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Our Mission: Helping to prepare Iowa's health practitioners to care for our growing population of elders. *E-NEWS* is one of our methods of teaching through technology.

Each month, *E-NEWS* delivers abstracts from current multidisciplinary healthcare journal articles related to a specific geriatric topic. This month's *E-NEWS* focuses on DEPRESCRIBING ANTIPSYCHOTICS IN OLDER ADULTS.

DEPRESCRIBING ANTIPSYCHOTICS IN OLDER ADULTS

In this issue of the *E-NEWS*, you will find abstracts for:

- A review that discusses reducing off-label antipsychotic use in older adults.
 - An article that presents an evidence-based clinical practice guideline for deprescribing antipsychotics for behavioral and psychological symptoms of dementia and insomnia.
 - A study that evaluates antipsychotic deprescription for older adults in long-term care.
 - A study that investigates the impact of an antipsychotic discontinuation bundle during transitions of care in critically ill patients.
 - An article that examines approaches to deprescribing psychotropic medications for changed behaviors in older adults living with dementia in long-term care.
 - A study that aims to reduce inappropriate antipsychotic use in long-term care residents with behavioral and psychological symptoms of dementia.
 - A study that seeks to optimize prescribing of antipsychotics in long-term care.
 - An article that explores the potential risks and benefits of discontinuing antipsychotic use in older adults with dementia and shares an algorithm to assist in decision-making.
 - An article that reviews the benefits and harms of using antipsychotics to treat delirium in hospitalized adults.
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- Bain KT, Schwartz EJ, Chan-Ting R. Reducing Off-Label Antipsychotic Use in Older Community-Dwelling Adults With Dementia: A Narrative Review. *J Am Osteopath Assoc*. 2017 Jul 1;117(7):441-450.

The off-label use of antipsychotics for the management of behavioral and psychologic symptoms of dementia (BPSD) in older adults (age ≥ 65 years) is common, despite evidence of modest benefits and serious risks. Although national initiatives aimed at reducing antipsychotic use among older adults with BPSD in nursing homes have been successful, similar initiatives are lacking for community-dwelling adults with dementia. As a result, older adults with BPSD residing in the community may be at an even greater risk of being negatively affected by antipsychotic use. Physicians should be knowledgeable of this issue and understand the alternatives to antipsychotics, as well as how to reduce antipsychotic use in patients with dementia who are already taking antipsychotics.

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- Bjerre LM, Farrell B, Hogel M, Graham L, Lemay G, McCarthy L, Raman-Wilms L, Rojas-Fernandez C, Sinha S, Thompson W, Welch V, Wiens A. Deprescribing antipsychotics for behavioral and psychological symptoms of dementia and insomnia: Evidence-based clinical practice guideline. *Can Fam Physician*. 2018 Jan;64(1):17-27.

OBJECTIVE: To develop an evidence-based guideline to help clinicians make decisions about when and how to safely taper and stop antipsychotics; to focus on the highest level of evidence available and seek input from primary care professionals in the guideline development, review, and endorsement processes. METHODS: The overall team comprised 9 clinicians (1 family physician, 1 family physician specializing in long-term care, 1 geriatric psychiatrist, 2 geriatricians, 4 pharmacists) and a methodologist; members disclosed conflicts of interest. For guideline development, 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 the behavioral and psychological symptoms of dementia, 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. RECOMMENDATIONS: We recommend deprescribing antipsychotics for adults with behavioral and psychological symptoms of dementia treated for at least 3 months (symptoms stabilized or no response to an adequate trial) and for adults with primary insomnia treated for any duration or secondary insomnia in which underlying comorbidities are managed. A decision-support algorithm was developed to accompany the guideline. CONCLUSION: Antipsychotics are associated with harms and can be safely tapered. Patients and caregivers might be more amenable to deprescribing if they understand the rationale (potential for harm), are involved in developing the tapering plan, and are offered behavioral advice or management. This guideline provides recommendations for making decisions about when and how to reduce the dose of or stop antipsychotics. Recommendations are meant to assist with, not dictate, decision making in conjunction with patients and families. © the College of Family Physicians of Canada.

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- Brodaty H, Aerts L, Harrison F, Jessop T, Cations M, Chenoweth L, Shell A, Popovic GC, Heffernan M, Hilmer S, Sachdev PS, Draper B. Antipsychotic Deprescription for Older Adults in Long-term Care: The HALT Study. *J Am Med Dir Assoc*. 2018 Jul;19(7):592-600.e7.

