Bree Collaborative Opioid Prescribing in Older Adults Guidelines
Updated: April 12, 2021

Background

In 2015, the Washington Agency Medical Director's Group (AMDG), in collaboration with clinical and academic pain experts, updated the Guideline on Prescribing Opioids for Pain including a section on section on older adults (Appendix A).[1] The guideline recognizes that opioids in this population could pose specific risks and challenges related to changing physiology and pharmacokinetics, increasingly complex interactions among polypharmacy use of drugs, especially other controlled substances (benzodiazepines, sedative hypnotics) or drugs such as gabapentenoids, presence of severe co-morbidities, declining cognitive function, and increasing social isolation and complex care support needs.[2] The Bree Collaborative, a public/private group dedicated to targeted initiatives to improve health care quality, outcomes, affordability, and equity, endorsed this guideline in 2017 and elaborated in key areas including prescribing for dentists, in the perioperative period, for long-term opioid therapy, and metrics for uniform measurement.

The need to focus on this topic has become increasingly compelling with the publication of a report from the Agency for Healthcare Research and Quality in 2018 that highlighted increasing rates of opioid-related hospitalizations, with the highest reported median rates in Oregon and Washington.[3] While opioid prescribing and mortality specific to prescribed opioids have fallen in recent years, between 2017-2018, the CDC reported that the specific opioid related mortality rate for persons ≥65 years increased by 4.8%.[4]

Areas of focus are organized around clinical decision points as shown in **Table 1**. In scoping these areas, cross-cutting themes were identified that should inform the evidence review and recommendations but that were too broad to be a focus of a specific workgroup including: the social determinants of health, palliative or end-of-life care, cognitive decline or dementia, and nursing home care.

Table 1: Focus Areas

Focus Area	Goal(s)	Members
Acute prescribing including acute injuries and peri-operative	Prevent transition to long term opioid use	Debra Gordon, Darcy Jaffe, Gary Franklin
Co-prescribing with opioids (e.g., sedative hypnotics, gabapentinoids, z-drugs)	Reduce impacts on cognition, falls, delirium	Gary Franklin, Jaymie Mai, James Floyd, Michael Parchman, Shelly Gray
Non-opioid pharmacologic pain management	Evidence base and risk/benefit	Pam Davies, Jason Fodeman, Denise Boudreau, Michael Parchman
Non-pharmacologic pain management	Evidence base and risk/benefit (e.g., CBT, active exercise)	Elizabeth Eckstrom, Yusuf Rashid/Siobhan Brown, Kushang Patel, Gina Wolf, Gary Franklin, Clarissa Hsu
Types of opioid therapy-intermittent, low dose, short acting vs others	Reduce use of long-acting opioids and COT	Judy Zerzan-Thul, Jaymie Mai, Steven Stanos
Tapering/deprescribing	Differentiators with recent Bree recommendations for legacy patients	Angie Sparks, Mark Sullivan, Carla Ainsworth, Jason Fodeman, Clarissa Hsu, Dianna Vinh

Recommendations

Acute prescribing including acute injuries and perioperative pain

Providers

- Prior to the elective procedure and to prescribing:
  - Perform a risk assessment for severe acute pain and adverse effects of opioids prior to prescribing (outlined in 2015 Washington State Agency Medical Directors' Group (AMDG) guidelines, 2018 BREE perioperative supplement)
  - Establish realistic goals and expectations with the patient and family or caregiver (if present) including: maximizing function, minimizing adverse events, side effects, and plans to reduce and discontinue opioid therapy to avoid persistent opioid use.

- When considering dosing:
  - Start at 25%-50% of what would be initiated in a younger adult and extend the dosing intervals.
  - Use lowest dose for shortest duration possible, prescribing <7 days (ideally ≤3 days) (consistent with CDC guidelines)
  - Avoid complicated regimens. Consider the person's other medications (e.g., muscle relaxers, antihistamines, anticholinergics)
  - Avoid using long-acting opioids for acute pain (methadone, levorphanol, fentanyl patch or opioid delivered by extended-release forms).

