Initial High Dose Opioid Prescribing Trends Among Members from a New Jersey Health Plan

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BACKGROUND

According to the CDC, an initial opioid dose of greater than 50 MME/day increases the risk of serious harm, including fatal and nonfatal overdose. A daily opioid dose ≥50 MME/day increases the overdose-related risk by at least twofold, and a dose ≥100 MME/day increases overdose risk up to nine times [1]. To minimize the use of initial high-dose opioids, in 2017, New Jersey initiated a law limiting initial opioid prescriptions to the lowest effective immediate-release dose for a five days' supply [2]. However, during the 2020 COVID-19 pandemic in New Jersey, illicit drug overdose-related deaths rose 20% compared to the previous year [3-5]. To help combat increasing opioid overdose deaths amidst COVID-19, Governor Murphy signed an Administrative Order requiring co-prescribing of Naloxone to high-risk patients qualifying with either a daily MME of at least 90 or if both opioids and benzodiazepines are co-prescribed [6]. Even though these two significant initiatives were taken by New Jersey, in 2021, overdose deaths increased more than 6% compared to 2020, where the death rate was 3046, and the predicted death rate for 2021 is 3250 [7]. Furthermore, several studies show that initiating opioids to an opioid-naive patient is one of the most prominent trends directing patients towards opioid addictions, leading to opioid overdose deaths [8,9]. However, there are not enough studies that examine the use of initial high-dose opioids in an opioid-naive patient. The CDC defines opioid-naïve patients as those who have not received opioid therapy in the past 90 days and determines pain severity as mild (1-3), moderate (4-6), or severe (7,8) on a scale of 1-10 [10,11]. Understanding the trends for prescribing initial high-dose opioids at a health plan level may help ensure that the members receive safe and appropriate prescription medication therapy.

OBJECTIVE

To identify the rationale behind initiating an initial high dose opioid to an opioid-naive patient, evaluating the trends relating to the patients and providers, and reviewing the number of high-risk patients receiving a Naloxone prescription.

METHODS

Horizon BCBS of New Jersey's (BCBSNJ) commercial and Medicare pharmacy claims data from May 2021 was compiled into a data set. Members who filled an initial opioid prescription ≥50 MME were identified and analyzed based on subgroups such as plan type, member age, gender, total day supply, and the prescribers' specialties. Members with more than one cancer or hospice claim were excluded from the analysis. Horizon prescription claims data were reviewed to identify the members who were either on benzodiazepines and opioids or opioids ≥90MME/day to determine the trend of naloxone prescriptions. After completing the initial assessment, the prescribers who wrote an initial opioid prescription ≥50 MME were identified, and a letter was sent to the physicians requesting further information. Once we received the responses from the providers, we evaluated all the data to identify any trends. The total MME prescribed, formulation being utilized, diagnoses, and the number of prescribers who stated opioids were discontinued after initial use was evaluated.