OBJECTIVES: Despite limited efficacy and significant safety concerns, antipsychotic medications are frequently used to treat behavioral and psychological symptoms of dementia (BPSD) in long-term residential care. This study evaluates the sustained reduction of antipsychotic use for BPSD through a deprescribing intervention and education of health care professionals. DESIGN: Repeated-measures, longitudinal, single-arm study. SETTING: Long-term residential care of older adults. PARTICIPANTS: Nursing staff from 23 nursing homes recruited 139 residents taking regular antipsychotic medication for ≥ 3 months, without primary psychotic illness, such as schizophrenia or bipolar disorder, or severe BPSD. INTERVENTION: An antipsychotic deprescribing protocol was established. Education of general practitioners, pharmacists, and residential care nurses focused on nonpharmacological prevention and management of BPSD.

MEASUREMENTS: The primary outcome was antipsychotic use over 12-month follow-up; secondary outcomes were BPSD (Neuropsychiatric Inventory, Cohen-Mansfield Agitation Inventory, and social withdrawal) and adverse outcomes (falls, hospitalizations, and cognitive decline). RESULTS: The number of older adults on regular antipsychotics over 12 months reduced by 81.7% (95% confidence interval: 72.4-89.0). Withdrawal was not accompanied by drug substitution or a significant increase in pro-re-nata antipsychotic or benzodiazepine administration. There was no change in BPSD or in adverse outcomes. CONCLUSION: In a selected sample of older adults living in long-term residential care, sustained reduction in regular antipsychotic use is feasible without an increase of BPSD. © AMDA – The Society for Post-Acute and Long-Term Care Medicine.

- D'Angelo RG, Rincavage M, Tata AL, Millstein LS, Gulati MS, Flurie RW, Gonzales JP. Impact of an Antipsychotic Discontinuation Bundle During Transitions of Care in Critically Ill Patients. *J Intensive Care Med.* 2019 Jan;34(1):40-47.

INTRODUCTION:: Delirium affects a large proportion of patients admitted to the intensive care unit (ICU) and is associated with increased morbidity and mortality. Antipsychotics have become frequently used agents for the treatment of delirium; however, they are often continued at transitions of care. This has potential negative short- and long-term health consequences that are preventable. We investigated the antipsychotic tapering bundle's impact on the rate of antipsychotic continuation at transitions from the medical intensive care unit (MICU). METHODS:: This was a preretrospective and postretrospective chart review that included adult patients in the MICU initiated on antipsychotic therapy for ICU delirium. A bundled multidisciplinary education program and antipsychotic discontinuation algorithm were implemented in the MICU to provide recommendations for safe and effective use of antipsychotics for ICU delirium and minimize continuation of therapy at transitions of care. Rates of antipsychotic continuation at transition from the MICU were compared between the preintervention and postintervention groups with the χ^2 test. RESULTS:: A total of 140 patients in the prebundle group and 141 patients in the postbundle group were enrolled. Overall, baseline characteristics were similar. After implementation of the discontinuation bundle, antipsychotic continuation at MICU discharge decreased (27.9% in the prebundle group vs 17.7% in the postbundle group; $P < .05$). In the multivariate analysis, patients were less likely to be continued on antipsychotic therapy at MICU discharge after implementation of the bundle (odds ratio [OR]: 0.47; 95% confidence interval [CI]: 0.26-0.86). There were also lower rates of overall antipsychotic continuation at hospital discharge (OR: 0.4; 95% CI: 0.18-0.89). CONCLUSION:: This is the first study to demonstrate a reduction in antipsychotic continuation at transition from the MICU after implementation of an antipsychotic discontinuation bundle in ICU patients. We believe this bundle allows for safer transitions of care from the MICU and decreases unnecessary antipsychotic therapy.

- Harrison SL, Cations M, Jessop T, Hilmer SN, Sawan M, Brodaty H. Approaches to Deprescribing Psychotropic Medications for Changed Behaviors in Long-Term Care Residents Living with Dementia. *Drugs Aging.* 2019 Feb;36(2):125-136.

