

Co-prescription of Naloxone Among Patients Prescribed Opioids After Inpatient Stays

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INTRODUCTION

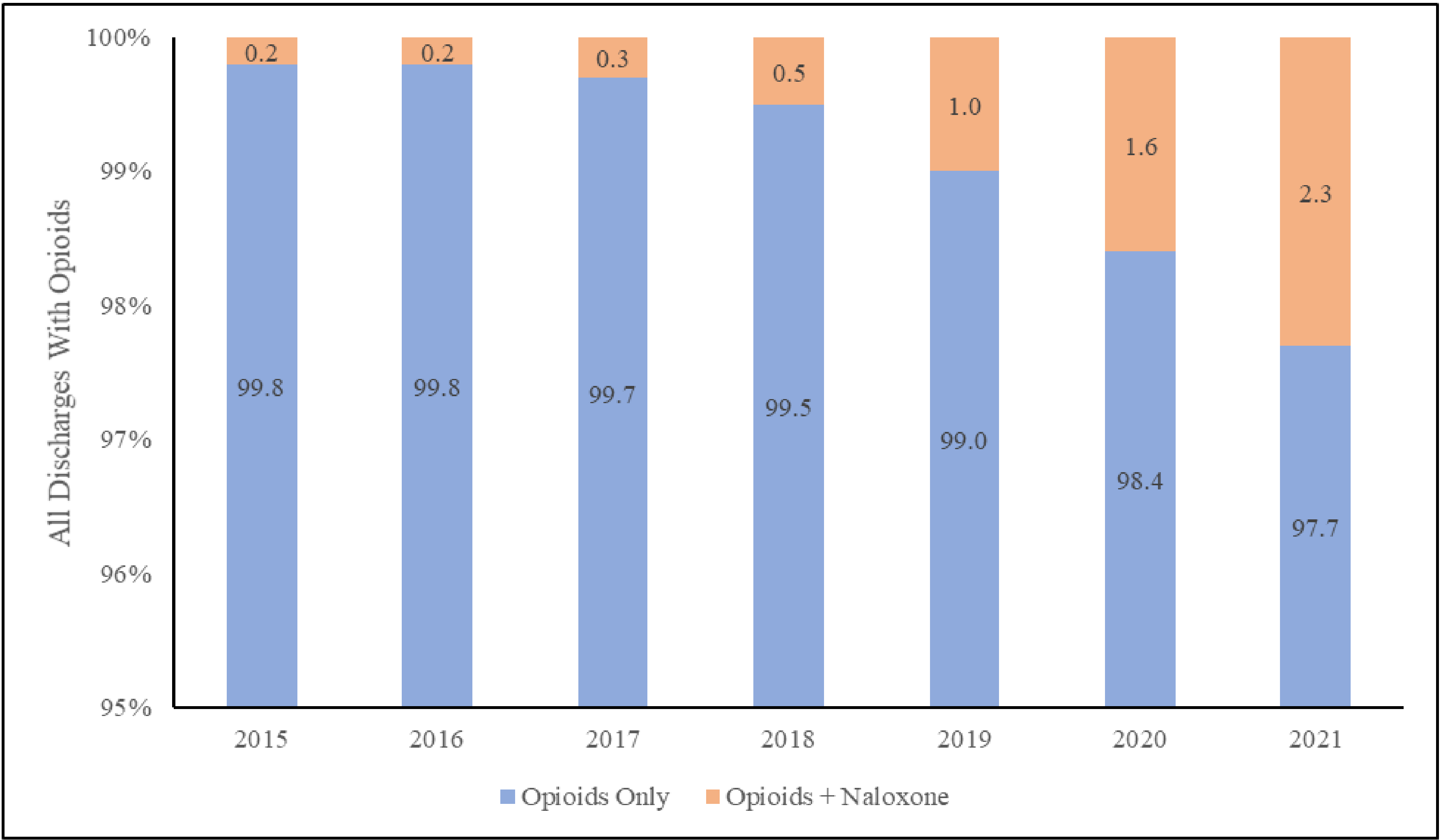
While prescription opioids are commonly used to treat pain after injury or surgery, it has been demonstrated that patients receiving higher doses upon discharge are at increased risk of opioid overdose. [1-2] Although naloxone (an opioid antagonist) has been used to reverse opioid overdoses and has become more readily available [3], it is unknown how frequently providers co-prescribe naloxone alongside an opioid prescription. We assessed the co-prescription trend of naloxone with an opioid within 28 days after an inpatient discharge. We hypothesized that from 2015 to 2021, there would be an increase in the proportion of inpatient discharges with a co-prescription of naloxone alongside an opioid.

