

Are We Nearing an Opioid Epidemic in Israel?

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Taub Center for Social Policy Studies in Israel

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Abstract

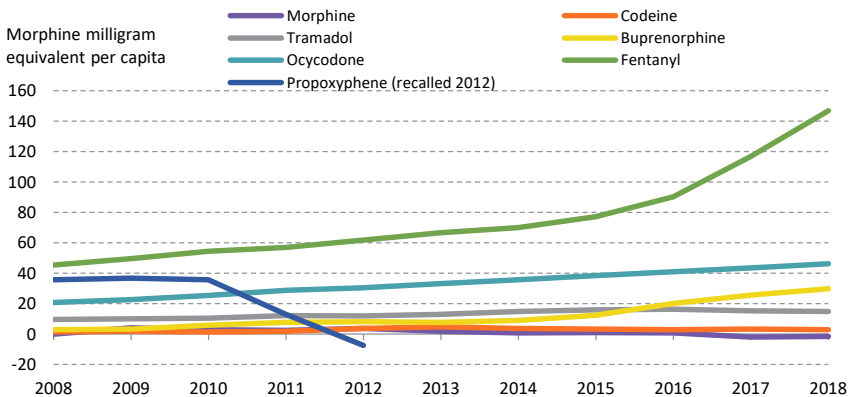
Addiction to opioid (narcotic) prescription pain medication carries with it a variety of negative effects some of which are life-threatening. Taking opioids over a long period of time increases tolerance levels and leads to the need for higher dosage levels — a process that increases the risk of overdose and death. A recent study found that Israel led the world in opioid prescriptions in 2020, due to sharp increases from 2013–2020. This increase tracks with increased reports of opioid misuse and overdose, especially from fentanyl, which is 50-times stronger than heroin. Israel's level of opioid prescriptions is similar to that of the United States and Canada in earlier years, which led them to an opioid epidemic. This suggests that Israel must take immediate action to reduce unwarranted opioid prescriptions and consumption, improve surveillance, ensure access to safer alternatives to pain management, improve linkages to care including mental health services and social supports, increase access to addiction and harm reduction services, and reduce stigma related to substance use and addiction, in order to prevent an increase in overdose deaths and other adverse consequences related to the misuse of opioids.

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Increased consumption of prescription opioids in Israel

Until 2011, Israel had a relatively low rate of consumption of prescription opioids, due to its low use of strong opioids (defined as morphine or stronger) such as oxycodone and fentanyl. At the time, Israel relied instead on opioid alternatives and on weaker opioids such as propoxyphene and codeine. In 2011, Israel banned the use of propoxyphene due to rare cardiological side effects at high doses, and, in 2014, placed limits on the use of codeine. During these years, there was an increase in the use of the strong opioids oxycodone and fentanyl, as can be seen in Figure 1, and, since 2014, there has been a sharp increase in the use of fentanyl (Miron et al., 2021a).

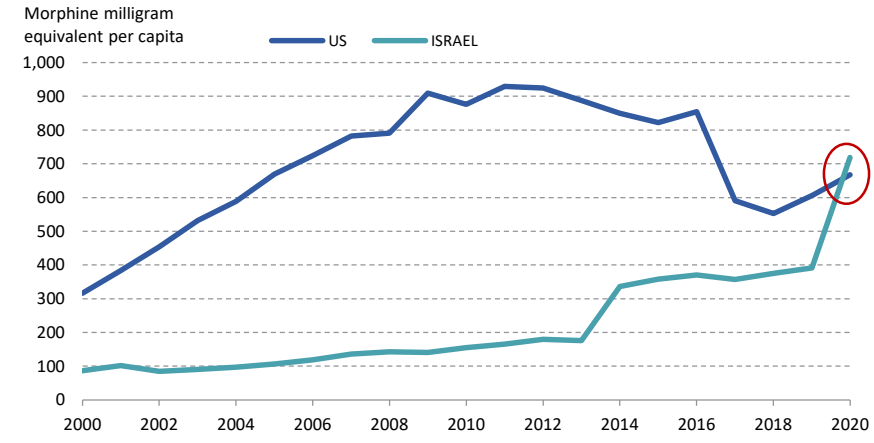
Figure 1. Consumption of prescription opioids in Clalit Health Services, by type



