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<p>Polypharmacy, associated with adverse health outcomes, is common in older adults owing to increasing chronic conditions. In addition to normal organ system changes that affect pharmacokinetic, and pharmacodynamics of medications, drug-drug interaction and drug-disease interactions should be reviewed. Tools to minimize polypharmacy should be considered when treating older adults.</p>	
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<p>Although hypertension is highly prevalent in older adults, treatment goals require both an understanding of the various guidelines available, as well as appreciation of the unique medical, cognitive, psychosocial, and functional heterogeneity of our individual geriatric patients that may place them outside those guidelines. As a patient's clinical status changes over time, clinicians may consider deprescribing their blood pressure medications when their risks begin to outweigh their benefits. Unique clinical circumstances and incorporating the time to benefit of hypertension control help guide clinical decision-making.</p>	
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<p>Behavioral and psychological symptoms of dementia (BPSD) may occur in most patients with dementia. Symptoms such as agitation, aggression, and psychosis often lead to higher rates of hospitalization, morbidity, and mortality. Despite the prevalence of BPSD, safe and effective treatment options are limited. This often leads to off-label prescribing and trends toward polypharmacy. Notwithstanding modest efficacy in BPSD, antipsychotics seem to be one of the most commonly prescribed medications in its treatment. Polypharmacy with antipsychotics is particularly troublesome due to the increased risk of potentially lethal adverse effects. As such, their use should be judiciously monitored with the goal of gradual dose reduction.</p>	

**Polypharmacy in Nursing Homes**

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Elaine Roh, Esteban Cota, Jason P. Lee, Ruth Madievsky, and Manuel A. Eskildsen

Older adults in the nursing home are at high risk for polypharmacy. This article provides a background of older adults in nursing homes and reviews key steps to address polypharmacy.

**Polypharmacy in the Hospitalized Older Adult: Considerations for Safe and Effective Treatment**

667

Analiese DiConti-Gibbs, Kimberly Y. Chen, and Charles Edward Coffey Jr.

Care for the hospitalized older adult is made more complex by polypharmacy that can increase the risks of adverse drug events. This article reviews polypharmacy in the hospitalized older adult from their admission to hospitalization and transition of care as well as highlighting principles to reduce polypharmacy and tools for deprescribing during hospitalization. We review common reasons for admission and how these conditions may be particularly affected by or contribute to polypharmacy in older adults.

**Polypharmacy in the Homebound Population**

685

Erin Atkinson Cook, Maria Duenas, and Patricia Harris

The number of homebound elders has risen dramatically in the past decade and was accelerated by the Sars-Cov-2 COVID-19 pandemic. These individuals generally have 5 or more chronic conditions, take 6 or more medications, and are at elevated risk for functional decline. Polypharmacy constitutes a major burden for these individuals, putting them at risk for medication nonadherence, medication errors, medication interactions, and reduced quality of life. A team-based approach may help these elders manage medications more effectively.

**Polypharmacy in Hospice and Palliative Care**

693

Angela Yeh, Amy Z. Sun, and Helen Chernicoff

In patients with limited life expectancy, or if the clinician would not be surprised if the patient were to die within a year, reconsidering the treatment targets and engaging in an open discussion with the patient on their goals of care would be appropriate. When a desire to deprescribe has been reached by both clinician and patient, a stepwise and guided approach to deprescribing with regular follow-ups is recommended. This article discusses common medications that can be deprescribed in the palliative/hospice patients and provides toolkits for future reference.

**Polypharmacy in Oncology**

705

Justin J. Cheng, Asal M. Azizoddin, Michael J. Maranzano, Narine Sargsyan, and John Shen

Polypharmacy, defined as taking five medications or more, is a common geriatric syndrome. It is especially prevalent in older adults with cancer. For older patients with breast, lung, prostate, and colorectal cancer and chronic lymphocytic leukemia, polypharmacy has numerous adverse effects, including interactions with medications prescribed for other

comorbidities. Polypharmacy is influenced by drug–drug interactions and can reduce the efficacy of systemic cancer therapeutics. It is also associated with worse progression-free and overall survival for some cancers such as lung and colorectal cancer. This highlights the need for a judicious review of all medications and the role of interventions in improving quality of life and survival.

### **Polypharmacy in Osteoporosis Treatment**

715

Megan McConnell and Albert Shieh

In older adults, polypharmacy and osteoporosis frequently occur contemporaneously. Polypharmacy is increasingly recognized as a risk factor for hip and fall-related fractures. Treatments for osteoporosis include antiresorptive (alendronate, risedronate, zoledronic acid, ibandronate, denosumab) and osteoanabolic (teriparatide, abaloparatide, romosozumab) agents. Polypharmacy is associated with worse adherence to pharmacologic therapy. Thus, the selection of osteoporosis treatment should be individualized and based on a variety of factors, including underlying fracture risk (high vs very high risk), medical comorbidities, medication burden, as well as fracture risk reduction profiles, modes of administration, and side effects of treatment options.

### **Polypharmacy in the Emergency Department**

727

Khai H. Nguyen, Vaishal Tolia, and Laura A. Hart

Polypharmacy in the emergency department (ED) presents additional challenges for older adults with acute illnesses but is also an opportunity for healthcare providers to prevent adverse drug events as well as the use of potentially inappropriate medications. Older patients have complex health-related needs and are at risk for medication-related complications during an ED visit. Implementing mitigating strategies of performing medication reconciliation and review, using existing implicit or explicit tools to evaluate medications, and deprescribing or de-escalating high-risk medications are critical to positive health outcomes. These practices can help to optimize pharmacologic interventions for older patients in the ED.