



Drug Overdoses Among the VADOC Community Corrections Population

VADOC Research - Forecast Unit

March 2023

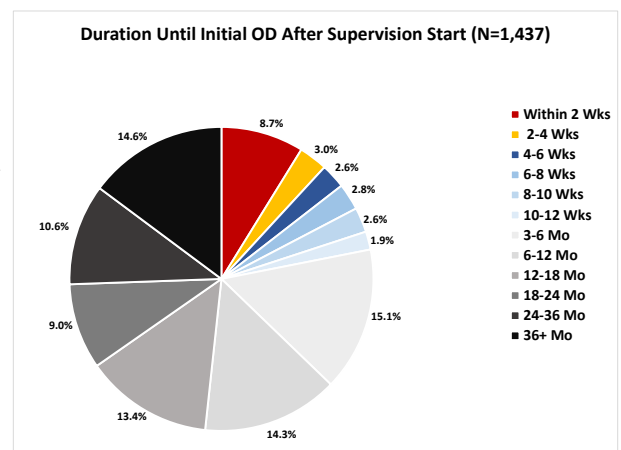
Background

Starting in the 1990's, there has been an increase in opioid related overdoses (ODs) in the general US population. Numerous studies suggest that this trend has been particularly prevalent among people with criminal justice involvement. Winkelman et al. (2018) found that in 2016, at least 20% of people with opioid use disorder had experienced some sort of criminal justice involvement in the prior year. During the post-release period of inmates, opioid ODs are the most common cause of death. Recent studies from different US states as well as international research data (Ranapurwala et al., 2018 / Waddel et al., 2020 / Binswanger et al., 2016) suggests that the all-cause risk of death, which is mainly driven by drug overdosing, is especially elevated within the first two weeks of an inmate's release. The risk for drug-related death remains significantly elevated up to the 4 weeks following release from prison (Merrall et al., 2010). Waddel et al. (2020) suggest that these trends are especially heightened among females who are released from incarceration. There is a variety of explanations for these developments but a disruption of social services, the re-introduction to problematic socio-cultural norms or behaviors that encourage drug use and a lowered drug tolerance due to incarceration (particularly for heroin) are frequently suggested as the main reasons (Joudrey et al. 2019).

VADOC Supervision – Initial Drug Overdose Data

From April 2016 until January 2023, VADOC's Community Overdose Tracking Survey recorded 1,437 individual supervisees who experienced at least one overdose since starting community supervision. Of these supervisees, 114 suffered two ODs overall, 20 suffered three ODs, 4 had four ODs and one supervisee had five ODs.

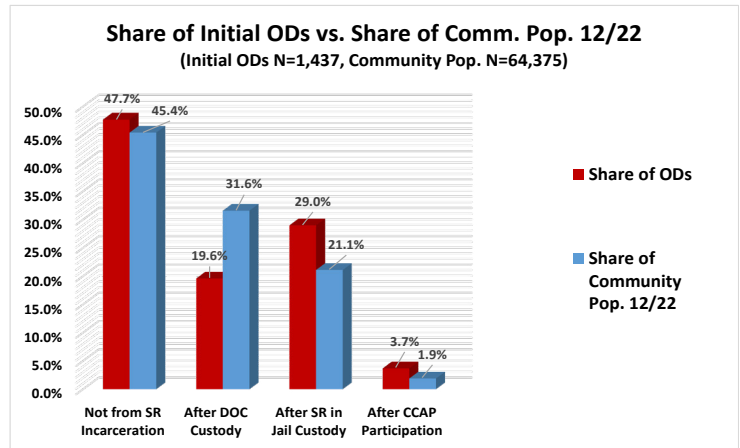
Duration Until Initial OD: Of the recorded initial overdoses, 125 (8.7%) occurred within the first two weeks of starting supervision, while an additional 43 (3%) occurred between two and four weeks. A comparison between these two week stretches suggests that a supervisee's chance to OD is markedly higher within the first two week stretch. This finding is in line with the general research data and is further confirmed when looking at the following two-week periods, which show an elevated but steady rate of ODs (4-6 Weeks: 2.6% (38); 6-8 Weeks: 2.8% (40); 8-10 Weeks: 2.6% (38)). After week ten the rate starts to slow (10-12 Weeks: 1.9% (27)). Within the periods of 3-6 Months and 6-12 Months, 15.1% (217) and 14.3% (206) of the ODs occurred, respectively. Within 12-18 Months after supervision start, 13.4% (192) of the ODs were suffered. Within 18-24 Months, 9% (130) of the ODs were suffered, while 10.6% (153) were suffered within 24-36 Months. The remaining 14.6% (210) were suffered past 36 Months. The average duration between supervision start and an OD occurring was about one and one-half years (76.3 weeks), with a median of just under one year (49 weeks). The quickest duration between supervision start and an OD occurring was less than a week, while the longest duration was 21.8 years after supervision start.



