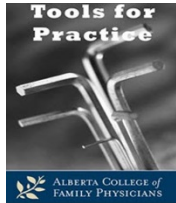


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July 22, 2019
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What is the Incidence of Iatrogenic Opioid Use Disorder?

Clinical Question: What is the risk of developing opioid use disorder (OUD) when taking prescription opioids?



Bottom Line: The incidence of OUD associated with prescribed opioids among chronic pain patients is likely ~3% (over ~2 years) but causation is uncertain. Patients with no history of substance use disorders appear to be at lower risk (<1%). Factors associated with increased risk of OUD include a history of substance use disorder and receiving opioids for longer duration (>90 days) or at higher doses (>120mg/day morphine equivalent).

Evidence:

- Systematic review¹ (12 studies, 310,408 patients): Pain patients prescribed opioid therapy (≥ 7 days and 97% had ≥ 3 months).
 - Incidence of opioid dependence or “abuse” was 3.1% in higher quality studies.
 - 4.7%, if all studies included.
 - Diagnostic criteria matter: incidence varies (from 1-11%) with different diagnostic criteria.
- Systematic review² (24 studies, 2507 patients): chronic pain patients prescribed opioid therapy, average exposure 26 months (range: 2-240).
 - Incidence of opioid addiction was 3.3%.
 - 0.2% in patients without a history of “substance abuse/addiction” versus 5% with positive history.
 - Limitations: Varying addiction definitions; quality of trials included: retrospective (71%), prospective and/or randomized (29%); unclear pooling technique.
- Two systematic reviews:^{3,4} incidence 0.3%-0.5% but generally lower risk patients.^{3,4}

Context:

- Incidence: new cases of OUD after opioid prescription and may better estimate iatrogenic OUD than prevalence. Prevalence: all OUD patients, including those who obtained prescribed opioids after developing OUD.²

- Prevalence of OUD ranges from 0.05%-23%.^{3, 5-10}
 - Wide variation attributable to differing study quality, variable diagnostic criteria/terminology, inconsistent reporting, and populations studied.
- Majority of included studies (using terms like “addiction” or “substance abuse”) published before DSM-V criteria.
- Exposure to prescription opioids in adolescents and young adults was associated with future non-medical prescription opioid use¹¹ and OUD.¹²
- From one insurance database cohort study (568,640 patients), after 12 months:¹³
 - Duration: For doses 36-120mg/day morphine equivalent, OUD incidence with acute use (1-90 days) was 0.12% versus 1.3% with chronic use (prescriptions >90 days).
 - Dose: For prescriptions >90 days, OUD incidence with 1-36mg/day morphine equivalents was 0.7% versus 6.1% with >120mg/day morphine equivalent.

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Disclosures:

Authors do not have any conflicts of interest to declare.

References:

1. Higgins C, Smith BH, Matthews K. *Br J Anesthesia* 2018; 120:1335-44.
2. Fishbain DA, Cole B, Lewis J *et al.* *Pain Medicine* 2008; 9:444-59.
3. Noble M, Treadwell JR, Tregear SJ, *et al.* *Cochrane Database Syst Rev* 2010, Issue 1, Art No.: CD006605.
4. Minozzi S, Amato L, Davoli M. *Addiction*. 2013 Apr;108(4):688-98.
5. Chou R, Turner JA, Devine EB, *et al.* *Ann Intern Med* 2015; 162:276-86.
6. Martell BA, O'Connor PG, Kerns RD, *et al.* *Ann Intern Med* 2007; 146:116-27.
7. Noble M, Tregear SJ, Treadwell JR *et al.* *J Pain Symptom Manage* 2008; 35(2): 214-28.
8. Roland CL, Lake J, Oderda GM. *J Pain Palliat Care Pharmacother* 2016; 30(4): 258-68.
9. Voon P, Karamouzian M, Kerr T. *Subst Abuse Treat Prev Policy* 2017; 12(1):36.
10. Vowles KE, McEntee ML, Julnes PS, *et al.* *Pain* 2005; 156(4):569-76.
11. McCabe SE, Veliz P, Schulenberg JE. *Pain* 2016; 157(10):2173-8.
12. Schroeder AR, Dehghan M, Newman TB *et al.* *JAMA Intern Med* 2019; 179(20): 145-152.
13. Edlund MJ, Martin BC, Russo JE *et al.* *Clin J Pain* 2014; 30(7):557-564.

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