

# Trends in New E-Prescriptions for Opioids, Non-Opioids, and Opioid Antagonists in the United States, 2019 - 2023

Joud Roufael, MPH<sup>1</sup>, Sharon Kim, MPP<sup>1</sup>, Shannon Reidt, PharmD, MPH, MS<sup>2</sup>

1. Research and Analytics Innovation, Surescripts, LLC; 2. Strategy and Innovation, Surescripts, LLC;  
2550 S Clark St 10<sup>th</sup> Floor, Arlington, VA 22202, USA

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## BACKGROUND

The opioid epidemic in the United States impacts millions of individuals annually. Prescription opioids are involved in the risk of opioid misuse, opioid use disorders, and opioid-related overdose and deaths. At the same time, the practice of opioid prescribing is part of this public health issue that impacts patient outcomes and healthcare costs, leading hospital systems to seek alternative treatment options.

## OBJECTIVES

In this study, we demonstrate the prescribing trends of new electronic prescriptions (e-prescriptions) for opioid drugs and non-opioid alternatives during 2019 - 2023. Additionally, we describe the trends in prescribing of opioid use disorder (OUD) and opioid overdose via opioid antagonists during the same period.

## METHODS

Data was retrieved from Surescripts, a national health network that connects providers, Electronic Health Records (EHRs), pharmacy benefit managers (PBMs), pharmacies, and other health technology vendors in the United States. In 2023, prescribers used the Surescripts network to send 2.5 billion e-prescriptions. The World Health Organization Anatomical Therapeutic Chemical (ATC) Classification was used to define therapeutic classes of pain medications. We identified new e-prescriptions of opioid and non-opioid pain medications, each comprised of ‘analgesics’ and ‘anti-inflammatory and antirheumatic products.’ We also included e-prescriptions of opioid antagonist medications e.g., Naloxone. We excluded any medications that are FDA approved to treat colds and migraines, which we identified by using their generic name.

## RESULTS

Between 2019 and 2023, the average annual new e-prescriptions for opioid analgesic and anti-inflammatory medications ordered by prescribers in the US was 85 million. The number of new e-prescriptions for opioids grew by 57.1% from 2019 to 2020, 26.0%, 7.8% and 5.1% from 2020-2021, 2021-2022, 2022-2023, respectively. Opioid analgesics accounted for 99.8% to 99.9% of all opioid pain medications e-prescribed from 2019 to 2023. Meanwhile, between 2019 and 2023, the average annual new e-prescriptions for non-opioid analgesic and anti-inflammatory medications ordered by prescribers was 90 million e-prescriptions. The number of new e-prescriptions for non-opioids increased by only 2.2% from 2019 to 2020, and then grew by 12.9%, 13.2%, and 9.3% from 2020-2021, 2021-2022, and 2022-2023, respectively. During this period, non-opioid analgesics accounted for 23.1%, 27.7%, 28.2%, 28.8 and 28.5% of all non-opioid pain medications e-prescribed in 2019, 2020, 2021, 2022, and 2023, respectively. During the study period, the average annual new e-prescriptions for opioid antagonists ordered by prescribers was 14 million e-prescriptions. New e-prescriptions for opioid antagonists grew by 63.9%, 29.3%, 10.7%, and 5.7% from 2019-2020, 2020-2021, 2021-2022, 2022-2023, respectively.

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Figure 1. New E-Prescriptions for Opioids by Therapeutic Class, 2019 – 2023

