

## Commentary on Pierce *et al.* (2016): Raising the bar of addiction treatment—first do no harm

*The significant risk of drug poisoning mortality associated with not being in treatment as well as receiving only out-patient psychotherapy necessitates that those with opioid use disorders be offered opioid-agonist medications, such as methadone or buprenorphine. Additionally, the significant increase in drug poisoning mortality associated with the discontinuation of treatment points to the need for overdose education, including dispensing the short-acting opioid antagonist, naloxone, prior to discharge from treatment.*

Mortality is the most important outcome of any medical intervention, and drug poisoning drives mortality for patients with opioid use disorders (OUD). The paper by Pierce *et al.* in this issue of *Addiction* demonstrates clearly that opioid agonist pharmacotherapy (OAP) reduces mortality due to drug poisoning, and raises serious concerns about the safety of out-patient psychotherapy alone as delivered currently.

In an impressive analysis of more than 150 000 patients, Pierce *et al.* found that patients with OUD have a high risk of death from drug poisoning if they are not in treatment of any kind or if they are receiving only psychosocial interventions. The protective effect of OAP is strong—a 50% reduction in the risk of fatal drug poisoning. The poor mortality outcomes of psychosocial services only, and those of no treatment services of any kind compared to OAP, raise two questions. First, is it ever appropriate to not offer OAP to a person with OUD? Secondly, should we reconsider the terminology of ‘medication-assisted treatment’ in favor of simply ‘treatment’ to express the centrality of pharmacotherapy in treating OUD?

No treatment for OUD is a panacea, as evidenced by the twofold increased mortality risk, compared to out-of-treatment people, in the 28 days following discharge from OAP and the startling fourfold increase following discharge from residential treatment not involving OAP. Given these findings, retaining people on OAP as long as it is improving their functioning is warranted, and developing strategies to reduce mortality after discharge from residential treatment is critical. Mortality outcomes post-treatment did not differ, regardless of whether or not a person was determined to have completed treatment successfully, a clear indication that opioid addiction is a chronic relapsing condition [1], and supporting the growing calls for take-home naloxone and overdose education for patients in treatment for OUD—particularly prior to discharge [2].

Interestingly, the authors found a decreased risk of death during the first 28 days on OAP. Given prior studies indicating increased risk of overdose during the initial

weeks of methadone [3], it is possible that methadone maintenance induction was implemented more safely than previously. Alternatively, this could be due to a limitation of the data in which the use of buprenorphine and methadone were not differentiated. Large-scale, population-level findings on buprenorphine are beginning to emerge, and suggest a lower risk of mortality during initiation when compared to methadone [4]. Pierce *et al.* indicate that they plan further studies to elucidate the overdose risks separately for methadone and buprenorphine, findings that will be valuable for the field.

If we consider OUD to be a medical disease, OAP is the gold standard treatment. Alternative treatments, including detoxification and out-patient counseling, may be preferred by some and should be available, with two important caveats. First, selection of non-medication treatments for OUD should be by informed choice, rather than due to an inability to access OAP. Secondly, overdose prevention services, including take-home naloxone, should be made available to mitigate the documented risk of these non-OAP therapies.

No patient would be forced to accept a medication for cardiovascular disease that increased mortality. People with substance use disorders deserve the same respect and quality of care.

### Disclaimer

The findings and conclusions in this paper are those of the authors and do not necessarily represent the views of the San Francisco Department of Public Health.

### Declaration of interests

None.

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### References

1. Goldstein A., Herrera J. Heroin addicts and methadone treatment in Albuquerque: a 22-year follow-up. *Drug Alcohol Depend* 1995; **40**: 139–50.

2. Walley A. Y., Doe-Simkins M., Quinn E., Pierce C., Xuan Z., Ozonoff A. Opioid overdose prevention with intranasal naloxone among people who take methadone. *J Subst Abuse Treat* 2013; **44**: 241–7.
3. Zador D., Sunjic S. Deaths in methadone maintenance treatment in New South Wales, Australia 1990–1995. *Addiction* 2000; **95**: 77–84.
4. Kimber J., Larney S., Hickman M., Randall D., Degenhardt L. Mortality risk of opioid substitution therapy with methadone versus buprenorphine: a retrospective cohort study. *Lancet Psychiatry* 2015; **2**: 901–8.