Source: Nadav Davidovitch, Yannai Kranzler, and Oren Miron, Taub Center, based on Miron et al., 2021a, fig. 1A

Following, an increase in fentanyl use, the rate of opioid consumption in Israel between 2012 and 2015 was the highest among the OECD countries (OECD, 2019). An analysis of data of the International Narcotics Control Board (INCB) found that since then, the situation has only worsened. Fentanyl consumption in Israel has continued to increase, and, in 2020, for the first time, Israel became the country with the highest consumption of prescription opioids in the world. In 2020, Israel surpassed the United States, whose increased opioid consumption during the 2000s led to its decade long opioid epidemic (about 80,000 deaths just in 2021). This fact should serve as a serious warning sign in Israel.

Figure 2. Opioid consumption in Israel and the United States

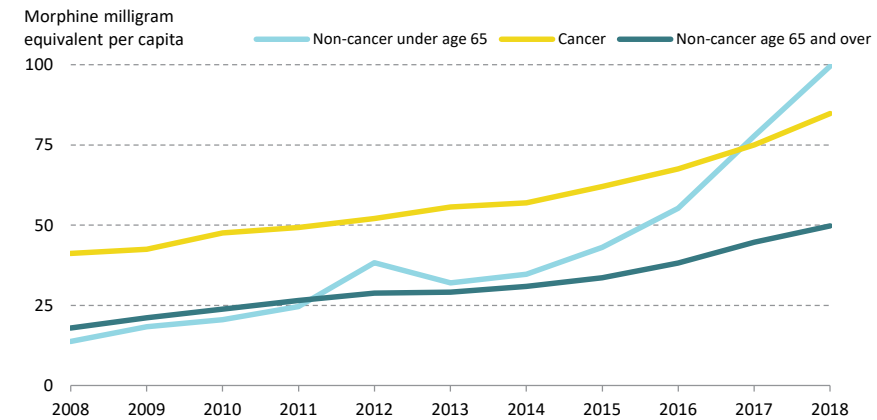


Source: Nadav Davidovitch, Yannai Kranzler, and Oren Miron, Taub Center | Data: INCB

Increased opioid dispensing to young, healthy, and poor Israelis

A study of outpatient opioid consumption identified that it mostly stemmed from fentanyl consumption by non-elderly and non-malignant patients (Figure 3) (Miron et al., 2021a).

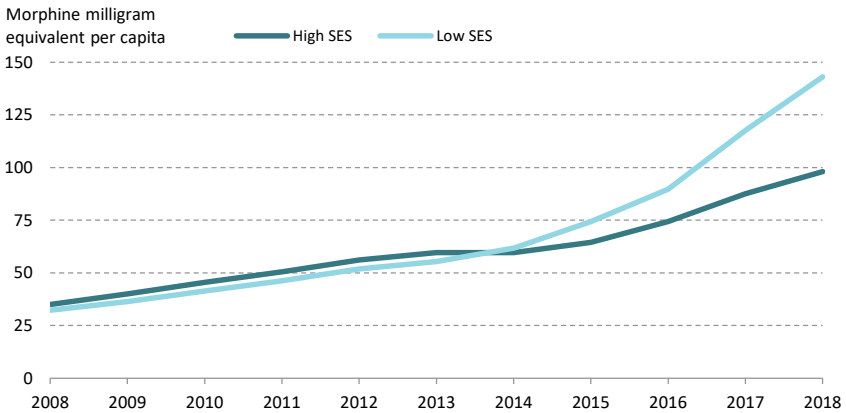
Figure 3. Opioid consumption in Clalit Health Services, by cancer status and age



Source: Nadav Davidovitch, Yannai Kranzler, and Oren Miron, Taub Center, based on Miron et al., 2021a, fig. 2A

The study also found that since 2014, most of the increase in opioid consumption stemmed from patients with a low socioeconomic status (Figure 4) (Miron et al., 2021a).