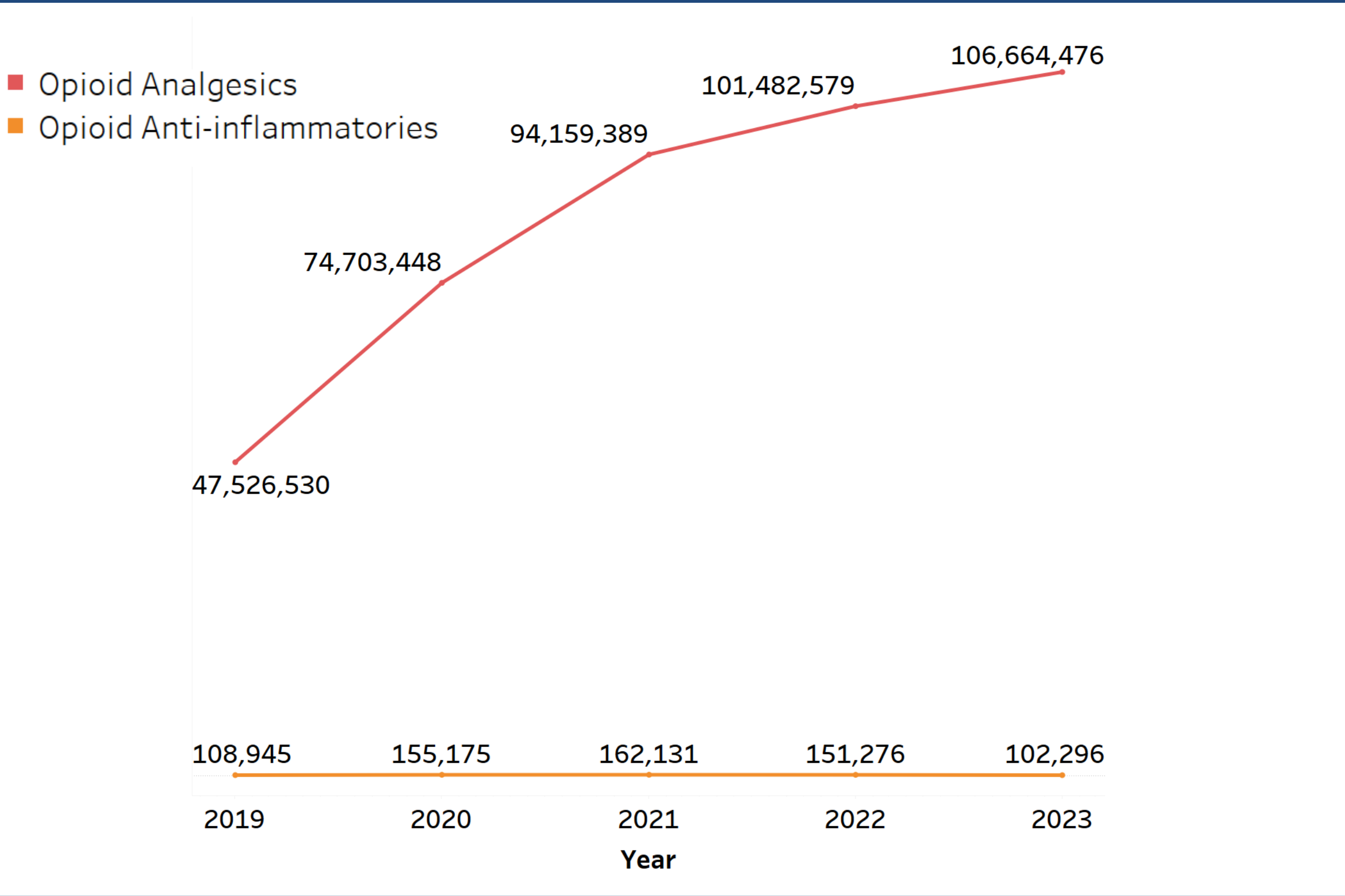


Figure 2. New E-Prescriptions for Non-opioids by Therapeutic