

The Opioid Crisis has resulted in the death of over 650,000 people in the U.S. since it began in the 1990s. These deaths are mostly due to overdose, which is the result of Opioid Use Disorder (OUD), characterized by the increased desire for opioids, tolerance, and withdrawal symptoms. Medication-assisted treatment (MAT) is a popular therapy against OUD. The implementation of MAT is done with three FDA approved drugs for OUD: methadone (full agonist), naltrexone (full antagonist), and buprenorphine (partial agonist). This review discusses the effectiveness, dependency risks, and other limitations of the three drugs, along with future directions for improvement with MAT and other promising approaches for therapy. Methadone was found to be highly effective but had the highest abuse potential and stricter regulations. Naltrexone was found to be the least addictive and was highly effective for relapse prevention but requires complete detoxification before treatment. Buprenorphine was found to be the happy medium between the two due to its partial agonist properties but is less effective with those that have high opioid tolerance. Some limitations to MAT include challenges with meeting the starting requirements, adherence, and accessibility barriers. Although MAT is the gold standard for OUD treatment, OUD still affected 2.7 million people in the U.S in 2020, so more effective treatments are needed. These include novel treatment targets, enhancing accessibilities, and de-stigmatizing OUD and MAT. Collaborative efforts across research, healthcare, and policy regulations will be important for implementing a widespread solution to fight the ongoing Opioid Crisis.