

NIHR Greater Manchester PSTRC

Plain English Publication Summary

Publication: [Non-fatal overdose risk during and after opioid agonist treatment: A primary care cohort study with linked hospitalisation and mortality records](#)

Publication details (Vancouver format)

Domzaridou E, Carr MJ, Webb RT, Millar T, Ashcroft DM. Non-fatal overdose risk during and after opioid agonist treatment: A primary care cohort study with linked hospitalisation and mortality records. *The Lancet Regional Health - Europe* 2022; 22: 100489

What are the most important findings/conclusions in this paper? Why are they important?

Our study found that, for patients with opioid dependence, opioid agonist treatment (OAT) was associated with a 51% lower risk of overdose compared to not receiving treatment. Patients were more likely to be hospitalised due to overdose during the first four weeks of their treatment plan and four weeks after their treatment was stopped.

Considering that only some patients engage with treatment services following an overdose, hospitalisation following a non-fatal overdose might be a key point of contact with the healthcare system, as it presents opportunities for treatment referral. This could help to prevent future non-fatal or fatal overdoses.

Currently, there are limited guidelines about the treatment choices for opioid dependence but our study shows that for some patients, buprenorphine might be a safer option compared to methadone.

What did you do?

We accessed data from 20,898 patients in the Clinical Practice Research Datalink who were prescribed OAT in primary care in England. We used the data to investigate potential changes in the risk of hospitalisation due to overdose by examining differing periods in and out of treatment over 20 years.

What was known before your paper was published and why did you conduct this research?

The UK healthcare system provides several treatment options for patients who seek help for opioid dependence. Among these options is OAT, which involves the prescribing of methadone or buprenorphine. In England, there are over 268,000 adults in contact with substance misuse treatment services. Of those, over 50% receive treatment for opioid dependence and 16% receive treatment in primary care.

Patients with opioid dependence differ regarding their physical and mental health needs and their risk of

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overdose. Studies worldwide show that the frequency of hospitalisation and the costs of care among those patients are higher than people of similar age and gender who are not opioid-dependent. Fatal overdose has been widely studied, but less is known about non-fatal overdose.

With this study, we aimed to:

- Find out what the rate of fatal and non-fatal overdose was among people who were prescribed OAT
- See whether there are particular aspects of their health, and the healthcare that they receive, that may put some patients at higher risk of overdose
- Examine whether buprenorphine might be a safer treatment option than methadone, with regard to the risk of overdose.

What is next? What is the potential impact of the work in this paper? What will change as a result of this paper (or the study it describes)?

Only a few patients receive OAT after hospitalisation due to overdose. Our study aims to inform clinicians, policymakers, and the public about healthcare services use, drug safety and the risk of overdose, comparing people who receive methadone with those receiving buprenorphine. Our findings will also help to guide future research studies.

Internationally, systems that monitor non-fatal overdoses are less developed compared to those for fatal overdoses, and hospitals can play an important role in monitoring and preventing these events. The evidence from this study might help to emphasise the value of these systems to policymakers.

We know that our study has some limitations. We were unable to include patients who received OAT from other treatment settings or people experiencing homelessness, and we could not examine how much the severity of opioid dependence impacted on overdose risk. Future research could examine the influence that specific health conditions may have on the risk of overdose, such as cardiovascular, respiratory, kidney or liver diseases.

Does this paper link in to a particular study / project? If so, please summarise the study and explain how this paper has improved understanding, or will move the study forward.

This is the first paper from a wider research project that uses electronic health records to look at the healthcare use and overdose risk among patients with opioid dependence.

Our research team is currently examining:

- If medicines such as antipsychotics, antidepressants, or hypnotics increase the risk of overdose for people who also receive OAT
- Whether people prescribed methadone make more or less frequent use of healthcare services than people prescribed buprenorphine
- Whether the costs of their healthcare differ and why.

Answering these questions will help us to highlight safety issues for patients who remain untreated and assess the potential impact of other prescribed medications whilst patients are also receiving OAT treatment.