- During discharge and follow-up:
  - Maintain a high vigilance for exaggerated side effects (e.g., respiratory depression, constipation with need for bowel prophylaxis, delirium, psychomotor effects that may increase risk of falls)
  - Track opioid use and signs of potential misuse including the emergence of opioid use disorder during acute recovery and related functional status with outcome measures (e.g., mood, mobility, activities of daily living, sleep, appetite, cognitive impairment, weight changes)
  - Be attentive to varying degrees of cognitive impairment that may impact opioid and other medication safety. Provide clear oral and readable written instructions on:
    - The risks, safe use, and storage of opioids and proper disposal of controlled substances through Safe Medication Return Program.
    - Which provider will be responsible for managing ongoing acute or postoperative pain, including who will be prescribing any opioids.
    - Planned taper of acute opioids, including a timeline for return to preoperative or lower opioid dosing for those on chronic opioids.
  - Perform medication review and reconciliation at follow up visits to ensure the patient is not continuing medication that s/he no longer needs.

Health Care Site or Delivery System

- Designates a responsible care coordinator (e.g., health service coordinator, nurse case manager, clinical pharmacist) to facilitate smooth and safe transitions specific to the opioid and pain management plan.
- Assures provider education on risk and best practices of opioid prescribing in this age group.

Evidence

Long-term opioid use often begins with treatment of acute pain. Probability of long-term opioid use increases most sharply in the first days of therapy, particularly after 5 days or 1 month of opioids have been prescribed.[5] There is little high-grade evidence on transition to long-term opioid use specific to advancing age by decade of life. A population study of opioid naive adults ≥65 years of age found 6% transitioned to persistent opioid use >90 days.[6] In a separate study, during a 1-year follow-up period of Medicare beneficiaries new to opioids, 6.5% had transitioned to long-term opioid use.[7] Transition rates to long-term opioid use following minor and major surgical procedures appear similar (5.9% and 6.5% respectively) and it appears that individual patient characteristics were more important than the surgical procedure.[8] Similar rates have been reported for opioid-naive patients remaining on opioid medication 12 months after sustaining fragility fractures of the hip, proximal humerus, or distal radius.[9] In comparison, 12-24% of patients with new back pain remained on opioids at 12 months though this may in part represent chronic pain care.[10]

Multiple studies suggest a number of patient, prescriber, and system factors contribute to unintended, persistent opioid use.[11,12,13,14] Age is associated with persistent opioid use particularly age greater than 50,[1516] as is white race, higher income and Medicaid dual-eligibility.[13] Characteristics associated with long-term opioid use include low income, older, females, in poor health, with new/chronic back pain, opioid initiations with long-acting opioids or tramadol, prescriptions for other pain, sleep or antipsychotic medication and pre and/or post mental health issues.[5] Additional patient risk factors include comorbid posttraumatic stress, past or current nicotine use, past or current substance use disorder, social isolation and loneliness.[17] Persistent opioid use has also been associated with presence of diabetes, pulmonary disease and heart failure.[18] There is substantial variation in opioid use between states even after accounting for patient and procedure characteristics associated with opioid use[19] suggesting influence of individual prescriber behavior and local conditions. Prescriber characteristics potentially associated with prescribing of prolonged opioid treatment include personal attitudes, knowledge, beliefs and former training.[20] Systems level interventions studied to address the opioid epidemic at large include 1) state legislation and regulation, 2) prescription drug monitoring programs (PDMPs), 3) insurance strategies, 4) clinical guideline implementation, 5) provider education, 6) health system interventions, 7) naloxone education and distribution, 8) safe storage and disposal, 9) public education, 10) community coalitions, and 11) interventions employing public safety and public health collaborations.[21]