REFERENCES

1. Patients in the US and Canada are Seven Times as Likely as those in Sweden to Receive Opioids After Surgery. (n.d.). Retrieved August 27, 2021, from Pennmedicine.org website: https://www.pennmedicine.org/news/news-releases/2019/september/patients-in-the-us-and-canada-are-seven-times-as-likely-as-sweden-to-receive-opioids--surgery
2. Ladha, K. S., Neuman, M. D., Broms, G., Bethell, J., Bateman, B. T., Wijeysundera, D. N., … Wunsch, H. (2019). Opioid prescribing after surgery in the United States, Canada, and Sweden. *JAMA Network Open*, *2*(9), e1910734.
3. Module 6: Dosing and titration of opioids: How much, how long, and how and when to stop? (n.d.). Retrieved August 13, 2021, from Cdc.gov website: https://www.cdc.gov/drugoverdose/training/dosing/accessible/index.html
4. Postsurgical Pain. (2021, June 17). Retrieved August 25, 2021, from Cdc.gov website: https://www.cdc.gov/acute-pain/postsurgical-pain/index.html
5. Brummett CM, Waljee JF, Goesling J, et al. New Persistent Opioid Use After Minor and Major Surgical Procedures in US Adults. JAMA Surg 2017; 152:e170504.
6. Calcaterra SL, Yamashita TE, Min SJ, et al. Opioid Prescribing at Hospital Discharge Contributes to Chronic Opioid Use. J Gen Intern Med 2016; 31:478.
7. Alam A, Gomes T, Zheng H, et al. Long-term analgesic use after low-risk surgery: a retrospective cohort study. Arch Intern Med 2012; 172:425.
8. Sun EC, Darnall BD, Baker LC, Mackey S. Incidence of and Risk Factors for Chronic Opioid Use Among Opioid-Naive Patients in the Postoperative Period. JAMA Intern Med 2016; 176:1286.
9. Bateman BT, Franklin JM, Bykov K, et al. Persistent opioid use following cesarean delivery: patterns and predictors among opioid-naive women. Am J Obstet Gynecol 2016; 215:353.e1.
10. Johnson SP, Chung KC, Zhong L, et al. Risk of Prolonged Opioid Use Among Opioid-Naive Patients Following Common Hand Surgery Procedures. J Hand Surg Am 2016; 41:947.
11. Schroeder AR, Dehghan M, Newman TB, et al. Association of Opioid Prescriptions From Dental Clinicians for US Adolescents and Young Adults With Subsequent Opioid Use and Abuse. JAMA Intern Med 2019; 179:145.
12. Cook, L. (2020, June 22). New Jersey overdose deaths spike by 20% amid pandemic, officials say. Retrieved August 13, 2021, from PIX11 website: https://pix11.com/news/coronavirus/new-jersey-overdose-deaths-spike-by-20-amid-pandemic-officials-say/
13. (N.d.). Retrieved August 22, 2021, from Njcares.gov website: https://www.njcares.gov/pdfs/2020-Opioid-Dispensations-by-NJ-County.pdf
14. (N.d.). Retrieved August 18, 2021, from Njconsumeraffairs.gov website: https://www.njconsumeraffairs.gov/News/Pages/04132018.aspx
15. Data Overview. (2021, June 22). Retrieved August 10, 2021, from Cdc.gov website: https://www.cdc.gov/opioids/data/index.html
16. Stark N, Kerr S, Stevens J. Prevalence and predictors of persistent postsurgical opioid use: a prospective observational cohort study. Anaesth Intensive Care 2017; 45:700.
17. Quinn PD, Fine KL, Rickert ME, et al. Association of Opioid Prescription Initiation During Adolescence and Young Adulthood With Subsequent Substance-Related Morbidity. JAMA Pediatr 2020; 174:1048.
18. Bravo Practice Guidelines. (n.d.). Retrieved August 26, 2021, from Idsociety.org website: https://www.idsociety.org/practice-guideline/practice-guidelines/#/+/0/date_na_dt/desc/
19. Mayans, L., & Walling, A. (2018). Acute migraine headache: Treatment strategies. *American Family Physician*, *97*(4), 243–251.
20. National Institute on Drug Abuse. (2021, June 1). Prescription Opioids DrugFacts. Retrieved August 10, 2021, from Drugabuse.gov website: https://www.drugabuse.gov/publications/drugfacts/prescription-opioids
21. (N.d.). Retrieved August 27, 2021, from Fda.gov website: https://www.fda.gov/media/147152/download
22. (N.d.). Retrieved August 18, 2021, from Njconsumeraffairs.gov website:https://www.njconsumeraffairs.gov/News/Pages/04132018.aspx
23. National Institute on Drug Abuse. (2021, June 1). Prescription Opioids DrugFacts. Retrieved August 10, 2021, from Drugabuse.gov website: https://www.drugabuse.gov/publications/drugfacts/prescription-opioids
24. Practice guideline update: Acute treatment of migraine in children and adolescents. (n.d.). Retrieved August 26, 2021, from Aan.com website: https://www.aan.com/Guidelines/home/GuidelineDetail/966
25. dpowell. (2019, December 26). Department of health. Retrieved August 27, 2021, from Www.nj.gov website:

CHARTS

Figure 1: Top Prescribers Specialties Who Prescribed an Initial Opioid Prescription ≥50 MME