Figure 4. Opioid consumption in Clalit Health Services, by socioeconomic status

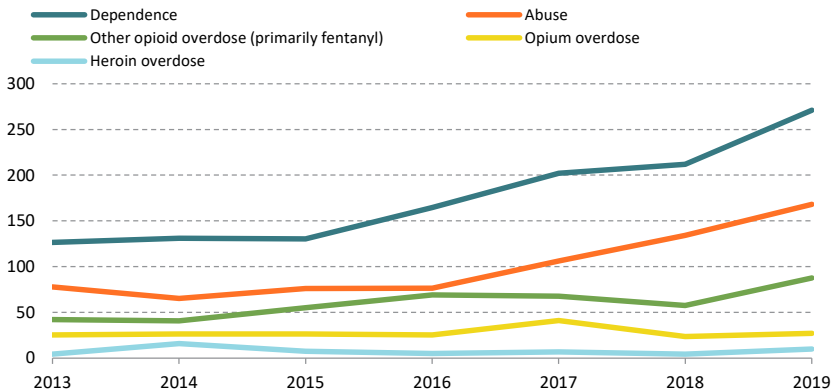


Source: Nadav Davidovitch, Yannai Kranzler, and Oren Miron, Taub Center, based on Miron et al., 2021a, fig. 2B

Increased opioid abuse and overdose

An analysis of opioid deaths in Israel found a decrease from 2009–2014 (Feingold et al., 2017). A more recent analysis, though, found that between 2015 and 2019 there was a rise, both in opioid dependence and abuse as well as opioid poisoning due to the use of opioids like fentanyl (but not the use of opium or heroin) (Miron et al., 2021b). These findings match police reports of increased abuse and deaths from fentanyl (Figure 5).

Figure 5. Diagnoses related to opioid abuse among Clalit Health Services patients



Note: Y-axis indicates the number of members with a given opioid-related diagnosis.

Source: Nadav Davidovitch, Yannai Kranzler, and Oren Miron, Taub Center, based on Miron et al., 2021a, fig. 1

Opioid use in Israel has not yet reached the epidemic proportions of the United States, Canada, and other countries, but the analysis of current Israeli data shows an alarming trend of increase opioid consumption. Due to religious restrictions, Israel has one of the lowest autopsy rates among developed countries and so there are difficulties in detecting opioid mortality. The limited availability of data on opioid morbidity and mortality could prevent detection of such an epidemic in time.

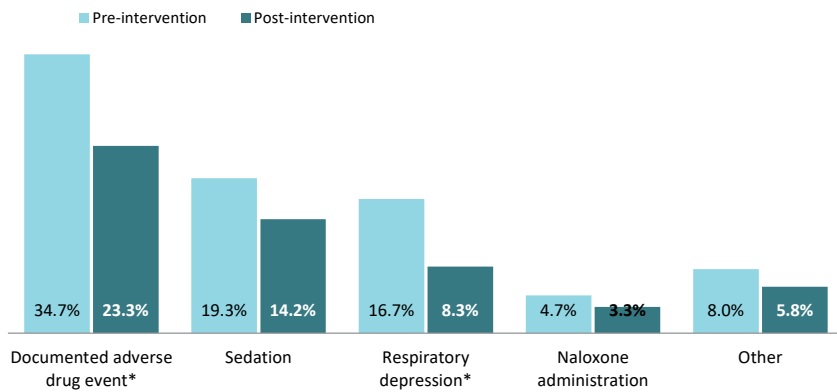
Hastening policy actions to prevent and treat opioid addiction

In 2003, the Ministry of Health recommended the prevention of unwarranted opioid prescription by using extensive electronic databases. This solution was not implemented because it required an elaborate and expensive solution. In 2016, the Israel Medical Association released recommendations to prevent unwarranted opioid prescription and treat opioid addiction, but these solutions were also not implemented, and were not integrated into clinical practice.

