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Factors Associated with Potentially Harmful Medication Prescribing in Nursing Homes: A Scoping Review

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ABSTRACT

Objectives: To summarize current evidence regarding facility and prescriber characteristics associated with potentially harmful medication (PHM) use by residents in nursing homes (NHs), which could inform the development of interventions to reduce this potentially harmful practice.

Design: Scoping review.

Setting and Participants: Studies conducted in the United States that described facility and prescriber factors associated with PHM use in NHs.

Methods: Electronic searches of PubMed/MEDLINE were conducted for articles published in English between April 2011 and November 2021. PHMs were defined based on the Beers List criteria. Studies testing focused interventions targeting PHM prescribing or deprescribing were excluded. Studies were characterized by the strengths and weaknesses of the analytic approach and generalizability.

Results: Systematic search yielded 1253 articles. Of these, 29 were assessed in full text and 20 met inclusion criteria. Sixteen examined antipsychotic medication (APM) use, 2 anticholinergic medications, 1 sedative-hypnotics, and 2 overall PHM use. APM use was most commonly associated with facilities with a higher proportion of male patients, younger patients, and patients with severe cognitive impairment, anxiety, depression, and aggressive behavior. The use of APM and anticholinergic medications was associated with low registered nurse staffing ratios and for-profit facility status. No studies evaluated prescriber characteristics.

Conclusions and Implications: Included studies primarily examined APM use. The most commonly reported facility characteristics were consistent with previously reported indicators of poor NH quality and NHs with patient case mix more likely to use PHMs.

New Onset (Incidence) of Epilepsy and Seizures in Nursing Home Residents

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ABSTRACT

Objective: The point prevalence of epilepsy is high in nursing homes (NH), but the incidence of epilepsy after admission is unknown. This study was done to determine the incidence of epilepsy/seizure (epi/sz) comorbid with other conditions in older adult NH residents.

Design: Retrospective evaluation of Minimum Data Set records to identify new onset epi/sz in NH residents.

Setting and Participants: Five cross-sectional cohorts of all residents in any Medicare/Medicaid certified NH in the United States on July 15 of each year 2003-2007.

Measures: Epi/sz was identified by *International Classification of Diseases, Ninth Revision* codes (345.xx or 780.39) or check box on the Minimum Data Set. Those with no such code on admission and with 1 to 3 plus years of follow-up (n = 3,609,422) were followed through 2007 or end of stay.

Results: Overall incidence of epi/sz was 16.42/1000 patient years (PY). Incidence was highest in the first year after admission and declined thereafter. There were more women (n = 2,523,951) than men (n = 1,089,631), but men had a higher incidence (21.17/1000PY) compared with women (14.81/1000PY). Although the 65-74 years of age cohort included fewer residents (n = 594,722) compared with the age 85 years + cohort (n = 1,520,167), the younger residents had the highest incidence (28.53/1000 PY) compared with the oldest, 10.22/1000 PY for the age 85+ years cohort. The highest incidences were among those with brain tumor (122.55/1000PY), followed by head injury (45.66/1000PY). Overall, 714,340 had a diagnosis of stroke, and incidence was 27.52/1000PY. Those with none of selected risk factors had an overall incidence of 12.45/1000PY.

Conclusions and Implications: The incidence of epi/sz in older individuals after admission to a NH is high. There is a need to develop practice approaches to best manage this large cohort. There does not appear to be a uniform approach to managing new onset epilepsy in NHs at this time. Studies to develop evidence for practice guidelines are needed.



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Special Article

Managing the Impact of COVID-19 in Nursing Homes and Long-Term Care Facilities: An Update



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A B S T R A C T

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Older adults in nursing homes are at greatest risk of morbidity and mortality from SARS-CoV-2 infection. Nursing home residents constituted one-third to more than half of all deaths during the early waves of the COVID-19 pandemic. Following this, widespread adaptation of infection prevention and control measures and the supply and use of personal protective equipment resulted in a significant decrease in nursing home infections and deaths. For nursing homes, the most important determinant of experiencing a SARS-CoV-2 outbreak in the first instance appears to be community-transmission levels (particularly with variants of concern), although nursing home size and quality, for-profit status, and sociodemographic characteristics are also important. Use of visitation bans, imposed to reduce the impact of COVID-19 on residents, must be delicately balanced against their impact on resident, friend or family, and staff well-being. The successful rollout of primary vaccination has resulted in a sharp decrease in morbidity and mortality from SARS-CoV-2 in nursing homes. However, emerging evidence suggests that vaccine efficacy may wane over time, and the use of a third or additional vaccine "booster" doses in nursing home residents restores protection afforded by primary vaccination. Ongoing monitoring of vaccine efficacy in terms of infection, morbidity, and mortality is crucial in this vulnerable group in informing ongoing SARS-CoV-2 vaccine boosting strategies. Here, we detail the impact of SARS-CoV-2 on nursing home residents and discuss important considerations in the management of nursing home SARS-CoV-2 outbreaks. We additionally examine the use of testing strategies, nonpharmacologic outbreak control measures and vaccination strategies in this cohort. Finally, the impact of SARS-CoV-2 on the sector is reflected on as we emphasize the need for adoption of universal standards of medical care and integration with wider public health infrastructure in nursing homes in order to provide a safe and effective long-term care sector.

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Older adults resident in nursing homes or long-term care facilities represent those at greatest risk from infection with SARS-CoV-2, the cause of COVID-19 illness and the current pandemic.^{1,2} In comparison

to their community-dwelling counterparts, older adults in nursing homes have greater levels of medical complexity, multimorbidity, frailty, and disability. Additionally, most older adults in nursing homes

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