Prevention, Diagnosis, and Management of Opioids, Opioid Misuse, and Opioid Use Disorder in Older Adults

Structured Abstract

Background. Opioid-related harms are increasing among older adults. Until we better understand the factors contributing to this trend, we will be unable to design and implement effective interventions to optimally manage opioid use and its potential harms among older adults. Although considerable research has been done in younger or mixed-age populations, the degree to which it is directly applicable to older adults is uncertain.

Objectives. To provide a framework for understanding how to reduce adverse outcomes of opioid use among older adults, and to describe the evidence available for different factors associated with and interventions to reduce adverse outcomes related to opioid use in this population.

Approach. With input from a diverse panel of content experts and other stakeholders, we developed a conceptual framework and evidence map to characterize empirical studies of factors associated with opioid-related outcomes and interventions to reduce opioid-related harms in older adults. We identified relevant literature among older adults (age ≥60 years) for an evidence map by systematically searching PubMed, PsycINFO, and CINAHL for studies published in English between 2000 and May 6, 2020.

Findings. We identified 5,933 citations, from which we identified 41 studies with multivariable models of factors associated with opioid-related outcomes and 16 studies of interventions in older adults. More than half (22/41) of the multivariable analysis studies evaluated factors associated with long-term opioid use (which, though not a harm per se, may increase the risk of harms if not appropriately managed). Prior or early postoperative opioid use, or greater amounts of prescribed opioids (high number of opioid prescriptions or higher opioid dose), were consistently (100% agreement) and strongly (measure of association ≥2.0) associated with long-term opioid use. Back pain, depression, concomitant use of nonsteroidal anti-inflammatory drugs (NSAIDs), and fibromyalgia also had consistent, but weaker, associations with long-term opioid use. Several factors were mostly associated (>75% agreement) with long-term opioid use, including benzodiazepine use, comorbidity scores, (generally undefined) substance misuse, tobacco use, and low income. However, studies were mostly consistent that alcohol abuse and healthcare utilization were *not* associated with long-term opioid use. Gender, age among older adults, Black race, dementia, rural/nonurban residence, prescription of long-acting opioids, unmarried status, and use of muscle relaxants were variably associated (<75% agreement) with long-term opioid use.

Six studies examined factors associated with opioid-related disorders, although only one study evaluated factors associated with opioid use disorder. Alcohol misuse and gender were variably associated with opioid misuse (examined by three studies each).

All other evaluations of specific pairs of associated factors and outcomes of interest were evaluated by only one or two studies each. These included analyses of factors associated with multiple opioid prescribers, mental health outcomes, physical health outcomes, all-cause hospitalization, opioid-related hospitalization, nonopioid-specific hospitalization, emergency department visits, opioid overdose, all-cause death, opioid-related death, and nonopioid-related death.

The evidence on interventions directed at older adults is sparse. Of the 16 studies of opioid-related interventions in older adults, six examined screening tools to predict opioid-related harms, but none of these tools was tested in clinical practice to assess real-world results. Two studies found that prescription drug monitoring programs are associated with less opioid use in communities. Other studied interventions include multidisciplinary pain education for patients, an educational pamphlet for patients, implementation of an opioid safety initiative, provision of patient information and pain management training for clinicians, a bundle of educational modalities for clinicians, free prescription acetaminophen, a nationally mandated tamper-resistant opioid formulation, and motivational interview training for nursing students. Few intervention studies evaluated pain or other patient-centered outcomes such as disability and functioning.

Conclusions. The evidence base that is directly applicable to older adults who are prescribed opioids or have opioid-related disorders is limited. Fundamental research is necessary to determine which factors may predict clinically important, patient-centered, opioid-related outcomes. Studies to date have identified numerous possible factors associated with long-term opioid use (whether appropriate or not), but analyses of other opioid-related outcomes in older adults are relatively sparse. Research is also needed to identify interventions to reduce opioid prescribing where harms outweigh benefits (including screening tools), reduce opioid-related harms and disorders, and treat existing misuse or opioid use disorder among older adults.