Learning from the implementation challenges of the 2003 and 2016 recommendations, we suggest a simple and cost-free improvement to the notification settings of the existing clinical prescription software “Clicks.” This

software is currently set to notify clinicians when they prescribe counter-indication for allergies. We recommend that the health funds add a notification for counter-indication fentanyl prescription. Fentanyl is indicated for patients who showed resistance to at least a 60 morphine milligram equivalent per day for a week. This definition is hard to calculate without an algorithm, which leads most physicians to prescribe fentanyl too soon, but a simple notification can reduce counter-indication prescription by half, along with the associated adverse effects (Figure 6).

Figure 6. Effect of fentanyl counter-indication notification on adverse effects



* Significance level: *p < 0.43.

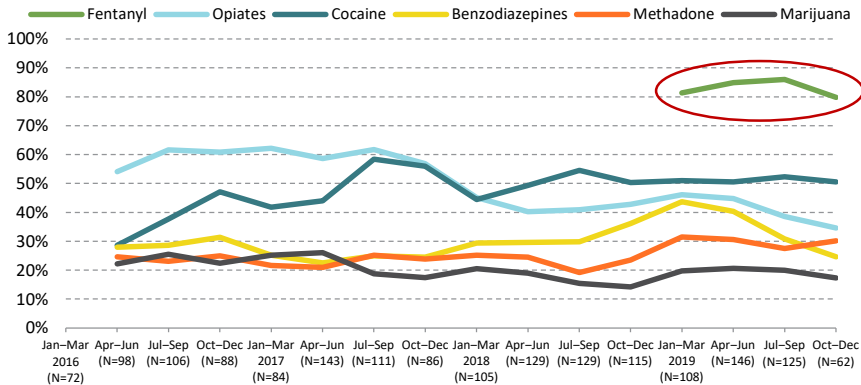
Source: Nadav Davidovitch, Yannai Kranzler, and Oren Miron, Taub Center, based on McEvoy et al., 2014, fig. 3

A similar notification could be used when a patient consumes fentanyl for non-malignant pain at dangerous levels. In such cases, we suggest gradually reducing the dose and/or replacing it with a safer addiction treatment medication such as suboxone.

Another policy action that should be promoted is the inclusion of fentanyl in the routine urine drug test panels. The test panels are only gradually updated to include new drugs, which leads to most tests still covering drugs that are less commonly prescribed today, such as barbiturates, and do not include fentanyl which has only become popular in recent years. When the United States started to add fentanyl to its testing panels they discovered it accounted for most of the overdoses. For example, between April and July 2019, over 80%

of the testing panels for fentanyl in Maryland were found to be positive (Figure 7). Adding fentanyl to the test kits can assist in correcting the underestimation of fentanyl addiction and overdose rates.

Figure 7. Drug test positivity in an emergency room in the United States



Source: Nadav Davidovitch, Yannai Kranzler, and Oren Miron, Taub Center, based on Dezman, 2020, fig. 725

Steps to prevent an opioid crisis

According to the Israel Center on Addiction and the Centers for Disease Control and Prevention in the United States, opioid addiction may lead to drowsiness, confusion, nausea, constipation, and respiratory depression, which can be life-threatening. Opioid abuse over the long term causes the body to develop tolerance levels and a need for an increased dosage beyond the original prescription level. Without appropriate responses in the healthcare system and a supportive social environment, this need may lead to misuse and the search for illicit drugs, which in turn increases the likelihood of overdose and death. On the other hand, immediately ceasing opioid use can also expose the body to difficult withdrawal symptoms.

