

# Transitioning to intrathecal drug delivery systems boosts discontinuation of systemic opioids

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## Video Abstract

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# Abstract

As the opioid epidemic wages on, few solutions to the global problem have proven effective. Efforts to more heavily control how opioids are prescribed have not only created illicit markets for the drugs, but they've also made it difficult for the millions living with chronic pain. So if targeting access is problematic, where could the focus lie? According to a new study, one option is evaluating the method of delivery. Data showed that switching patients from systemic opioids, including opioids delivered orally or transdermally, to medications administered by an intrathecal drug delivery system reduced overall systemic opioid dosing levels. This was also correlated with a percentage of patients discontinuing systemic opioids altogether and thousands of dollars of savings in medical costs. The authors of the study reviewed healthcare claims data for 631 patients with an intrathecal drug delivery system for chronic non-cancer pain. The goal was to determine how intrathecal administration would affect utilization of systemic opioids, both leading up to and after implantation with an intrathecal drug delivery device. Results showed that 43.3% of patients discontinued systemic opioid therapy entirely. And 81.5% of all patients, regardless of whether they discontinued therapy, experienced a decrease in average daily drug dose. The findings agree with previously reported data for patients whose pain was managed with an intrathecal drug delivery system. But unlike those studies, the current study also looked at dosing levels over the entire assessment period. That enabled the authors to zero in more closely on drug-use behavior leading up to and following device implantation. Their findings revealed that patients on low doses of systemic opioids prior to implantation were twice as likely to discontinue systemic opioid than patients on high doses prior to starting therapy. The observation makes a strong case for weaning patients off systemic opioids before starting intrathecal drug delivery therapy to maximize the probability that they discontinue systemic opioids completely. The team's cost analysis also points to the financial benefits to be gained from eliminating oral and transdermal opioids. Mean annual payer costs dropped by \$11,115 per patient for those who discontinued systemic opioids versus those who stayed on them, an overall cost savings of 29%. The results should be interpreted with some caution. Insurance claims data, after all, paints a grainy picture of drug use among patients, who might not use prescribed medication as directed. And such data doesn't capture patient-reported outcomes such as pain severity and other functional measures. Still, as the number of casualties of the opioid epidemic continues to grow, the findings offer much-needed guidance, pointing to the value of promising treatment modalities.