

# Impact of state policies on opioid prescribing among surgery and injury patients: Controlled interrupted time-series study, North Carolina, 2014-2019

Shabbar Ranapurwala<sup>1</sup>, Theo G. Beltran<sup>1</sup>, Brian W. Pence<sup>1</sup>, Naoko Fulcher<sup>2</sup>, Nabarun Dasgupta<sup>2</sup>, Courtney N. Maierhofer<sup>1</sup>, Bethany L. DiPrete<sup>1</sup>, Stephen Marshall<sup>1</sup>, Maryalice Nocera<sup>2</sup>, Scott K. Proescholdbell<sup>3</sup>, Li-Tzy Wu<sup>4</sup>, David A. Edwards<sup>5</sup>, Timothy Carey<sup>1</sup>, Paul R. Chelminski<sup>6</sup>, Juan Hincapie-Castillo<sup>1</sup>, and Joacy G. Mathias<sup>7</sup>

<sup>1</sup>The University of North Carolina at Chapel Hill Department of Epidemiology

<sup>2</sup>The University of North Carolina at Chapel Hill Injury Prevention Research Center

<sup>3</sup>North Carolina Injury and Violence Prevention Branch

<sup>4</sup>Duke University Department of Psychiatry and Behavioral Sciences

<sup>5</sup>Vanderbilt University Medical Center Department of Anesthesiology

<sup>6</sup>The University of North Carolina at Chapel Hill School of Medicine

<sup>7</sup>Duke University Department of Obstetrics and Gynecology

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## Abstract

**Purpose:** Impact of policies limiting opioid prescribing for acute and post-surgical pain among racially minoritized populations are not well understood. We evaluated the impact of two North Carolina (NC) policies on outpatient opioid prescribing among injury and surgical patients by race, ethnicity, age, and sex. **Methods:** We conducted controlled and single series interrupted time series using electronic health data from two integrated healthcare systems in NC, among >11 years-old patients having acute injuries and surgery between April 2014 to December 2019. The policy interventions were safe opioid prescribing investigative initiative (SOPI, May 2016) and NC law limiting opioid days' supply (STOP Act, January 2018). Outcomes included, proportion of patients receiving index opioid prescription after surgery or injury event, receipt of subsequent opioid prescriptions, days' supply, and milligrams of morphine equivalents (MME). **Results:** Of the 621,997 surgical and 864,061 injury patients, 69.4% and 19.7%, respectively, received an index opioid analgesic prescription. There were sustained declines in index opioid prescription among post-surgical patients after SOPI [-2.7% per year (-4.6, -0.9)] and STOP act [-4.1% (-5.9, -2.2)], but no change among injury patients. Policy-related opioid prescribing declines were larger among black, native American, and Hispanic post-surgical patients than whites and Asians. Index and subsequent opioid days' supply showed sustained declines after SOPI and STOP Act among post-surgical patients. There was no policy impact on MME. **Conclusions:** Policies were associated with reductions in opioid prescribing, particularly in post-surgical patients, however, racialized disparities likely reflect implicit and explicit racialized biases in pain management practices.

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