CHOPs) Steering Committee, utilising evidence based practice and expert opinion	
Recommendations relating to prescription and use of antipsychotic medicines for people aged 65 years and over for the treatment of BPSD and delirium	**Recommendations relating to:** **Indication** Antipsychotics are not effective in the treatment of confusion. Non-pharmacological strategies are more effective Antipsychotic medications can be useful for severe behavioural disturbance. They should be used under medical supervision and reviewed. **Drug dose:** **Duration of use:** **Contraindications:** **Second line options:** **Recommendations around consent:** **Other:**	**Level of evidence:**

Box 3. Choosing Wisely recommendations from Australia and the USA for management of behavioural and psychological symptoms dementia and delirium. These recommendations encompass non-pharmacological and pharmacological management strategies.

CHOOSING WISELY RECOMMENDATIONS FROM AUSTRALIA AND THE US[1]

Reference type	**Choosing Wisely national college consensus recommendations**			
Theme	**Australia**		**US**	
	College/organisation	*Recommendation*	*College/organisation*	*Recommendation[2]*
Accurate diagnosis of dementia and/or delirium			American Academy of Nursing, 2014	Don't assume a diagnosis of dementia in an older adult who presents with an altered mental status and/or symptoms of confusion without assessing for delirium or delirium superimposed on dementia using a brief, sensitive, validated assessment tool.
Assessment for underlying cause of BPSD or delirium			AMDA – The Society for Post-Acute and Long-Term Care Medicine, 2017	Don't prescribe antipsychotic medications for behavioral and psychological symptoms of dementia (BPSD) in individuals with dementia without an assessment for an underlying cause of the behavior

[1] Similar Choosing Wisely recommendations were made by professional colleges and organisations in the UK and Canada but are not included in this report.

[2] Some recommendations with two key themes appear in duplicate.

			American Academy of Nursing, 2014	Don't administer "prn" (i.e., as needed) sedative, antipsychotic or hypnotic medications to prevent and/or treat delirium without first assessing for, removing and treating the underlying causes of delirium and using nonpharmacologic delirium prevention and treatment approaches.
Do not use antipsychotics as first line therapy for BPSD or delirium	Australian and New Zealand Society for Geriatric Medicine, 2016	Do not use antipsychotics as the first choice to treat behavioural and psychological symptoms of dementia.	American Academy of Nursing, 2014	Don't use physical or chemical restraints, outside of emergency situations, when caring for long-term care residents with dementia who display behavioral and psychological symptoms of distress; instead assess for unmet needs or environmental triggers and intervene using non-pharmacological approaches as the first approach to care whenever possible.

	Australian and New Zealand Society for Geriatric Medicine, 2016	Do not prescribe benzodiazepines or other sedative hypnotics to older adults as first choice for insomnia, agitation or delirium.	American Geriatrics Society, 2014	Don't use antipsychotics as the first choice to treat behavioral and psychological symptoms of dementia.
			American Geriatrics Society, 2014	Don't use benzodiazepines or other sedative-hypnotics in older adults as first choice for insomnia, agitation or delirium.
			American Psychiatric Association, 2014	Don't routinely use antipsychotics as first choice to treat behavioral and psychological symptoms of dementia
			American Academy of Nursing, 2014	Don't administer "prn" (i.e., as needed) sedative, antipsychotic or hypnotic medications to prevent and/or treat delirium without first assessing for, removing and treating the underlying causes of delirium and using nonpharmacologic delirium prevention and treatment approaches.

Limit duration of antipsychotics for BPSD or delirium	The Society of Hospital Pharmacists of Australia, 2016	Don't initiate and continue antipsychotic medicines for behavioural and psychological symptoms of dementia for more than 3 months.		
	Pharmaceutical Society of Australia, 2018	Do not continue benzodiazepines, other sedative hypnotics or antipsychotics in older adults for insomnia, agitation or delirium for more than three months without review.		
Limit use of physical restraints for BPSD or delirium	Australian and New Zealand Society for Geriatric Medicine, 2016	Do not use physical restraints to manage behavioural symptoms of hospitalized older adults with delirium except as a last resort	American Academy of Nursing, 2014	Don't use physical or chemical restraints, outside of emergency situations, when caring for long-term care residents with dementia who display behavioral and psychological symptoms of distress; instead assess for unmet needs or environmental triggers and intervene using non-pharmacological approaches as the first approach to

				care whenever possible.
			American Geriatrics Society, 2014	Don’t use physical restraints to manage behavioral symptoms of hospitalized older adults with delirium

Appendix E. Outputs of Literature Searches

Research Question 1

Endnote library attached

Research Question 2

Endnote library attached

Google Results attached as pdf

Research Questions 3 and 4

Endnote libraries attached for black and grey literature searches

AUSTRALIAN COMMISSION
ON SAFETY AND QUALITY IN HEALTH CARE

Level 5, 255 Elizabeth Street, Sydney NSW 2000
GPO Box 5480, Sydney NSW 2001

Phone: (02) 9126 3600
Fax: (02) 9126 3613

Email: mail@safetyandquality.gov.au
Website: www.safetyandquality.gov.au