



Substance Misuse in WNC

Single and Polysubstance ED Visits

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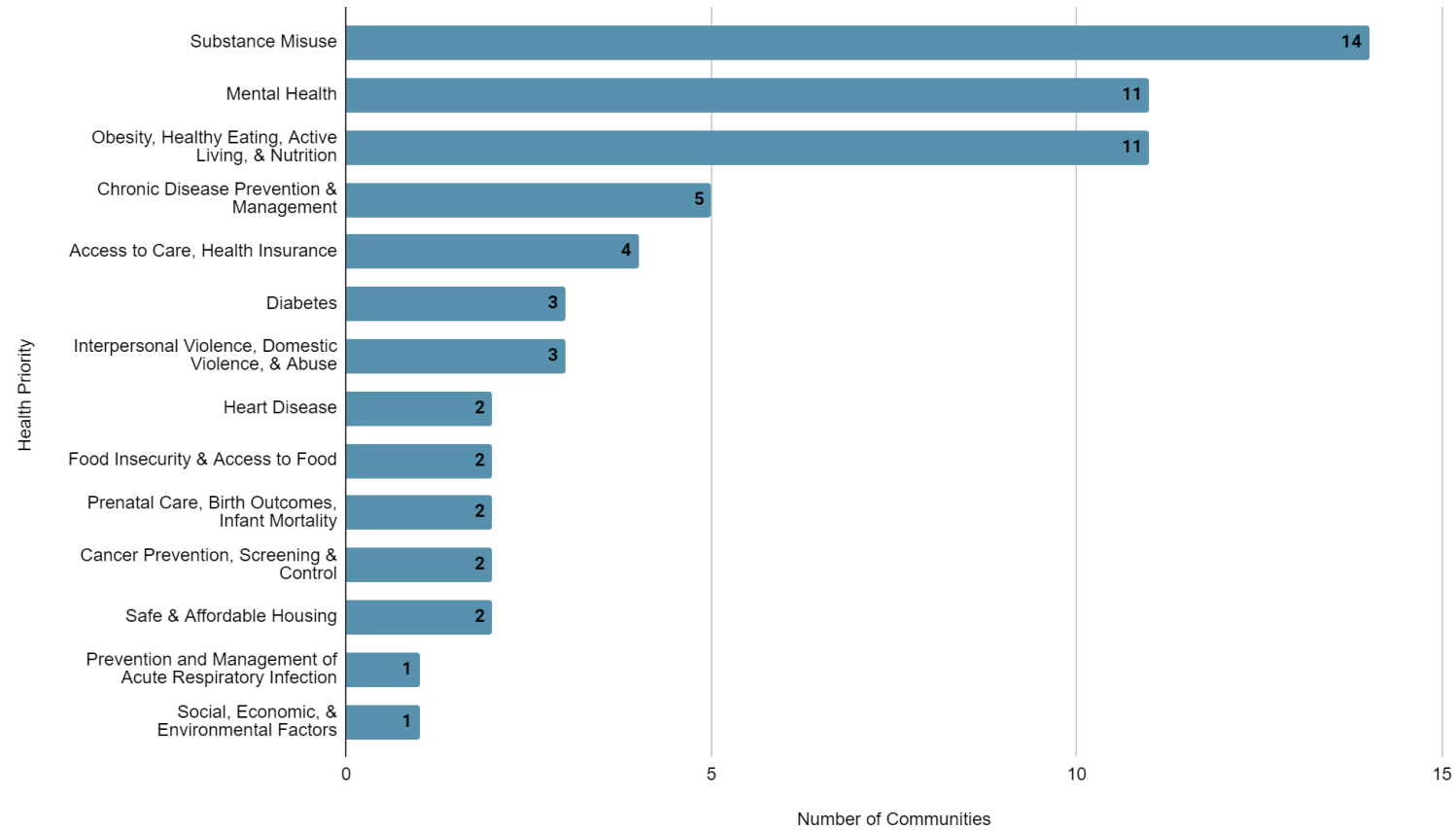
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In partnership with Dr. Jennifer Runkle, NC State University

Regional Health Priorities



2021-2023 Community Health Priorities in WNC





Data Analysis Sample Information

Defining Single and Polysubstance Emergency Department (ED) Visits

Single Substance Misuse ED Visits:

- Misuse of one drug at the time of ED visit.
- For analysis: Only an opioid, cocaine, or psychostimulant diagnosis.

