

## **Association Between Anxiety, Depression, and Opioid Use Disorder in Adult Surgical Patients: A Real-World Data Study**

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### **Background/Objective:**

The opioid crisis remains a central issue in public health. Prior research has explored how postoperative opioid prescribing contributes to the development of opioid use disorder (OUD). Pre-existing psychiatric conditions may influence postoperative misuse of opioid medications, but existing research on this association is limited in scope and generalizability. This study aimed to evaluate whether a diagnosis of depression and/or anxiety is associated with increased odds of OUD among adult patients undergoing common opioid-prescribing surgical procedures.

### **Methods:**

In this retrospective case-control study, we used de-identified Electronic Health Record data from the IU School of Medicine-Evansville RWEdataLab (CRC/Sidus Insights) Psychiatric database. Adult patients aged 18-70 who underwent a common opioid-prescribing surgical procedure were identified using CPT codes. Psychiatric and OUD diagnoses were identified using ICD-10 codes. Patients were grouped based on the presence or absence of an OUD diagnosis. Odds ratios were calculated to assess the association between OUD and prior diagnosis of anxiety, depression, or both.

### **Results:**

Among 18,440 patients who underwent a qualifying surgery, 653 were diagnosed with OUD. Of these, 288 had depression, 280 had anxiety, and 223 had both diagnoses, indicating substantial overlap between conditions. Patients with depression (OR: 1.91; 95% CI: 1.63-2.23), anxiety (OR: 1.26; 95% CI: 1.08–1.48), and both conditions (OR: 3.84; 95% CI: 3.24–4.54) had significantly higher odds of OUD compared to surgical patients with other psychiatric diagnoses.

### **Conclusion and Clinical Implications:**

These findings suggest that adult surgical patients with a history of anxiety and/or depression have increased odds of developing OUD. This underscores the clinical importance of individualized pain management and enhanced perioperative support for patients with psychiatric comorbidities. Future research should explore these associations in broader and more diverse populations and evaluate interventions that integrate mental health screening into preoperative planning.