Psychotropic medications have a high risk of serious adverse events and small effect size for changed behaviors for people with dementia. Non-pharmacological approaches are recommended as first-line treatment for changed behaviors, yet psychotropic medications remain highly prevalent in long-term aged care settings. This narrative review describes the current evidence regarding deprescribing psychotropic medications for people with dementia in long-term care. Deprescribing psychotropic medications can be achieved without harm to the person with dementia, and most people experience no withdrawal symptoms. Interventions to deprescribe psychotropic medications should be multifactorial, including lowering the dose of the medication over time, educational interventions and psychological support. However, implementing this is a significant challenge due to the overreliance on psychotropic medications for behavioral management in long-term aged care. Facilitators to deprescribing psychotropic medications in long-term care include multidisciplinary teams with adequate training, education and managerial support, engaging residents and families and change 'champions'. Deprescribing practices should be person-centered, and an individualized deprescribing protocol should be in place, followed by careful monitoring of the individual. The person with dementia and their family, general practitioner, pharmacist, and allied health and direct care staff should all be involved throughout the deprescribing process. Direct care staff need adequate support, education and training, so they can effectively help the individual and implement person-centered approaches in the absence of psychotropic medications. Effective communication between residents and staff and amongst staff is

consistently shown to be an important factor for deciding whether deprescribing of a medication should occur and the successful implementation of deprescribing psychotropic medications.

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- Jessop T, Harrison F, Cations M, Draper B, Chenoweth L, Hilmer S, Westbury J, Low LF, Heffernan M, Sachdev P, Close J, Blennerhassett J, Marinkovich M, Shell A, Brodaty H. Halting Antipsychotic Use in Long-Term care (HALT): a single-arm longitudinal study aiming to reduce inappropriate antipsychotic use in long-term care residents with behavioral and psychological symptoms of dementia. *Int Psychogeriatr*. 2017 Aug;29(8):1391-1403.

BACKGROUND: Inappropriate use of antipsychotic medications to manage Behavioral and Psychological Symptoms of Dementia (BPSD) continues despite revised guidelines and evidence for the associated risks and side effects. The aim of the Halting Antipsychotic Use in Long-Term care (HALT) project is to identify residents of long-term care (LTC) facilities on antipsychotic medications, and undertake an intervention to deprescribe (or cease) these medicines and improve non-pharmacological behavior management. METHODS: LTC facilities will be recruited across Sydney, Australia. Resident inclusion criteria will be aged over 60 years, on regular antipsychotic medication, and without a primary psychotic illness or very severe BPSD, as measured using the Neuropsychiatric Inventory (NPI). Data collection will take place one month and one week prior to commencement of deprescribing; and 3, 6 and 12 months later. During the period prior to deprescribing, training will be provided for care staff on how to reduce and manage BPSD using person-centered approaches, and general practitioners of participants will be provided academic detailing. The primary outcome measure will be reduction of regular antipsychotic medication without use of substitute psychotropic medications. Secondary outcome measures will be NPI total and domain scores, Cohen-Mansfield Agitation Inventory scores and adverse events, including falls and hospitalizations. CONCLUSION: While previous studies have described strategies to minimize inappropriate use of antipsychotic medications in people with dementia living in long-term care, sustainability and a culture of prescribing for BPSD in aged care remain challenges. The HALT project aims to evaluate the feasibility of a multi-disciplinary approach for deprescribing antipsychotics in this population.

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- Kirkham J, Maxwell C, Velkers C, Leung R, Moffat K, Seitz D. Optimizing Prescribing of Antipsychotics in Long-Term Care (OPAL): A Stepped-Wedge Trial. *J Am Med Dir Assoc*. 2019 Sep 23. pii: S1525-8610(19)30585-7. doi: 10.1016/j.jamda.2019.07.025. [Epub ahead of print]

BACKGROUND: Inappropriate antipsychotic prescribing is a key quality indicator by which clinical outcomes might be monitored and improved in long-term care (LTC), but limited evidence exists on the most effective strategies for reducing inappropriate antipsychotic use. OBJECTIVES: The objective of the study was to evaluate a multicomponent approach to reduce inappropriate prescribing of antipsychotics in LTC. DESIGN: A prospective, stepped-wedge study design was used to evaluate the effect of the intervention. SETTINGS AND PARTICIPANTS: Interdisciplinary staff at 10 Canadian LTC facilities. METHODS: The intervention consisted of an educational in-service, provision of evidence-based tools to assess and monitor neuropsychiatric symptoms (NPS) in dementia, and monthly interprofessional team meetings. The primary outcome was the proportion of residents receiving an antipsychotic without a diagnosis of psychosis using a standardized antipsychotic quality indicator. RESULTS: The weighted mean change in inappropriate antipsychotic prescribing rate from baseline to 12-month follow-up was -4.6% [standard deviation (SD) = 2.8%, $P < .0001$], representing a 16.1% (SD = 17.0) relative reduction. After adjusting for site, the odds ratio for the inappropriate antipsychotic prescribing quality indicator at 12 months compared to baseline was 0.73 (95% confidence interval = 0.48-0.94; chi-square = 6.59; $P = .01$). There were no significant changes in related quality indicators, including falls, restraint use, or behavioral symptoms. CONCLUSIONS AND IMPLICATIONS: This multicomponent intervention was effective in reducing inappropriate antipsychotic prescribing in LTC without adversely affecting other domains related to quality of care, and offers a practical means by which to improve the care of older adults with dementia in LTC.