Polysubstance Misuse ED Visits:

- Misuse of two or more concurrent drugs at the time of ED visit.
- For analysis: At least one diagnosis of an opioid, cocaine, or psychostimulant and could have a diagnosis of alcohol or cannabis

Sample Information: Geography and Total ED Visits

Geography:

- Residents of the 18-County western North Carolina region
 - Avery, Buncombe, Burke, Cherokee, Clay, Graham, Haywood, Henderson, Jackson, Macon, Madison, McDowell, Mitchell, Polk, Rutherford, Swain, Transylvania, Yancey

The focus on this analysis was single vs. polysubstance users and non-users were not included.

Total ED Visits:

- ED Visits involving an opioid, psychostimulant, or cocaine:
n=32,093
- Single substance misuse ED Visits: n=20,216 (63%)
- Polysubstance misuse ED Visits: n=11,087 (37%)

[The Cecil G. Sheps Center for Health Services Research, NC Discharge Data](#) (Data Citation Pending)

Sample Information: Single and Polysubstance ED Visits

Single Substance ED Visits

- Single substance: Opioids n=8895 (44%)
- Single substance: Cocaine n=2876(14%)
- Single Substance: Psychostimulants n=8445 (42%)

Polysubstance ED Visits (Number of Substances)

- Two Concurrent Drugs: n=8801 (74.10%)
- Three Concurrent Drugs: n=2632(22.16%)
- Four Concurrent Drugs: n=409 (3.44%)
- Five Concurrent Drugs: n=35 (0.29%)

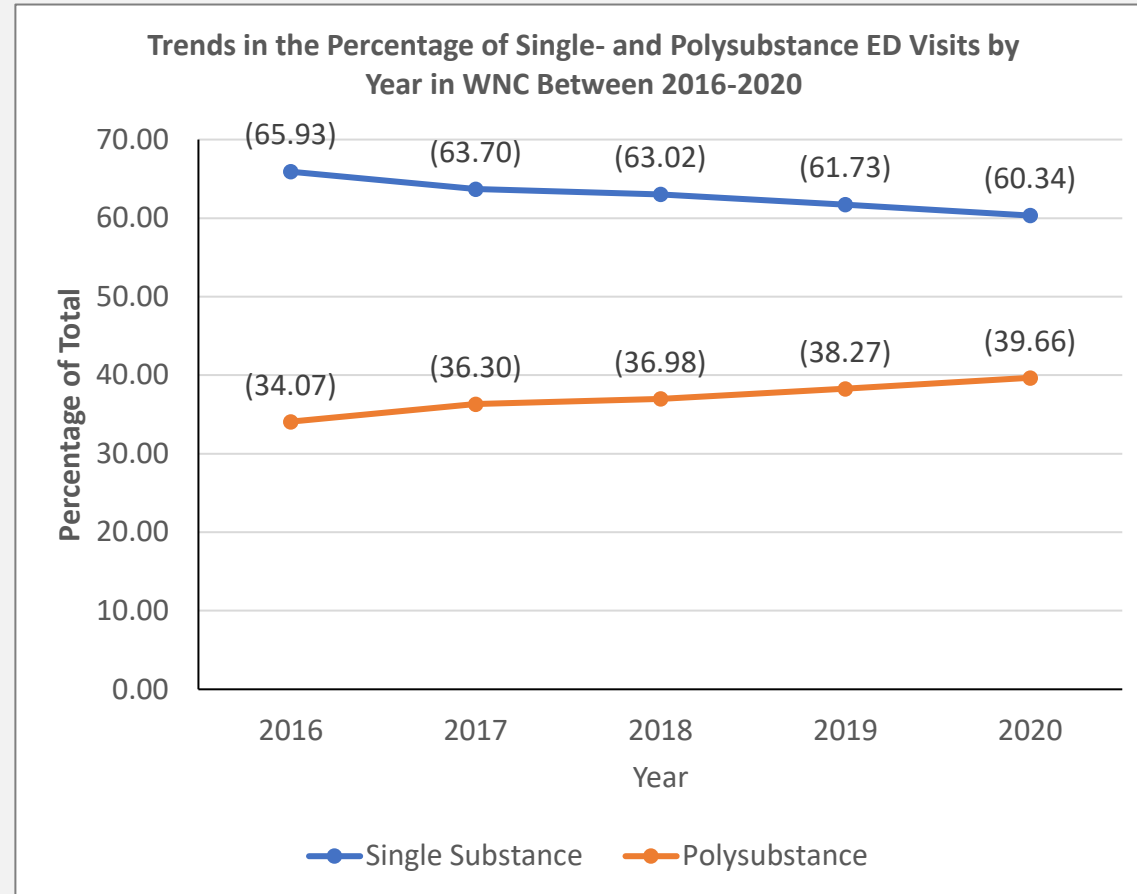
[The Cecil G. Sheps Center for Health Services Research, NC Discharge Data](#) (Data Citation Pending)