Every good doctor seeks to help patients who are in pain, and opioids can, indeed, alleviate that pain. Drug manufacturers invest tremendous resources in marketing pain medications, while convincing professionals that they are safe, that their side effects are minimal or exaggerated, and that addiction is the fault of the patient. Nevertheless, when a patient begins to consume

pain medication based on the advice of a doctor they trust, without a pain management plan to limit their drug dependence, and without the support of family, friends, and the broader social and physical environment, they can easily be vulnerable to addiction. Instability, insufficient time and resources for treatment and recovery, as well as a lack of emotional and social support all increase the dangers of addiction and abuse, particularly among those from lower socioeconomic status groups. This can lead to a widening of health inequalities, especially among young, otherwise healthy populations that could have received better, safer care from the health system.

Preventing the devastating consequences of opioid use experienced in the United States, Canada, and elsewhere, depends on safer prescription practices, stronger surveillance, and better linkages to medical care and social supports. More than a decade into the overdose crises suffered abroad, the public health community has developed important insights and best practices to mitigate these risks. As fentanyl and other opioid prescription rates increase in Israel, the following recommendations provide a road map for protecting those most vulnerable to addiction and the adverse effects of opioid abuse:

- Improved surveillance both of opioid prescriptions and adverse outcomes such as opioid use disorder and overdoses, including publicly available, near-real time data related to prescription drug use. The availability of data also ensures that Israel's research community can do its part to monitor trends, evaluate policies and programs, identify vulnerabilities, facilitate partnerships, and make recommendations.
- Increasing the number of autopsies in the case of suspected deaths due to substance abuse and the formation of a mortality review committee. The availability of electronic health records places Israel at an advantage over the United States for monitoring patients' prescription and medical histories, which must be utilized to inform decision making, especially for those most vulnerable to addiction. On the other hand, the formerly noted low rate of autopsies in Israel limits the ability to understand the breadth of overdose deaths, which can deceive decision makers into underestimating the problem. Policy makers can explore potential solutions such as increased justification for autopsies in all cases of suspected overdose, or pilot methods such as inter-agency mortality review committees to better understand the causes of suspected deaths related to substance use.

- Safer prescription practices, including appropriate use of fentanyl substitutes and alternatives for opiate-based medications, particularly among high-risk patients, through, for instance, utilization of prescription drug monitoring systems to inform provider decision makers in the hospital, community clinic, and pharmacy, as well as educators.
- Patient and family-member education regarding the risks of addiction at the point of prescription and dispensing, treatment plans that include tapering off opioid use at a rate that best serves the patient, and mandatory patient check-ins by their medical providers over the course of the consumption period to monitor their medication use.
- Case management to address mental health and other needs such as food insecurity, family support, and stable housing for recovery. Each health fund in Israel has a social support unit staffed by licensed social workers, which can be critical in helping facilitate the support system needed to address trauma and social instability associated with increased vulnerability to addiction, opioid use disorder, and overdose.
- Trauma-informed health services as well as linkages to mental healthcare and other social supports for individuals who receive opioid prescriptions are critical toward mitigating the risks of opioid consumption, especially for groups at increased risk such as pregnant individuals, people experiencing homelessness, individuals without support at home, those with a prior history of drug use, and others.

All of these steps, alongside public education on the risks of drug use and addiction, can contribute to reducing the stigma and encourage the use of alternate treatments.

Conclusion

Israel has become the world leader in consumption of prescription opioids and has a large amount of unwarranted fentanyl prescription to young, healthy, and poor adults. This in turn has led to an increase in fentanyl misuse, addiction, and overdose, which are likely underestimated. Israel can learn from effective practices developed in countries that experienced the worst of the opioid crisis, like the United States and Canada to establish safer prescription protocols, immediately reduce rates of unwarranted fentanyl prescriptions, increase rehabilitation treatments and testing, solidify inter-agency collaboration, improve surveillance, and provide stronger linkages to social supports. Doing so will enable Israel to reduce the devastating consequences of increased opioid abuse and overdose, and provide better care to those who need it most.

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