Bio-physiologic changes that occur with aging, accumulation of comorbidities, co-prescriptions of medication, frailty, and psychosocial changes increase risk of opioid treatment. Pharmacokinetic changes and enhanced pharmacodynamic sensitivity (i.e., more pronounced effects at equivalent does used in younger adults) occur with all opioids with age,[22,23] leading to recommendations to start opioid therapy with about 50% of the usual adult dosage.[24] The American College of Surgeons Best Practices Guidelines for Acute Pain Management in Trauma Patients (2020) recommends a decrease in the initial dose of an opioid by 25% in 60-year-old patients, and by 50% for 80-year-old patients; but to administer

at the same intervals. Initiation of opioid and antiepileptic use and polypharmacy in older adults are significantly associated with increased risk of falling in meta-analyses.[25] Long term postoperative opioid use is associated with decreased use of planned healthcare utilization such as follow up with medical appointments and participation in postoperative rehabilitation sessions.[26] Older adults with prolonged use of central nervous system depressant medication such as opioids report lower scores on self-reported health-related quality of life and have higher odds of having more problems performing usual activities.[27] Opioid analgesics are one of the most common medications that account for all discrepant medications at time of transfer from hospital to skilled nursing facilities[28] highlighting the importance of medication reconciliation at time of transition of care providers. A case series of more than 500,000 adults reported a near 4-fold increase in the risk of fracture associated with periods of opioid exposure compared to non-use.[29] Though no differences were found by age, the associated risk for fracture was highest in the first 7 days of opioid initiation (adjusted incidence rate ratio: 7.81, 95% confidence interval).

Exposure to opioids for the purposes of acute pain relief can progress to physical dependence and/or the onset of opioid use disorder (OUD). Older drug users are growing in number with many presenting for substance use treatment for the first time aged 50–70 years.[30] There are two distinct types of problem substance users among older people; “early-onset” and “late-onset” users. “Early-onset” refers to those who have a long history of substance use, who continue to use as they age, while “late-onset” includes individuals who develop a new OUD as elders.[31] As individuals age, they are less likely to obtain prescription opioids illicitly and more likely to obtain prescription opioids via the medical community.[32] One study reported that 40-50% of adults 50 and older who misused prescription opioids obtained those medications through physicians.[33] Alcohol use among older adults is also increasing particularly among females, including past-month binge alcohol and is a significant safety concern for acute or persistent opioid treatment in older adults who may self-medicate loss, grief and loneliness.[34]

A range of comprehensive system-level strategies have been utilized in various settings to alleviate the problem of inappropriate prescribing of opioids.[35] These include organizational support, automated decision support systems, and tools for individual feedback. Well executed patient handoffs at all points of transition of care, patient and caregiver education attuned to the patient’s cognitive status and care coordination provide opportunities for patient safety and prevention of unintended long-term prescribing. One intervention that has been shown to be feasible and to promote faster return to preoperative opioid doses and definitive opioid cessation is a telephone-based motivational-interviewing intervention focused on providing opioid tapering reductions of 25% of the total opioid dose every seven days for patients with preexisting pain and opioid use who underwent orthopedic surgery.[36] However, many elderly patients experience cognitive impairment, memory loss and confusion that can be confounded by sight and hearing impairment. This can lead to problems with patient counseling and adherence to medication instructions. Medication hoarding is a problem for some older adults, with prevalence of hoarding behaviors increasing with age.[37] Thus caregivers’ perspective is

important for assessing medication and when providing instructions to discontinue and properly dispose of unused quantities of opioids.

In summary, there are insufficient data based on age, risk factors and specific acute pain conditions to recommend a specific strategy for prevention of persistent acute or postoperative opioid use.[38] Specific approaches used to reduce unintended transition from acute to long-term opioid use include prescribing limitations,[39] acceptance and commitment therapy delivered by a mobile phone,[40] motivational interviewing, development of a multidisciplinary transitional pain service to identify at-risk patients and optimize pain management upon discharge from hospital[41] and de-prescribing algorithms.[42,43] The practicality of implementing these types of measures is limited as is the likelihood of a single intervention being successful. However, the body of evidence as a whole suggests enhanced care coordination between surgeons and primary care physicians to allow for earlier identification of patients at risk for new persistent opioid use to prevent misuse and dependence[44] and reduced duration of a course of acute opioid treatment. In addition to a clear understanding of the patient's treatment goals and expectations, comorbidities and medication risks, cognitive and functional status, a consistent prescriber and care coordination of community resources and family support are important for pain treatment in later life.[45,46]