Note: Out of 797 initial scripts, we only have the specialty of 231 prescribers

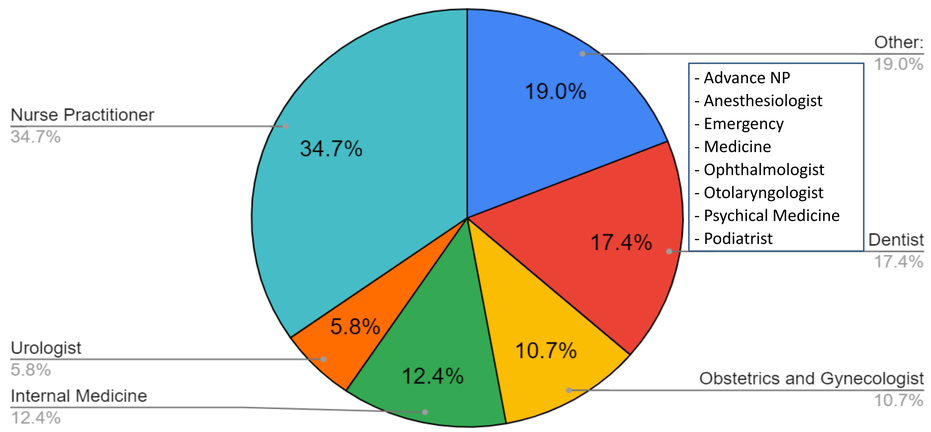


Figure 2: Top Diagnoses Reported by Prescribers Among Horizon BCBSNJ Members Who Received Initial Opioid Prescription ≥50 MME

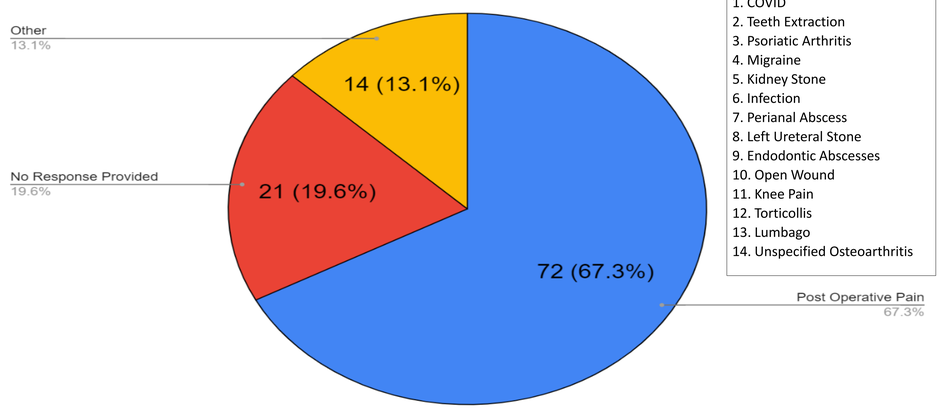
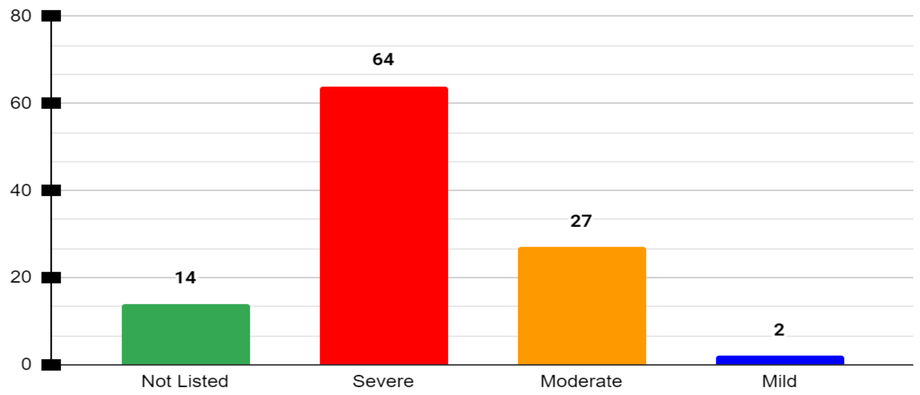


Figure 3: Severity of the Pain Reported by the Prescribers Among Horizon BCBSNJ Members Who Received an Initial Opioid Prescription ≥50 MME