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Data Analysis Summary of Findings

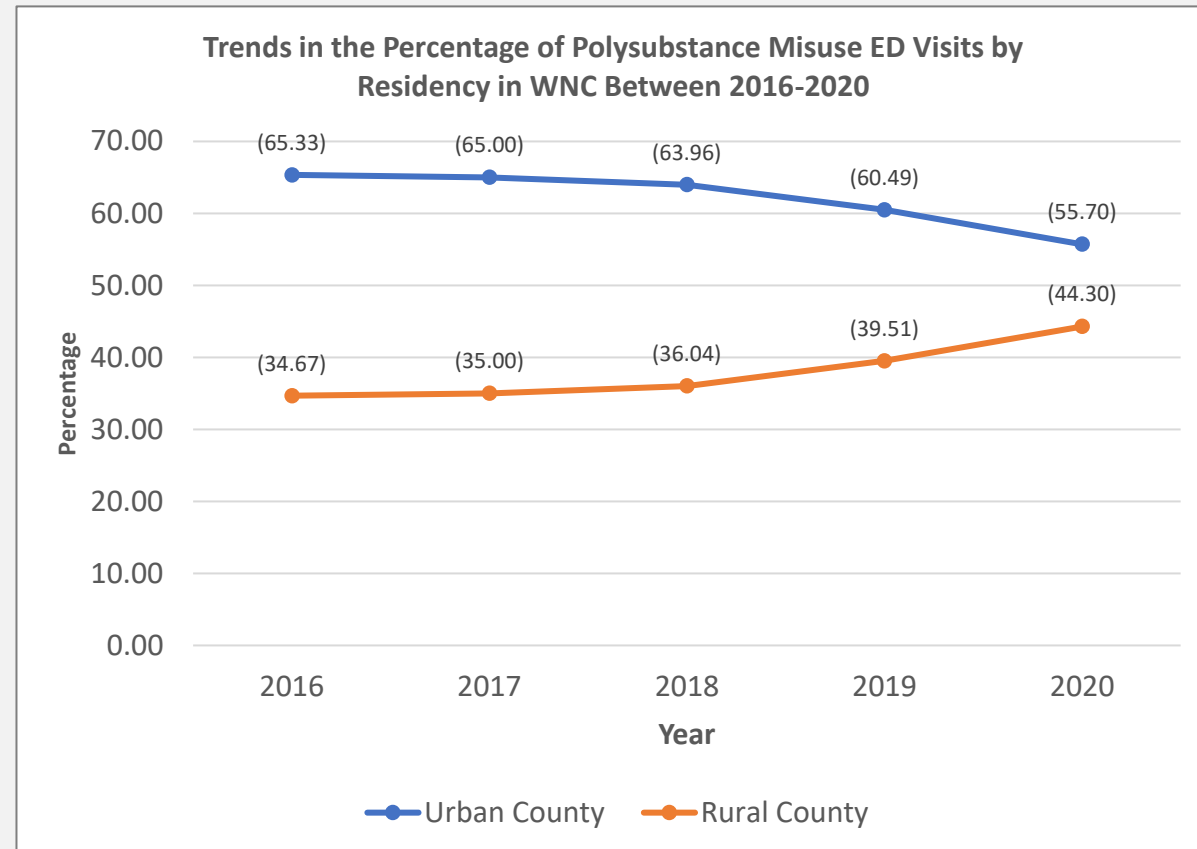
Polysubstance ED Visits Are Rising

- Polysubstance Misuse ED Visits Increased by about 5% between 2016 and 2020.