References

[1] The Washington State Agency Medical Director's Group. Interagency guideline on prescribing opioids for pain. 3rd Edition, June, 2015. URL: http://www.agencymeddirectors.wa.gov/Files/2015AMDGOpioidGuideline.pdf. Accessed 4/1/21.
[2] Gazelka HM, Leal JC, Lapid MI, Rummans TA. Opioids in older Adults: Indications, prescribing, complications, and alternative therapies for primary care. Mayo Clin Proc 2020; 95: 793-800, URL: www.mayoclinicproceedings.org/article/S0025-6196(20)30145-2/fulltext, Accessed 4/1/21.
[3] Weiss AJ, Heslin KC, Barrett ML, Izar R, et al. Opioid-related inpatient stays and emergency department visits among patients aged 65 years and older, 2010 and 2015: Statistical Brief #244. Healthcare Cost and Utilization Project (HCUP) Statistical Briefs. Rockville (MD)2018. URL: https://www.hcup-us.ahrq.gov/reports/statbriefs/sb244-Opioid-Inpatient-Stays-ED-Visits-Older-Adults.jsp
[4] Wilson N, Kariisa M, Seth P, et al. Drug and opioid-involved overdose deaths, United States, 2017-2018. Morb Mortal Wkly Rep 2020; 69:290–297. URL: http://dx.doi.org/10.15585/mmwr.mm6911a4external icon, Accessed 4/1/2021
[5] Shah A, Hayes CJ, Martin BC. Characteristics of Initial Prescription Episodes and Likelihood of Long-Term Opioid Use - United States, 2006-2015 MMWR Morb Mortal Wkly Rep 2017 Mar 17;66(10):265-269.
[6] Musich S, Wang SS, Slindee L, Kraemer S, Yeh CS. Characteristics associated with transition from opioid initiation to chronic opioid use among opioid-naive older adults. Geriatric Nursing 2019;40:190-196.
[7] Raman SR, Bush C, Karmali RN et al. Characteristics of New Opioid Use Among Medicare Beneficiaries: Identifying High-Risk Patterns J Manag Care Spec Pharm. 2019 Sep;25(9):966-972.
[8] Brummett CM, Waljee JF, Goesling J. et al. New persistent opioid use after minor and major surgical procedures in US adults. JAMA Surg 2017;152(6):e170504.
[9] Torchia MT, Munson J, Tosteson TD, et al. Patterns of opioid use in the 12 months following geriatric fragility fractures: a population-based cohort study. JAMDA 2019;20:208-304.
[10] Gold LS, Hansen RN, Avins AL. et al. Associations of early opioid use with patient-reported outcomes and healthcare utilization among older adults with low back pain.Clin J Pain. 2018 Apr;34(4):297-305.
[11] Kent M. et al American Society for Enhanced Recovery and Perioperative Quality Initiative-4 Joint Consensus Statement on Persistent Postoperative Opioid Use: Definition, Incidence, Risk Factors, and Health Care System Initiatives. Anesth Analg 2019;129:543–52.
[12] Hooten WM, Brummett CM, Sullivan MD, et al. A conceptual framework for understanding unintended prolonged opioid use. May Clin Proc 2017;92(12):1822-1830.
[13] Nguyen AV, Ross E, Westra J., et al. Opioid utilization in geriatric patients after operation for degenerative spine disease. J Neurosurg Anesthesiol 2020; 2020 Feb 21;10.1097.
[14] Lawal OD, Gold J, Murthy A et al. Rate and risk factors associated with prolonged opioid use after surgery: a systematic review and meta-analysis. JAMA Netw Open. 2020 Jun 1;3(6):e207367.
[15] Rose AJ, McBain R, Schuler MS. et al. Effect of age on opioid prescribing, overdose, mortality in Massachusetts, 2011 to 2015. JAGS 2019;67:128-132.
[16] Pugely AJ, Bedard NA, Kalakoti P, Hendrickson NR, Shillingford JN, Laratta JL, Saifi C, Lehman RA, Riew D. Opioid use following cervical spine surgery: trends and factors associated with long-term use. The Spine Journal 2018;18:1974-1981.
[17] Vyas MV, Watt JA, Yu AYX, Straus SE, Kapral MK. The association between loneliness and medication use in older adults. Age Ageing. 2020 Sep 14:afaa177. doi: 10.1093/ageing/afaa177. Online ahead of print.
[18] Mosher HJ, Jiang L, Vaughan Sarrazin MS, Cram P, Kaboli PJ, Vander Weg MW. Prevalence and characteristics of hospitalized adults on chronic opioid therapy. J Hosp Med. 2014 Feb;9(2):82-7.
[19] Vail D, Azad TD, O/Connell C., et al. Postoperative opioid use, complications, and costs in surgical management of lumbar spondylolisthesis. Spine 2018;43(15):1080-1088.
[20] Desveaux L, Saragosa M, Kithulegoda N, Ivers NM. Understanding the behavioural determinants of opioid prescribing among family physicians: a qualitative study. BMC Fam Pract. 2019 May 10;20(1):59.

