ALICE RAP Policy Paper Series

Policy Brief 4.

Prescription opioids and public health in the European Union

AR Policy Paper 4

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ALICE RAP (Addictions and Lifestyles in Contemporary Europe – Reframing Addictions Project) is the first major Europe wide project studying addictions as a whole and their influence on wealth, health and stealth. The aim of this five year, €10 million, co-financed EU project is to stimulate and feed scientific evidence into a comprehensive public dialogue and debate on current and alternative approaches to addictions.

The AR Policy Paper series aims to provide succinct evidence briefs for decision-makers and advocates working on key addiction-related issues. The fourth paper in the series focuses on public health challenges arising from prescription opioid dispensing regulations and use.

This AR policy paper outlines the key issues for policy-makers considering the possible risks of increasing opioid prescription and how to balance the need for adequate medical control of pain against possible problematic non-medical use of these substances. Three key considerations for evidence-based policy are highlighted in conclusion.

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Use and non-medical use of prescription opioids

Medically, prescription opioids (POs) are used as analgesics to treat severe pain (fentanyl, hydromorphone, methadone, morphine and pethidine), moderate to severe pain (buprenorphine and oxycodone), and mild to moderate pain (codeine, dihydrocodeine and dextropropoxyphene), as well as to induce or supplement anaesthesia (fentanyl and fentanyl analogues) (1). Specifically, cancer pain has been a target for pharmacotherapeutic treatment with POs, although the evidence of effectiveness is mixed for most POs (2).[1] The evidence for treatment of chronic non-cancer pain is similarly mixed (4), but weak evidence suggests that patients who are able to continue taking POs in the long-term experience clinically significant pain relief. Another medical field of use is methadone maintenance treatment, an effective and currently the most widely used form of treatment for opioid dependence (5).[2]

Non-medical prescription opioid use (NMPOU) is any use that is not prescribed or in a manner other than that intended by the prescriber, including but not limited to cases where medication is taken longer or in higher doses as prescribed, or POs prescribed for other people are taken. Also included are, of course, all situations, where prescriptions are obtained under false premises (including "double doctoring"), or the medication is obtained outside the medical system (through the street market for diverted drugs or the internet).[3]

Globally, medical PO use has more than tripled since 1990, with most of this increase in high income countries, and in particular the US, which has about 4.5 times the level of use of the European Union average (EU) (1). Within the EU, even though medical PO use has

[1] It has to be mentioned here that randomised trials in cancer settings are difficult to perform and justify. As a consequence, there is a paucity of long-term trials and the evidence is scarce, and most underlying trials would be categorized as "low quality" based on Cochrane criteria (see also the comments in (3) on discussing oral morphine for treatment of cancer pain in the last Cochrane Review on this topic).

[2] See http://www.emcdda.europa.eu/best-practice/treatment/opioid-users

[3] For definitions of NMPOU, see also Martins and colleagues (6). However, a number of different terms are used interchangeably in the literature including 'abuse', 'illicit use', 'misuse', 'unsanctioned use' or 'extramedical use' (7). There is little consensus around the terminology (8).

been markedly increasing over time in all countries, there are still manifold differences in prescribing levels between countries. There is also a concern that in-pain populations in some countries may be underserved (9, 10).

There is a major public health concern that research, mostly conducted in North America, has shown strong associations between the level of medical PO use and non-medical use (NMPOU), and even stronger associations between medical PO use and morbidity and mortality outcomes as seen in data from emergency room visits, treatment admissions for PO use disorders, overdose mortality (11-15). The higher the level of medical use, the higher the level of non-medical use and PO-attributable morbidity and mortality, most often with correlations between 0.7 and 0.95 indicating a very close relationship. The exact pathways into NMPOU are not clear: a minority of people with PO prescriptions may become dependent and initiate NMPOU[4], POs may get diverted from the medical system und misused, there may be organised crime becoming involved in the street drug market of POs. In other words, the associations are not likely to be fully explained solely by the outcomes of patients being prescribed POs.

However, there are clear indications that availability of POs at the population level determines a number of negative outcomes such as morbidity and mortality. These outcomes have public health relevance; for example, in the US, the number of PO-related overdose deaths in 2007 started to outnumber, and now markedly exceeds, the deaths associated with heroin and cocaine put together[5].

Most of this research has been undertaken in North America, where the level of PO use is the highest in the world (1). For the EU, the EMCDDA has found some of the same associations with NMPOU, but on a lower level (18), as well as some other indications of emerging problems with PO (19-21)). Another example of PO-related public health risk comes from the EU research consortium DRUID: They demonstrated that medical use of opioids increases the risk of serious injury or fatal accidents in traffic by a factor 4-10.[6] Overall, the EU research base on NMPOU and associations between medical PO use and morbidity and mortality is still small.

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[4] See the review of Fishbain and colleagues (16) on the risk of PO use disorders abuse in patients. See also the study of Bohnert and colleagues (17), which showed that a small minority of patients, especially those with high prescriptions, experienced fatal overdoses. However, overdose deaths related to PO are not necessarily those of patients in the medical system.

[5] See http://www.drugabuse.gov/sites/default/files/rrprescription.pdf and http://www.cdc.gov/homeandrecreationalsafety/pdf/poison-issue-brief.pdf

[6] See http://www.druid-project.eu/cln_031/nn_1109574/Druid/EN/Dissemination/downloads_and_links/Final_Report,templateId=raw,property=publicationFile.pdf/Final_Report.pdf

Policy considerations

It seems that the EU countries may be at a crucial point with respect to policies regulating prescription of opioids and public health:

1) Better research is necessary to understand the relationships described above between the availability of PO and NMPOU and related harm to health (especially ER visits and overdose mortality) in the EU (22), as well as how this relationships may vary between EU countries (23). Given the increasing PO dispensing levels in EU countries, it may be important to monitor potential negative public health consequences.

2) Medications such as prescription opioids should not only be considered from a purely medical perspective of pain or other treatment (even though there are some doubts about this use as well; see above). We are not dealing solely with side-effects for the patients involved, but also with public health side effects for society as a whole, such as potential diversion of POs and subsequent overdose mortality. Clearly, the availability of POs in any European country has not reached the level seen in the US, but dispensing levels have been increasing, and the link to negative consequences should be kept in mind. We should not risk increases in overdose mortality to the levels seen in some jurisdictions in North America.

3) Public health strategies should be informed by research or policy trials that provide information about how to limit inappropriate use, on the one hand, without making prescription opioids unavailable or extremely difficult to obtain for patients who benefit from them, on the other. Examples from North America include studies of prescription monitoring programmes, the impact of tamper-proof opioid products on inappropriate use, or delisting (i.e., no longer reimbursing the medication by the single payer, as practised in Ontario) of selected opioids. Obviously, policy implementations need to take into consideration the local environment and laws or regulations on dispensing opioids, meaning that we would need comparative European research into best practices to limit inappropriate use as well European policy trials. The outcomes of these policies can and should be considered in the context of European decision-making.

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