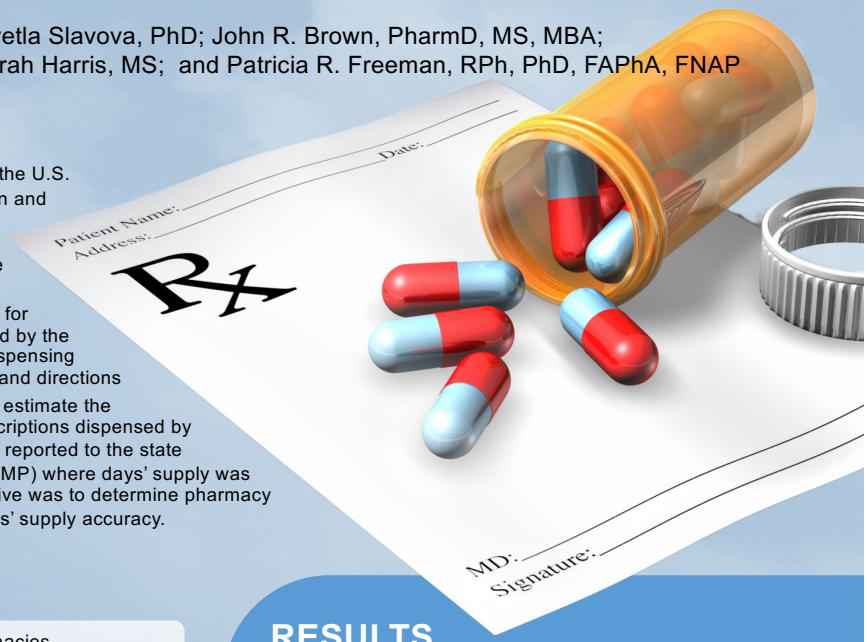
ACCURACY AND VALIDITY OF REPORTED OPIOID PRESCRIPTION DAYS' SUPPLY

Dustin K. Miracle, PharmD, MS; Svetla Slavova, PhD; John R. Brown, PharmD, MS, MBA; Nabarun Dasgupta, PhD, MPH; Sarah Harris, MS; and Patricia R. Freeman, RPh, PhD, FAPhA, FNAP



BACKGROUND

- In 2019, 70% of drug overdose deaths in the U.S. involved an opioid. While the use of heroin and unregulated synthetic opioids have shown that not all opioid use problems originate from prescriptions, they continue to contribute to opioid overdoses.
- Days' supply refers to the number of days for which a prescription is intended to be used by the patient and is usually calculated by the dispensing pharmacist based on prescribed quantity and directions
- The primary objective of this study was to estimate the percentage of opioid analgesic (OA) prescriptions dispensed by independent pharmacies in Kentucky and reported to the state prescription drug monitoring program (PDMP) where days' supply was entered accurately. The secondary objective was to determine pharmacy and prescription factors related to OA days' supply accuracy.

METHODS

Kentucky Independent Pharmacies (N = 477)

STAGE 1 SAMPLING ↓ Sampled with probability proportional to volume of dispensed OAs

Pharmacy Sample (n = 25)

STAGE 2 SAMPLING ↓ 100 random OA prescriptions were sampled from PDMP records submitted by each pharmacy

OA Prescription Sample (n = 100)

PHARMACY RECRUITMENT ↓ Pharmacies recruited via phone/email per recruitment script with USD $500 incentive for participation

Final Sample of 1300 OA prescriptions at 13 participating pharmacies

- Demographic information and hard-copy prescription data for sampled records were abstracted on-site
- Days' supply was independently calculated by two pharmacists using a standard formula with disagreements adjudicated blindly by a third pharmacist and then compared to that submitted to the state PDMP
- Multivariable logistic regression was used to assess the relationship between accuracy and prescription/practice-related factors; Backwards selection was used to identify a parsimonious final model

RESULTS

- Of the sampled prescriptions, 1281 had complete prescription records for collection
- Estimated accuracy of reported OA days' supply in the PDMP was 89.85%, (95% CI: 86.90, 92.80)
- The mean weighted difference between days' supply reported to the PDMP and adjudicated days' supply was -0.04 days (95% CI: -0.18, 0.09; paired t-test p-value=0.49).
- In the PDMP, 1165 prescriptions were reported as third party pay (e.g., insurer, discount program) and 116 were reported as private pay (cash) prescriptions
- After accounting for misclassification of payer source due to private pay bank identification numbers (BINs), we saw a 42.4% increase in the number of private-pay prescriptions
- The practice of opioid 'split-billing' was revealed in the sample and may obscure prescription details in both PDMPs and administrative claims databases

Table 1. Factors Associated with Increased Accuracy of Reported Opioid Analgesic Days' Supply in State PDMP, 2019 (N=1281)

Variable	Adjusted Odds Ratio (95% CI)
Special Instructions for Pharmacy (Yes vs. No)	3.13 (1.43 – 6.82)*
Payer Source (Private Pay/Cash vs. Combined Third Party Payers)	1.43 (1.01 – 2.02)*
Written to Take 'As-Needed' (Yes vs. No)	0.29 (0.18 – 0.47)*

*Statistically significant at α=0.05

CONCLUSIONS

*While **overall accuracy of reported opioid days' supply is high**, this accuracy is influenced by prescription-related factors, including **'as-needed' instructions**, **special filling instructions for the pharmacist**, and **prescription payer source***

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THE UNIVERSITY of NORTH CAROLINA at CHAPEL HILL

College of Public Health

UKCoP Beyond the Script