



Concomitant Use of Opioids and Psychotropic Medications in

Mississippi Medicaid Beneficiaries

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Background

- The United States, struggling with a severe overdose crisis resulting in about 100,000 deaths annually by 2020, has experienced escalating drug use and overdose rates due to patterns that originated with excessive opioid prescriptions in the early 2000s.
- In response, numerous national and state initiatives, including the declaration of a health emergency and implementation of restrictive prescribing laws, significantly reduced opioid prescriptions.
- Reflecting national trends, Mississippi enforced stringent laws on opioid use and implemented robust monitoring systems, resulting in a substantial decline in prescriptions. However, overall drug overdose rates continued to rise, paralleled by an increase in prescribing of non-opioid psychoactive medications, which often interact with opioids, increasing the risk of serious side effects.

Objectives

The aim of this project was to estimate the prevalence and intensity of concomitant use of opioids and psychotropic medications (co-use) in Mississippi Medicaid beneficiaries.

Methods

- **Data Source:** Utilized Mississippi Medicaid claims data spanning 2016 to 2021, covering inpatient, outpatient, pharmacy, and beneficiary details, linked by encrypted IDs.
- **Study Design:** Employed a cross-sectional approach annually from 2016 to 2021, focusing on Medicaid beneficiaries who filled opioid prescriptions, excluding those not fully eligible or dual-enrolled with Medicare, and special cases like cancer or sickle cell patients.
- **Study Measures:** Primarily investigated the overlap of opioid and psychotropic medication prescriptions, identifying concomitant use based on prescription fill dates and supply. Included measures like the intensity of concomitant use, daily opioid dosage, and opioid types (short-acting or long-acting).
- **Demographic Details:** Analyzed individual data on age, sex, race, county, and Medicaid plan, along with relevant opioid usage characteristics like chronic non-cancer pain (CNCP) and long-term opioid therapy (LTOT).

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Results

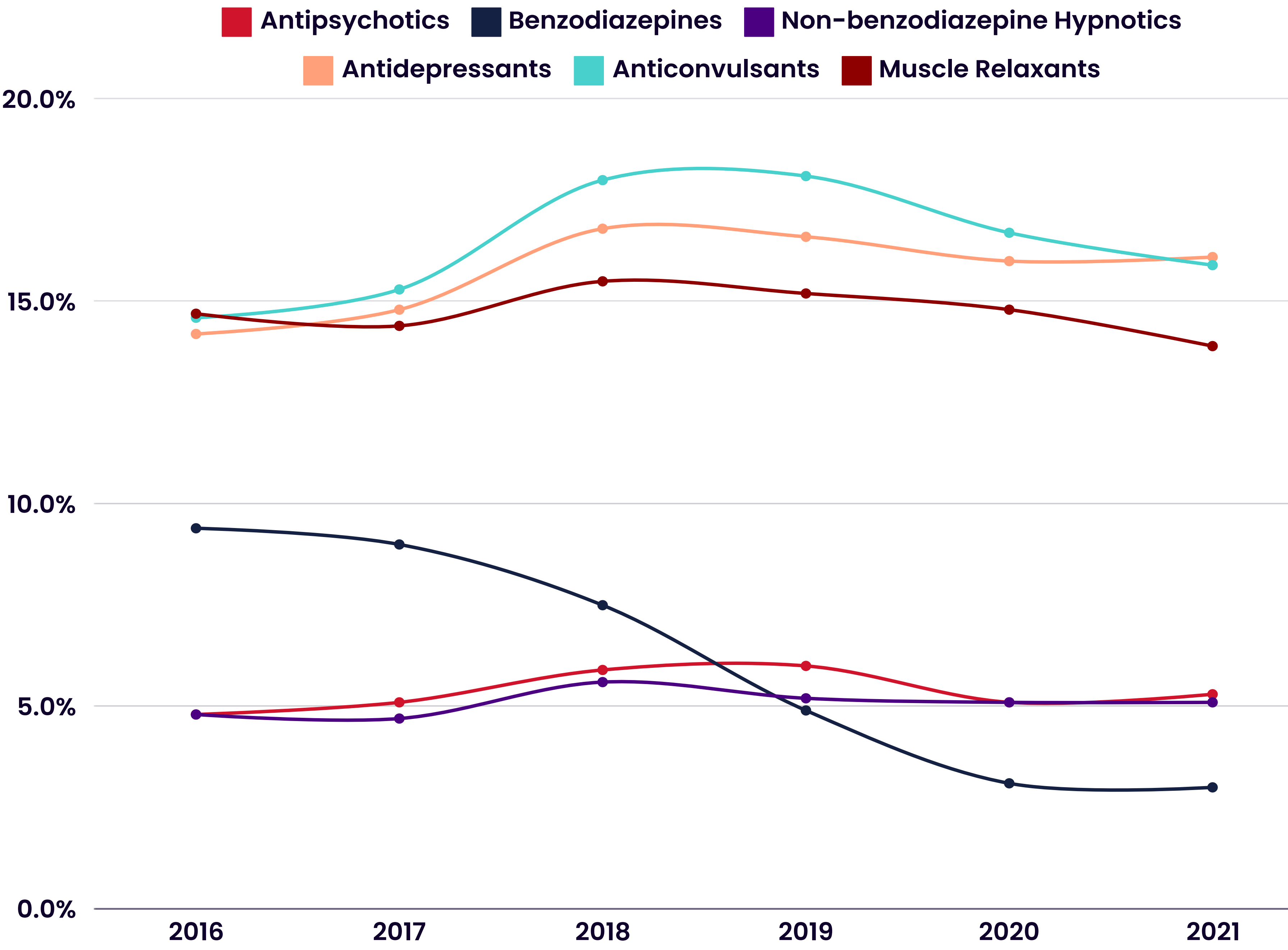


Figure 1: Percentage of beneficiaries with concomitant use of opioids with each psychotropic medication class