Class, 2019 – 2023

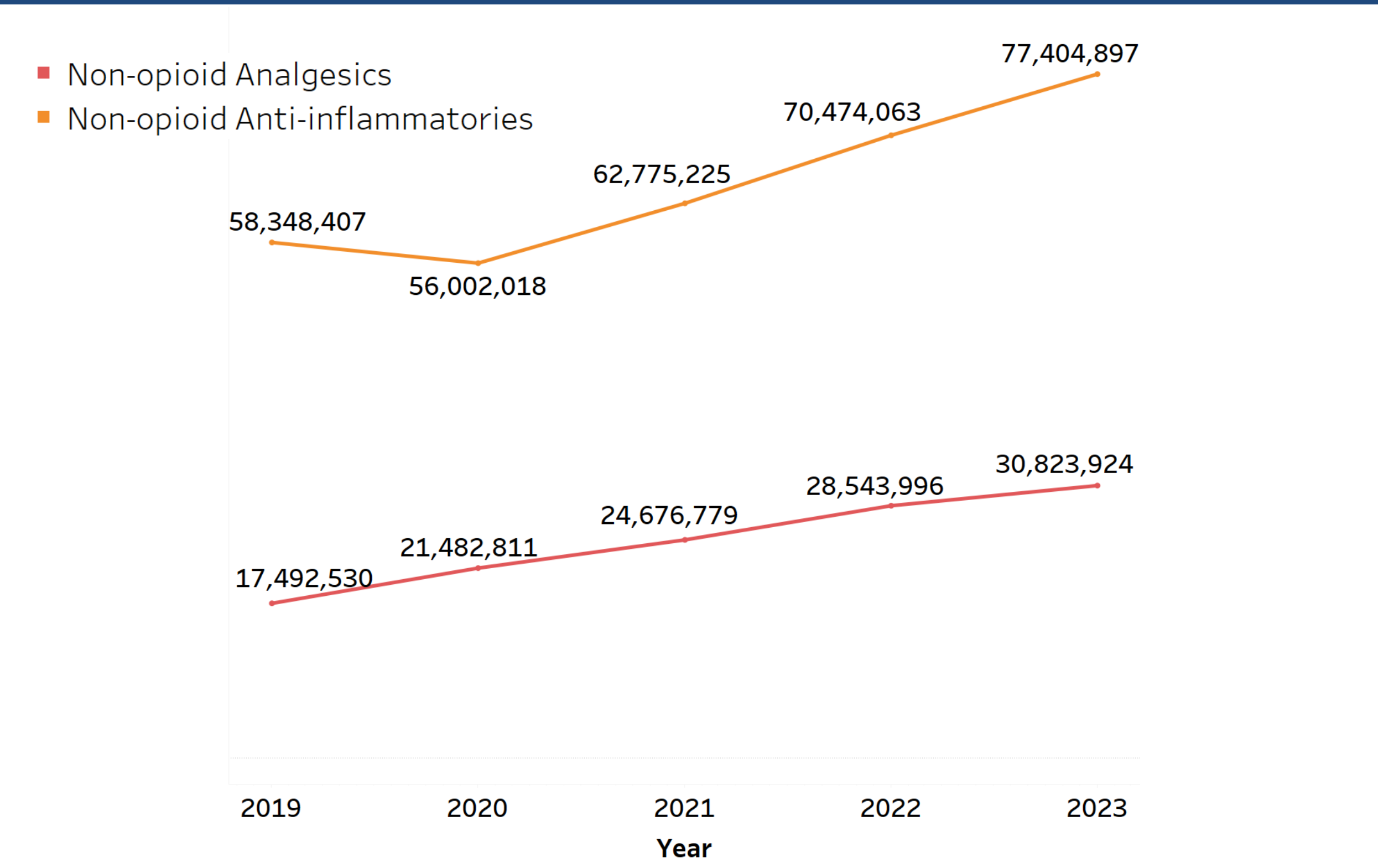
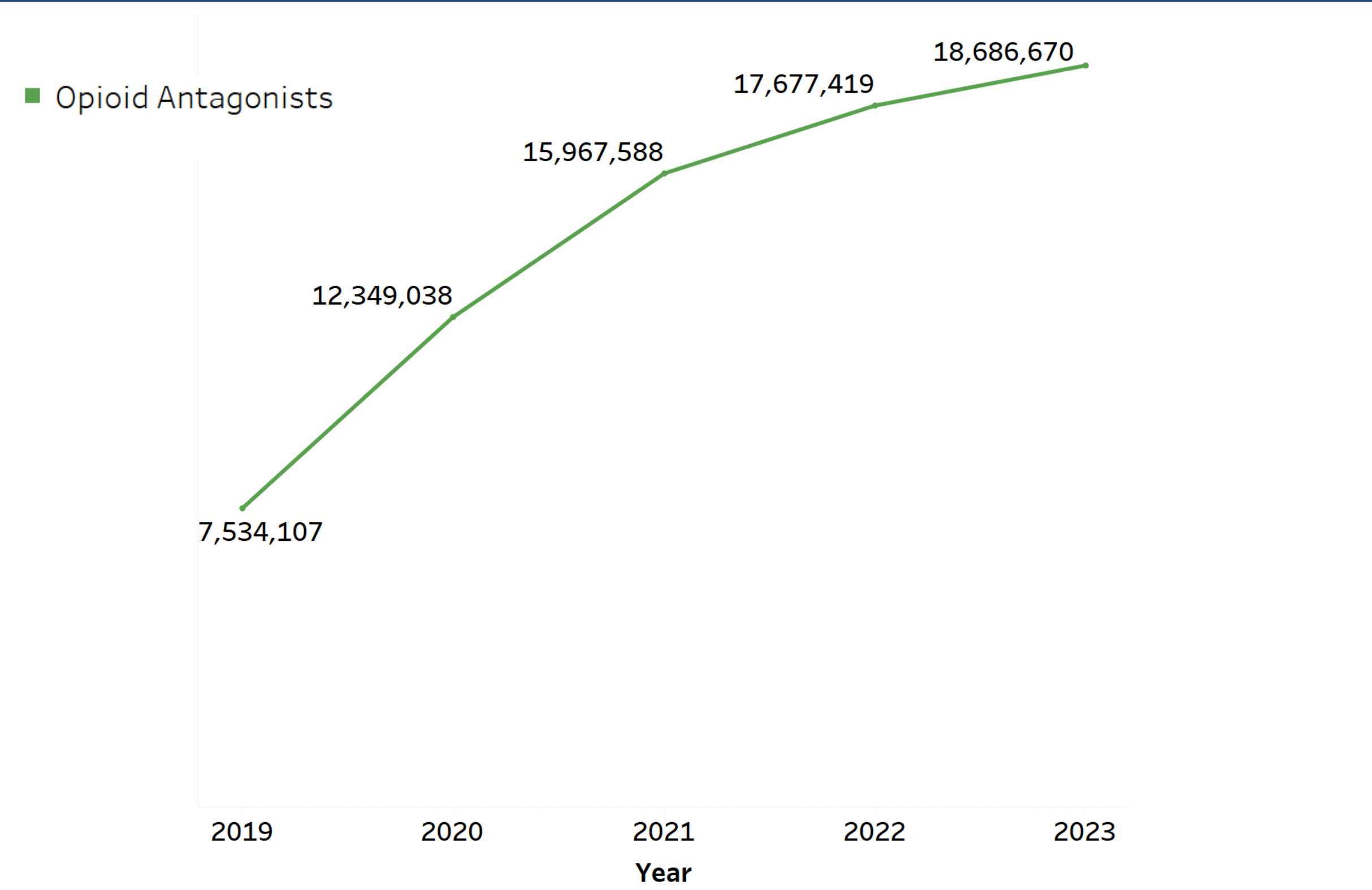