RESULTS

In May 2021, Horizon BCBSNJ received 797 initial opioid prescriptions written for ≥50 MME where 85.57% (n=682) were commercial claims, and 14.42 % (n=115) were Medicare claims. Most of the scripts were written for an average age of 50 years old, and 49% (n=393) of the members were female, and 51% (n=405) were male. The prescription trends show that a total of 13% (n=103) of members received more than a 5-day supply, whereas 87% (n=695) were within the five-day initial supply limit. Additionally, 99.12%% (n=790) of the 797 members received an immediate-release (IR) opioid for their initial script, 0.87% (n=7) received an extended-release (ER) formulation, and one member received both the IR and ER formulations. Furthermore, 94% (n=754) of the members received between 50-90 MME, 5.13% (n=41) received > 90 MME, and 0.378% (n=3) of the member received >200 MME. Additionally, 13.42% (n=107) out of 797 members identified with active benzodiazepine claims prior to and during the high-dose opioid initiations, and 9.34% (n=10) of the 107 members have received opioid doses ≥90MME/day in conjunction with benzodiazepines. These 107 members from the benzodiazepine group and 44 from the opioids ≥90 MME group qualify for a naloxone prescription, but only 4.63% (n=7) out of these 151 members received a naloxone prescription. From the 13.42% (n=107) responses received, 67% (n=72) of the prescribers stated that opioids were prescribed for postoperative pain, 13% (n=14) of the prescribers reported other diagnosis codes (Figure 2), and 20% (n=21) of the prescribers did not provide a diagnosis for initiating the high-dose opioids. The other diagnosis codes provided include torticollis (M43.6), lumbago with sciatica (m54.40), unspecified osteoarthritis (m19.90), tooth extraction, infection, migraines, and altogether account for less than one percent. Furthermore, 59.81% (n=64) of the prescribers noted members were experiencing severe pain, 25.23% (n=27) noted moderate pain, 1.86% (n=2) noted mild pain, and 13.08% (n=14) did not provide a severity level (Figure 3). Only 5 out of 107 prescribers said they had tried NSAID or acetaminophen before initiating opioids, and 93.45% (n=100) of the prescribers said they discontinued the opioid prescription following the initial prescription. Meanwhile, 2.8% (n=3) of the prescribers reported that the ≥50 MME opioid prescriptions were not for an opioid-naive patient, and the members were actually on opioids prior to the script in question. This is because these members newly joined Horizon, and we do not have their prior medication history.

CONCLUSIONS

Our analysis shows that postoperative pain was the top diagnosis submitted, accounting for 67% of the members in which the physician initiated opioids of ≥50 MME. Some of the physicians' specific diagnosis codes, such as tooth extractions, migraines, and infections, are ones where the respective guidelines do not recommend opioids as first-line treatment [12-17]. The CDC recommends that clinicians use non-opioid analgesics as first-line options for all types of postoperative pain. This is due to multiple studies showing an increased risk of new persistent opioid use in opioid-naive patients after a minor mild pain surgery where the physician initiated opioids for pain management [18-21]. However, the CDC states physicians can include an additional lowest effective dose of an opioid for less than 3, 7, or 14 days depending on if the expected level of recovery is rapid, medium-term, or long-term, respectively, as an add-on to NSAIDs or acetaminophen for severe pain only[22]. The CDC recommends the highest seven-day supply of opioids lowest effective dose for severe pain other than postoperative pain [23]. Additionally, only seven members received a naloxone prescription even though 107 members had active benzodiazepines claims and 44 members had opioid scripts ≥90MME/day, making them meet the New Jersey Administrative Order criteria requiring a script for naloxone for these members [24,25]. Two limitations of the study are that we do not have access to any cash-paid claims or the opioid history of members who have switched to Horizon from other health plans. In our assessment, postoperative pain management remains the number one reason for initial high-dose opioids among Horizon members. Additional studies may be beneficial to assess the comparative effectiveness of initial high-dose opioid analgesics with non-opioid analgesics in postoperative pain management. In accordance with the CDC guidelines, providers should try NSAIDs or acetaminophen before initiating a high dose of opioids and limit opioids as an adjunct therapy for severe pain only. Providers should also use the lowest effective dose of immediate-release formulations and limit the opioid scripts to the lowest day supply necessary. Moreover, a proper discontinuation plan and a prescription for naloxone for members who meet the New Jersey Administrative Order criteria would be crucial to ensure that members receive safe and effective medication regimens.