

Study reveals decline in long-term prescription opioid use after hospital or ED visit

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A large, linked data study has detailed the scale of prescription opioid use—such as oxycodone, morphine, or tramadol—after a hospital or emergency department (ED) visit, while giving insight into how often people then go onto long-term and potentially problematic use of these medicines in NSW.

The study from UNSW's National Drug & Alcohol Research Center (NDARC) and the Medicines Intelligence Center of Research Excellence found the proportion of hospital or ED visits where people started opioids and remained on them long-term was small and declined over the 2014—2020 period.

"Australia has looked on with concern at the widespread harm from prescription [opioid](#) painkillers in the U.S.," says pharmacist and epidemiologist Kendal Chidwick, lead author of the [study](#) which was published May 27 in the *British Journal of Clinical Pharmacology*.

"While these medicines are an important tool for reducing moderate to [severe pain](#) in the short-term, they have significant side effects.

"Our analysis suggests that efforts to reduce opioid use in Australia have been successful, in terms of post-hospital use."

The researchers used confidentialized health data to follow all hospitalizations and ED visits in NSW between 2014 and 2020, focusing on people who had not used prescription opioids in the year before.

Long-term use was defined as 90 or more days of continuous opioid use at some time during the period between 90 to 270 days after starting.

The study is the largest of its kind in Australia to date. As the state with the largest population, results for NSW are likely representative of Australia-wide trends.

Efforts to reduce opioid use are paying off

Until recently, Australia's use of prescription opioids was increasing, and with it worries about dependence, overdose and death.

"Previous research suggests that about half of all prescription opioids are started after a hospital or ED visit," says co-author Dr. Malcolm Gillies, who is a biostatistician from the Medicines Intelligence Research Program at UNSW. "That can go on to [long-term use](#)."

Over the last few years, Australia has deployed a range of measures to reduce opioid use and related harms. Measures have included smaller pack sizes, restricting repeat dispensings, and changing low-dose codeine to prescription-only, alongside real-time prescription monitoring and increasing implementation of opioid stewardship programs in hospitals.

"It appears that the tide has changed in Australia, with reductions in opioid use after hospital admissions," says Dr. Gillies.

"Our study revealed that both starting an opioid after a hospital or ED visit, and remaining on it long-term, declined over time, which is good news."

From 2014 to 2020, overall opioid initiations decreased by 16%, from 8.7% to 7.2% of hospital/ED admissions, and long-term opioid use decreased by 33%, from 1.3% to 0.8%.

"Ensuring that each patient has their pain effectively managed while minimizing harms is key when it comes to opioid prescribing," says Dr. Gillies.

"Looking at the bigger picture, best-practice care of chronic pain will mean increasing access to coordinated multidisciplinary pain services."

Long-term use lower than expected

The study also found that 1 in 4 people admitted for trauma, such as a physical injury or road accident, started an opioid, and 2.3% of them went on to long-term use. Traumatic injuries can result in chronic pain in some patients, which might lead to long-term opioid use. This rate of long-term use is somewhat lower than reported in previous Australian research.

One in 15 people attending ED started an opioid and 1% of them went on to long-term use. This is lower than estimates from the U.S.

"It's reassuring to have evidence, at the population level, that Australia's rates of long-term prescription opioid use following hospital and ED visits are low compared to some other countries," says Chidwick.

"Our results highlight variation by patient demographic and admission characteristics. Continued opioid stewardship is critical to ensuring the balance of benefits and harms."

Long-term use of opioids was low after Cesarean sections and planned surgeries such as hip replacements or tonsillectomies, despite high rates of starting an opioid among these groups, mostly for managing post-operative pain.

One in five obstetric admissions involving surgery and 1 in 10 planned surgical admissions resulted in an opioid dispensing; however, less than 1% of these progressed to long-term use.

Quality use of medicines vital

In 2022, Australia released its [first national clinical care standard on](#)

[Analgesic Stewardship in Acute Pain](#). Before this, individual stewardship programs varied across hospitals.

"Insights from such large studies like ours will inform stewardship programs and promote quality prescribing practices," says co-author Professor Sallie Pearson, pharmacoepidemiologist at the School of Population Health at UNSW.

"Linking health data across systems enables large sample sizes over long time frames and reveals the 'real world' use of medicines in Australia," says Prof. Pearson.

More information: Malcolm B. Gillies et al, Long-term prescribed opioid use after hospitalization or emergency department presentation among opioid naïve adults (2014–2020)—A population-based descriptive cohort study, *British Journal of Clinical Pharmacology* (2024). [DOI: 10.1111/bcp.16093](https://doi.org/10.1111/bcp.16093)

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