- Miarons M, Cabib C, Barón FJ, Rofes L. Evidence and decision algorithm for the withdrawal of antipsychotic treatment in the elderly with dementia and neuropsychiatric symptoms. *Eur J Clin Pharmacol.* 2017 Nov;73(11):1389-1398.

PURPOSE: Antipsychotics (APs) are commonly used to manage neuropsychiatric symptoms (NPS) in elderly patients with dementia, even though several large studies have demonstrated an association between AP treatment and increased morbidity and mortality in people with dementia. The aim of this study is to review the scientific literature of the use of AP in the elderly with dementia and to propose an algorithm to assist in decision-making regarding the withdrawal of APs. METHODS: A computerized literature search (MEDLINE: 1966 to December 2016, EMBASE: 1982 to December 2016) was used to locate relevant literature. Keywords in the search included terms from Medical Subject Headings (MESH) and EMBASE thesaurus (EMTREE). The following terms were used in the MESH database and EMTREE thesaurus: Aged, Antipsychotic Agents, Behavioral Symptoms and Dementia. RESULTS: Earlier studies of APs used in elderly patients with dementia suggest that, in most elderly demented patients, APs can be withdrawn with no effect on behavior. These patients are likely to benefit from the algorithm we propose to assist clinicians in the withdrawal of APs. CONCLUSIONS: In this paper, we review the potential risks and benefits of discontinuing AP treatment in elderly demented patients with NPS and propose an algorithm to assist in decision-making regarding AP withdrawal.

- Nikooie R, Neufeld KJ, Oh ES, Wilson LM, Zhang A, Robinson KA, Needham DM. Antipsychotics for Treating Delirium in Hospitalized Adults: A Systematic Review. *Ann Intern Med.* 2019 Sep 3. doi: 10.7326/M19-1860. [Epub ahead of print]

Background: Delirium is common in hospitalized patients and is associated with worse outcomes. Antipsychotics are commonly used; however, the associated benefits and harms are unclear. Purpose: To conduct a systematic review evaluating the benefits and harms of antipsychotics to treat delirium in adults. Data Sources: PubMed, Embase, CENTRAL, CINAHL, and PsycINFO from inception to July 2019 without language restrictions. Study Selection: Randomized controlled trials (RCTs) of antipsychotic versus placebo or another antipsychotic, and prospective observational studies reporting harms. Data Extraction: One reviewer extracted data and assessed strength of evidence (SOE) for critical outcomes, with confirmation by another reviewer. Risk of bias was assessed independently by 2 reviewers. Data Synthesis: Across 16 RCTs and 10 observational studies of hospitalized adults, there was no difference in sedation status (low and moderate SOE), delirium duration, hospital length of stay (moderate SOE), or mortality between haloperidol and second-generation antipsychotics versus placebo. There was no difference in delirium severity (moderate SOE) and cognitive functioning (low SOE) for haloperidol versus second-generation antipsychotics, with insufficient or no evidence for antipsychotics versus placebo. For direct comparisons of different second-generation antipsychotics, there was no difference in mortality and insufficient or no evidence for multiple other outcomes. There was little evidence demonstrating neurologic harms associated with short-term use of antipsychotics for treating delirium in adult inpatients, but potentially harmful cardiac effects tended to occur more frequently. Limitations: Heterogeneity was present in terms of dose and administration route of antipsychotics, outcomes, and measurement instruments. There was insufficient or no evidence regarding multiple clinically important outcomes. Conclusion: Current evidence does not support routine use of haloperidol or second-generation antipsychotics to treat delirium in adult inpatients.

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