

Incidence of iatrogenic opioid use disorder

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Clinical question

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

Bottom line

Incidence of OUD associated with prescribed opioids in chronic pain patients is likely about 3% (over 2 years) but causation is uncertain. Patients with no history of substance use disorder (SUD) appear to be at lower risk (<1%). Factors associated with increased risk include history of SUD and receiving opioids for longer (>90 days) or at higher doses (>120 mg/d morphine equivalent [ME]).

Evidence

A systematic review¹ (12 studies, N=310408) of patients with pain prescribed opioid therapy (≥7 days; 97% for ≥3 months) found the following.

- Incidence of opioid dependence or “abuse” was 3.1% in the higher-quality studies and 4.7% including all studies.
- Diagnostic criteria matter: incidence varies (from 1% to 11%) based on diagnostic criteria.

A systematic review² (24 studies, N=2507) of patients with chronic pain prescribed opioid therapy (average exposure 26 months, range 2 to 240 months) found the following.

- Incidence of opioid addiction was 3.3%.
 - Incidence was 0.2% in patients without a history of “substance abuse/addiction” versus 5% with positive history.
- Limitations: varying addiction definitions; quality of studies included (retrospective [71%], prospective and randomized [29%]); unclear pooling technique.

Two systematic reviews^{3,4} found incidences of 0.3% to 0.5%, but in patients who were generally lower risk.

Context

- Incidence (new cases after opioid prescription) might better estimate iatrogenic OUD than prevalence (all OUD patients, including those prescribed opioids after developing OUD).²
- Prevalence of OUD ranges from 0.05% to 23%.^{3,5,6}
 - The variation is attributable to differing study quality, variable diagnostic criteria and terminology, inconsistent reporting, and the populations studied.
- Most included studies (using terms like *addiction* or *substance abuse*) were published before the DSM-5 criteria.
- Exposure to prescription opioids in adolescents and young adults was associated with future nonmedical prescription opioid use⁷ and OUD.⁸

- One insurance database cohort study⁹ (N=568640) found after 12 months that for doses of 36 to 120 mg/d ME, OUD incidence with acute use (1 to 90 days) was 0.12% versus 1.3% with chronic use (>90 days). For prescriptions of more than 90 days, OUD incidence with 1 to 36 mg/d ME was 0.7% versus 6.1% with more than 120 mg/d ME.

Implementation

Opioids are frequently not superior to other medications for acute¹⁰ or chronic pain¹¹ and have high (about 23%) discontinuation due to adverse events.³ If considering opioids, assess possible risk factors for OUD, particularly previous SUD. If prescribing, consider shorter prescriptions, lower doses and potency, and smaller amounts. Urine toxicology can help verify the patient is taking the provided prescription. If refilling chronic opioid prescriptions, consider screening for OUD with simple tools like the Prescription Opioid Misuse Index and consult appropriate guidelines as needed.¹²

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Competing interests
None declared

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