When comparing the severity of OD outcomes between the week groupings, there were no noticeable differences in death rates based on how early a supervisee’s first OD occurred after supervision start. The same is true for supervisees who were hospitalized in an inpatient setting or had an ER visit associated with their OD. Supervisees who suffer a subsequent OD tend to have had their initial OD earlier (19.8% within 6 weeks) compared to those that do not suffer a subsequent OD (13.8% within 6 weeks).

Supervisee Origin: Persons on VADOC community corrections supervision can be placed on supervision:

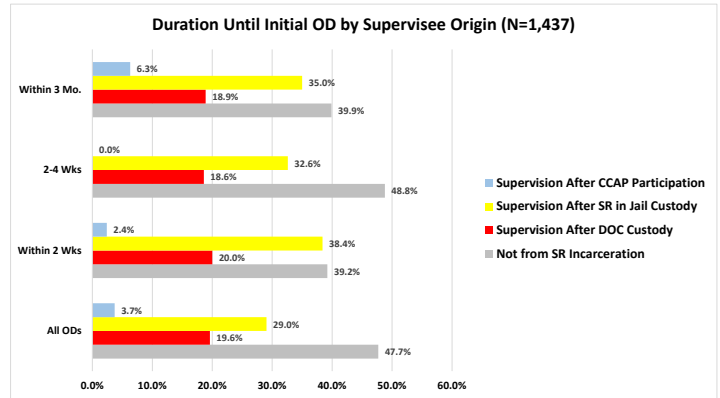
1) following a term of state responsible (SR) incarceration spent in a VADOC facility; 2) following a term of SR incarceration spent in a local/regional jail; 3) following a term of local responsible (LR) incarceration spent in a local/regional jail; 4) following participation in the Community Corrections Alternative Program (CCAP); or 5) after being sentenced directly to supervision by the courts¹. Of the Community Corrections population on 12/31/2022, 45.4% started supervision directly from the courts or following LR incarceration, 36.1% started supervision following DOC Custody, 21.1% started supervision following SR incarceration spent in a jail, and 1.9% started supervision after CCAP participation.



Using the VADOC Community Corrections population on December 31, 2022 as a comparison to look for proportionality, supervisees who started supervision following LR incarceration or directly from the courts suffer ODs at rates proportional to their share of the community corrections population (47.7% vs. 45.4%). Supervisees who started supervision following release from DOC Custody suffer ODs at a markedly lower rate (19.6% vs. 31.6%). Contrary to this, supervisees whose supervision followed SR incarceration in a local jail have ODs at higher rates (29.1% vs. 21.1%). CCAP participants also suffer ODs at a much higher rate (3.7% vs. 1.9%), yet this could be expected considering that the CCAP programming is set-up to specifically serve individuals with substance use disorder (SUD) needs. Overall, supervisees who come from LR incarceration or the courts suffer ODs at a slightly higher rate (47.7% vs. 45.4%) than supervisees coming from SR incarceration (52.3% vs. 54.6%).

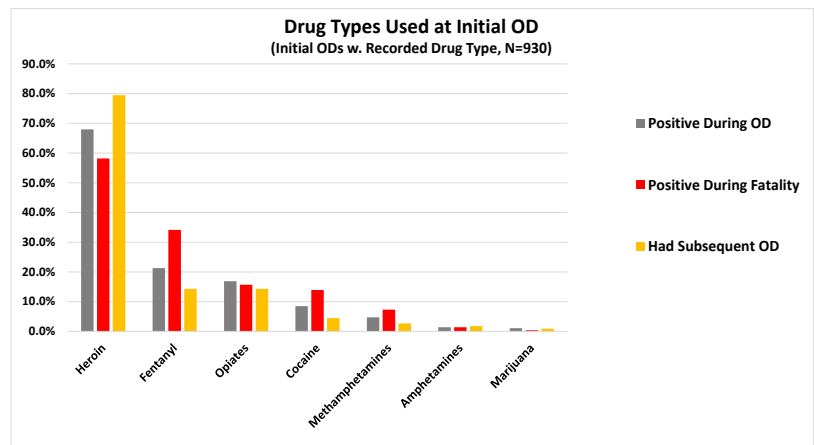
¹ The State Responsible (SR) inmate population is composed of persons convicted of one or more felony convictions and sentenced to one year or more of incarceration; SR inmates may be incarcerated in a VADOC Facility (SR in DOC Custody) or in a local/regional jail (SR in Jail). The Local Responsible (LR) inmate population is composed of: 1) persons convicted of just misdemeanor offenses, and 2) persons with felony conviction but sentenced to less than one year incarceration; LR inmates spend their entire incarceration in a local/regional jail; and VADOC does not have access to information about LR inmates. The [Community Corrections Alternative Program \(CCAP\)](#) is an alternative program to incarceration, giving probationers and parolees the opportunity to engage in treatment, education, vocational training, and employment in a structured setting in order to promote long lasting public safety.