METHODS

This study was approved by the Institutional Review Board at our hospital (IRB#2017-0169). The requirement for written informed consent was waived given the de-identified nature of the data. Using the Truven Health MarketScan database from 2015 to 2021 (Truven Health Analytics, Inc., IBM, Armonk, NY, USA), we identified patients who filled an opioid prescription within 28 days of an inpatient discharge and further identified those with a naloxone prescription within the same 28-day period. Descriptive statistics were stratified by opioids-only and opioids+naloxone prescription ≤28 days after discharge. Variables included age, sex, region, insurance type, length of stay, and discharge status. Year of discharge was included to identify potential trends during the study period.

References
[1] Dowell D, Ragan KR, Jones CM, Baldwin GT, Chou R (2022) CDC Clinical Practice Guideline for Prescribing Opioids for Pain — United States, 2022. MMWR. Recommendations and reports 71:1-95.
[2] Stein BD, Smart R, Jones CM et al (2021) Individual and Community Factors Associated with Naloxone Co-prescribing Among Long-term Opioid Patients: a Retrospective Analysis. J GEN INTERN MED 36:2952-2957.
[3] Green TC, Davis C, Xuan Z, Walley AY, Bratberg J (2020) Laws Mandating Coprescription of Naloxone and Their Impact on Naloxone Prescription in Five US States, 2014–2018. American journal of public health (1971) 110:881-887.

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RESULTS

We identified 2,248,615 inpatient discharges between 2015 and 2021 with at least one opioid prescription within 28 days, of which 13,376 (0.6%) also had a naloxone prescription (Table 1). Factors associated with naloxone prescription (among those prescribed opioids) were age (more naloxone in the 45-64 age group), sex (more naloxone among males), hospital region (more naloxone in hospitals located in the West), insurance type (more naloxone in the HMO group), and discharge status (more naloxone when discharged to a home health service); all p<0.05. Overall, inpatient discharges with an opioid prescription decreased from 468,812 in 2015 to 157,689 in 2021 while there was a paradoxical increase in the number of naloxone prescriptions filled from 838 (0.2%) in 2015 to 3597 (2.3%) in 2021 (Figure 1).

Table 1. Patient and hospital characteristics by opioids only and opioid co-prescription with naloxone (2015–2021)					
Year of procedure*	Opioids Only (n=2,234,879)		Opioids + Naloxone (n=13,736)		P-value
	N	%	N	%	
2015	467974	99.8	838	0.2	<.0001
2016	448295	99.8	891	0.2	
2017	392742	99.7	993	0.3	
2018	327357	99.5	1745	0.5	
2019	270099	99.0	2799	1.0	
2020	174320	98.4	2873	1.6	
2021	154092	97.7	3597	2.3	

* Row percent listed

DISCUSSION

We found an increase in the number of naloxone-opioid co-prescriptions from 2015 to 2021, with various factors associated with naloxone co-prescription. Despite the increasing trend, naloxone co-prescriptions were still alarmingly low within our analysis. Further research is needed to determine if the increase of naloxone co-prescription is also existing in specific cohorts, such as those receiving higher opioid prescriptions.