[21] Haegerich TM, Jones CM, Cote PO, Robinson A, Ross L. Evidence for state, community and systems-level prevention strategies to address the opioid crisis. Drug Alcohol Depend 2019 Nov 1;204:107563.
[22] McLachlan AJ, Bath S., Naganathan , et al. Clinical pharmacology of analgesic medicines in older people: impact of frailty and cognitive impairment. Br J Clin PHarmacol 2011;71:351-364.
[23] Scott JC, Stanski DR. Decreased fentanyl and alfentanil dose requirements with age: A simultaneous pharmacokinetic and pharmacodynamic evaluation. J Pharmacol Exp Ther. 1987;240:159-166.
[24] Pergolizzi J, Boger RH, Budd K., et al. Opioid and management of chronic severe pain in the elderly:consensus statement of the international expert panel with focu on the six clinically most ofen used World Health Organization step III opioids (buprenorphine, fentanyl, hydromorphone, methadone, morphine, oxycodone). Pain Pract. Jul-Aug 2008;8(4):287-313.
[25] Seppala LJ, van de Glind EMM, Daams JG, Ploegmakers KJ, de Vries M, Wermelink AMAT, van der Velde N; EUGMS Task and Finish Group on Fall-Risk-Increasing Drugs. Fall-Risk-Increasing Drugs: A Systematic Review and Meta-analysis: III. Others. J Am Med Dir Assoc. 2018 Apr;19(4):372.e1-372.e8.
[26] Lieberman JS, Samuels LR, Goggins K., et al. Opioid prescriptions at hospital discharge are associated with more post-discharge healthcare utilization. J Am Heart Assoc. 2019;8:e010664.
[27] Cheng S, Siddiqui TG, Gossop M et al. Health-related quality of life in hospitalized older patients with versus without prolonged use of opioid analgesics; benzodiazepines, and z-hypnotics: a cross-sectional study. BMC Geriatrics 2020;20:425.
[28] Tjia J, Bonner A, Briesacher BA, McGee S, Terrill E, Miller K. Medication discrepancies upon hospital to skilled nursing facility transitions. J Gen Intern Med. 2009 May;24(5):630-5.
[29] Peach EJ, Pearce FA, Gibson J, Cooper AJ, Chen LC, Knaggs RD. Opioids and the Risk of Fracture: a Self-Controlled Case Series Study in the Clinical Practice Research Datalink. Am J Epidemiol. 2021 Feb 19:kwab042.
[30] Carew AM, Comiskey C. Treatment for opioid use and outcomes in older adults: a systematic literature review. Drug Alcohol Depend. 2018 Jan 1;182:48-57.
[31] Roe B, Beynon C, Pickering L, Duffy P. Experiences of drug use and ageing: health, quality of life, relationship and service implications. J Adv Nurs. 2010 Sep;66(9):1968-79.
[32] Cicero TJ, Surratt HL, Kurtz S, Ellis M, Inciardi JA, 2012 Patterns of prescription opioid abuse and comorbidity in an aging treatment population. J Subst Abuse Treat. 42, 87–94.
[33] Schepis TS, McCabe SE, Teter CJ, 2018 Sources of opioid medication for misuse in older adults: results from a nationally representative survey. Pain. 159, 1543–1549.
[34] Han BH, Moore AA, Keyes K, Palomar JJ. Demographic trends of binge alcohol use and alcohol use disorders among older adults in the United States, 2005-2014. Drug and Alcohol Dependence 2017;170:198-207.
[35] Losby J, Hyatt JD, Kanter MH, Baldwin G, Matsuoka D. Safer and more appropriate opioid prescribing: a large healthcare system's comprehensive approach. J Eval Clin Pract 2017;23(6):1173-1179.
[36] Hah JM, Trafton JA, Narasimhan B, et al. Efficacy of motivational-interviewing and guided opioid tapering support for patients undergoing orthopedic surgery (MI-Opioid Taper): A prospective, assessor-blind, randomized controlled pilot trial. EClinicalMedicine. 2020 Oct 16;28:100596.
[37] VanDyke MM, Steffen AM.Medication Saving Behaviors of Older Adults: Scale Developed to Assess Family Caregiver Perspectives Clin Gerontol 2017;40(4):258-267.
[38] Wu C., et al. American Society for Enhanced Recovery and Perioperative Quality Initiative Joint Consensus Statement on Perioperative Opioid Minimization in Opioid-Naïve Patients. Anesth Analg 2019;129:567–77.
[39] Young BT, Zolin SJ, Ferre A., et al. Effects of Ohio's opioid prescribing limit for the geriatric minimally injured trauma patient. The American Journal of Surgery 2020;219:400-403.
[40] Anthony CA, Rojas EO, Keffala V., et al. Acceptance and commitment therapy delivered via a mobile phone messaging robot to decrease postoperative opioid use in patients with orthopedic trauma: randomized controlled trial. J Med Internet Res 2020;22(7):e17750.
[41] Huang A, Azam A, Segal S, Pivovarov K, Katznelson G, Ladak SS, Mu A, Weinrib A, Katz J, Clarke H. Chronic postsurgical pain and persistent opioid use following surgery: the need for a transitional pain service. Pain Manag. 2016 Oct;6(5):435-43.