Supervisees who started supervision following LR incarceration or directly from the courts suffered their ODs later compared to the SR groups (39.9% of ODs within 3 mo. vs. 47.9% of all ODs). This finding is most noticeable for the ODs suffered in the first two weeks (only 39.2%). The supervisees who started supervision following SR incarceration in a local jail, on the other hand, are strongly overrepresented in this early OD group (38.4% of ODs within 2 wks vs. 29% of all ODs). This trend continues in the 2-4 week group, where supervisees who started supervision following LR incarceration or directly from the courts still account for 32.6% of ODs. Supervisees coming from DOC Custody show no dramatic deviations in terms of the OD duration, while participants of CCAP tend to suffer their ODs at lower rates within the first 4 weeks (2.4% within 2 wks and 0% between 2-4 wks vs. 3.7% of all ODs).



When comparing the fatality rates of the initial ODs between the supervisee origin groupings, there was a slight overrepresentation of supervisees who started supervision following LR incarceration or directly from the courts (47.7% of all ODs vs. 52.1% of all OD deaths). No patterns were discernible between supervisee origin groups for hospitalizations in an inpatient setting or ER visits. In terms of subsequent ODs, the origin of a supervisee did not seem to have a noticeable effect.

Drug Types² : The data from the Community Overdose Tracking Survey follows the research data closely with Heroin being the drug that was both most commonly involved in the recorded initial ODs that listed a drug type (68%) and also being recorded in higher rates for fatal initial OD cases (58.2%). The rates for subsequent ODs (79.5%) among supervisees who had an initial Heroin OD were especially high. Fentanyl and Other Opiates also had higher high positive rates than other drug types with 21.3% and 16.9% respectively, as well as higher rates of subsequent ODs with 14.3% each. Fentanyl’s fatality rate stands out as the second highest at 34.1%. The fatality rate for Cocaine and Methamphetamines is also overrepresented when compared to their overall positivity rate (8.5% vs. 13.9% / 4.7% vs. 7.3%).



2 When recording overdose information, more than one drug can be selected. Multiple selections are shown in every category; although Heroin and Fentanyl are listed as separate variables in the Community OD Tracking Survey, they are officially classified as opioids.

Demographics: The demographic numbers recorded through the OD Tracking Survey do not show a gender discrepancy as Needham Waddell et al. (2020) suggested in their study. The share of female supervisees who have at least one recorded overdose (23.7%) is almost identical to the share of female supervisees in the community corrections population (22.7%). The supervisees who had recorded ODs were younger than the comparison population with the age cohorts 18-29 and 29-39 being overrepresented when compared to the reference population (26.5% vs. 19.1% and 38.2% vs. 35.1% respectively). The racial composition of supervisees captured by the survey showed clear deviations from our general comparison group, with white supervisees constituting a large majority with 69.5% compared to only 41% of white supervisees in our comparison group.

Main Takeaways:

- *VADOC's data resembles previous research findings with the two-week period after release producing the highest OD rates and a slightly elevated OD rate from Week 2-4.*
- *Supervisees coming from SR Incarceration in a Local Jail suffer ODs both at disproportionate rates and earlier than other supervisees. Other than that, supervisee origin did not seem to have strong effects.*
- *As described by previous research, Heroin stands out as being involved in more than two thirds of all OD cases in the VADOC community population - a much higher rate than other drug types. Heroin and Fentanyl account for most OD related fatalities.*
- *Based on our recorded initial ODs, we could not verify any gender discrepancy mentioned by previous research. White supervisees suffered ODs at disproportionate rates compared to the general community population.*

Citations:

- Binswanger, I. A., Stern, M. F., Yamashita, T. E., Mueller, S. R., Baggett, T. P., & Blatchford, P. J. (2016) Clinical risk factors for death after release from prison in Washington State: a nested case-control study. *Addiction*, 111(3), 499–510.
- Ranapurwala S.I., Shanahan M.E., Alexandridis A.A., Proescholdbell S.K., Naumann R.B., Edwards D. Jr., Marshall S.W. (2018) Opioid Overdose Mortality Among Former North Carolina Inmates: 2000-2015. *Am J Public Health*. 2018 Sep;108(9):1207.
- Waddell, E.N., Baker, R., Hartung, D.M. et al. (2020) Reducing overdose after release from incarceration (ROAR): study protocol for an intervention to reduce risk of fatal and non-fatal opioid overdose among women after release from prison. *Health Justice* 8, 18.
- Winkelman T.N., Chang V.W., Binswanger I.A. (2018) Health, Polysubstance Use, and Criminal Justice Involvement Among Adults With Varying Levels of Opioid Use. *JAMA Netw Open*. 2018;1(3):e180558.
- Merrall E.L.C., Kariminia A., Binswanger I.A., Hobbs M.S., Farrell M., Marsden J., Hutchinson S.J. & Bird S.M. (2010) Meta-analysis of drug-related deaths soon after release from prison. *Addiction*, 105, 1545–1554.

Virginia Department of
Corrections

Research - Forecast Unit

Dr. Tama Celi

Warren McGeehe

Philip Roehrs-Weist

Email: tama.celi@vadoc.virginia.gov