Figure 3. New E-Prescriptions for Opioid Antagonists, 2019 – 2023



## DISCLOSURES

Authors of this presentation have no financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation.

Table 1. Year-over-year Change in New E-Prescriptions by Medication Type

Medication Type	2019-2020	2020-2021	2021-2022	2022-2023
Opioid Antagonists	63.9%	29.3%	10.7%	5.7%
Opioid Analgesics	57.2%	26.0%	7.8%	5.1%
Opioid Anti-Inflammatories	42.4%	4.5%	-6.7%	-32.4%
Opioid Medications (Total)	57.1%	26.0%	7.8%	5.1%
Non-Opioid Analgesics	22.8%	14.9%	15.7%	8.0%
Non-Opioid Anti-Inflammatories	-4.0%	12.1%	12.3%	9.8%
Non-Opioid Medications (Total)	2.2%	12.9%	13.2%	9.3%

Data Source for Figures and Tables: Surescripts, 2019-2023

## CONCLUSIONS

Although non-opioid e-prescribing volumes were higher than that of opioid e-prescribing in 2019, e-prescribing volumes for each medication type were more similar in magnitude in 2023 due to the relatively higher year-over-year growth rate in opioid e-prescribing from 2019 to 2023.

The year-over-year growth in opioid and opioid antagonist e-prescribing slowed from 2019 to 2023. Notably, the similar onset of prescribing of opioid antagonists could be an indicator of improvement in preventive care practices due to policies and regulations around prescribing opioids.

E-prescribing of non-opioid analgesics increased markedly from 2019 to 2020, but growth slowed in subsequent years in a similar manner to opioids. Non-opioid anti-inflammatory e-prescribing decreased from 2019 to 2020, driving down the overall 2019 to 2020 growth in non-opioid e-prescribing.

Public health efforts such as clinical practice guidelines, controlled substance policies, and adoption of prescribing technology may have been some factors that contributed to the shift in these trends.

## IMPLICATIONS

The opioid epidemic is a significant public health crisis. It highlights the importance of ongoing evidence-based prescribing practices, along with the adoption of prescribing technology and policies that promote appropriate prescribing of controlled substances. Continued support for policies that focus on non-opioid alternatives are also necessary to address the growing challenges faced by public health and the impact of drugs shortages on the population. Future research is warranted to further understand the state of opioid prescribing geographically and explore the trends in prescribing by specialty, as well as evaluate the relationship of federal and state regulations on the outcome of prescribing and the prevalence of OUD and opioid overdose.

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