[42] Hah JM, Trafton JA, Narasimhan B, et al. Efficacy of motivational-interviewing and guided opioid tapering support for patients undergoing orthopedic surgery (MI-Opioid Taper): A prospective, assessor-blind, randomized controlled pilot trial. EClinicalMedicine. 2020 Oct 16;28:100596.
[43] Lumish R, Joshana G, Brandt NJ. Optimizing pain management through opioid deprescribing. Journal of Gerontological Nursing, 2018-01-01, Vol.44 (1):9-14.
[44] Klueh MP, Hu HM, Howard RA, Vu JV, Harbaugh CM, Lagisetty PA, Brummett CM, Englesbe MJ, Waljee JF, Lee JS. Transitions of Care for Postoperative Opioid Prescribing in Previously Opioid-Naïve Patients in the USA: a Retrospective Review. J Gen Intern Med. 2018 Oct;33(10):1685-1691.
[45] Makris UE, Abrams RC, Gurland B, Carrington M. Management of persistent pain in the older patient: a clinical review, JAMA 2014;312(8):825-36.
[46] Lagisetty P, Bohnert A, Goesling J, Hu HM, Travis B, Lagisetty K, Brummett CM, Englesbe MJ, Waljee J. Care Coordination for Patients on Chronic Opioid Therapy Following Surgery: A Cohort Study. Ann Surg. 2020 Aug;272(2):304-310.