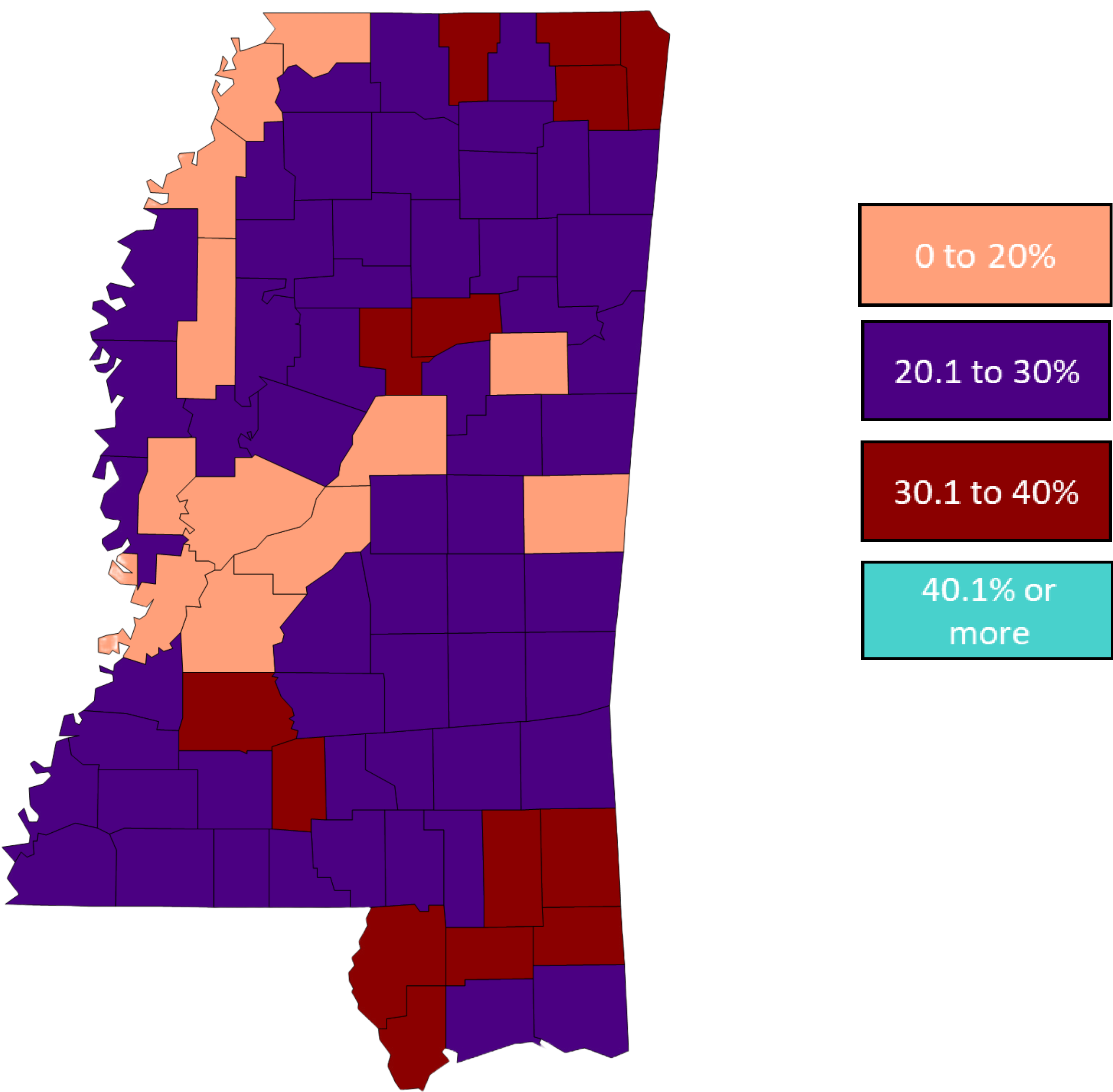


Figure 2: Geographic variation in percentage of Medicaid enrollees with concomitant use of opioid and psychotropic medications, 2016-2021

Results

- **Sample Size:** The number of eligible participants (i.e., Mississippi Medicaid beneficiaries who filled at least one prescription for opioid analgesics in a year) decreased from 82,550 in 2016 to 51,583 in 2021.
- **CNCP Incidence:** Diagnoses of chronic non-cancer pain (CNCP) increased slightly from 21% in 2016 to 24% in 2021.
- **LTOT Utilization:** Usage of long-term opioid therapy (LTOT) decreased from 16% in 2016 to 9% in 2021.
- **MEDD Values:** The average morphine equivalent daily dose (MEDD) decreased from 45.6 in 2016 to 40.6 in 2021.
- **Co-use Prevalence:** Approximately one-third of the study sample experienced at least one day of co-use of opioids with other medications annually.
- **Most Common Co-used Medications:** Antidepressants, anticonvulsants, and muscle relaxants were most frequently co-used, with less frequent use of benzodiazepines, non-benzodiazepine hypnotics, and antipsychotics.
- **Co-use Intensity:** The intensity of medication co-use increased from 76.7% of opioid prescription days in 2016 to 84.3% in 2021.
- **Overall Trends:** There was a general decrease in opioid prescribing and LTOT, stable rates of psychotropic medication use, except for a decrease in benzodiazepines, and a slight increase in the intensity of medication co-use over the study period.

Conclusions

- Co-use is fairly common among Mississippi Medicaid beneficiaries using opioid medications.
- Results suggest a potentially growing reliance on psychotropic medications for pain management, warranting further investigation into the safety of such treatment patterns.

Acknowledgment

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