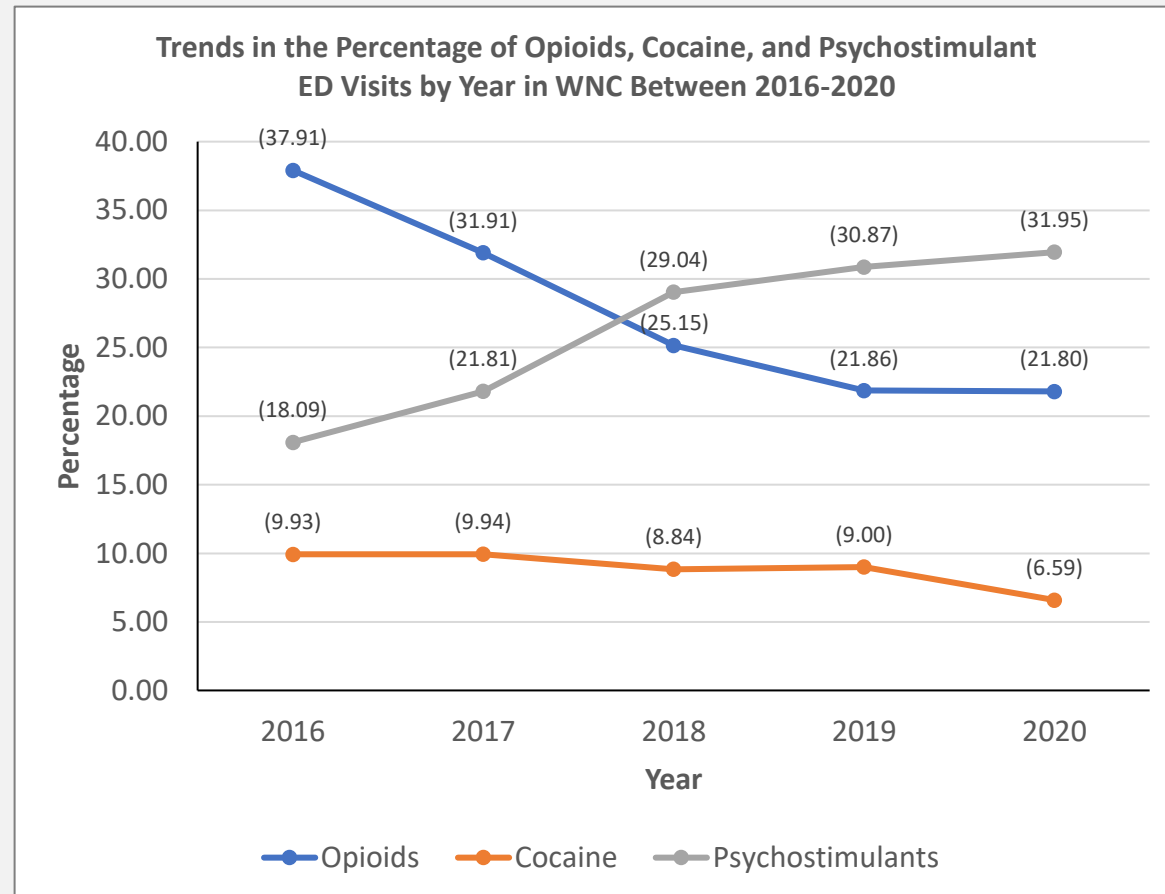
Polysubstance Misuse ED Visits for Rural County Residents Increased

- Polysubstance Misuse ED Visits Increased by 5% between 2016-2019.
- BUT between 2019-2020, sharply increased by 5%.

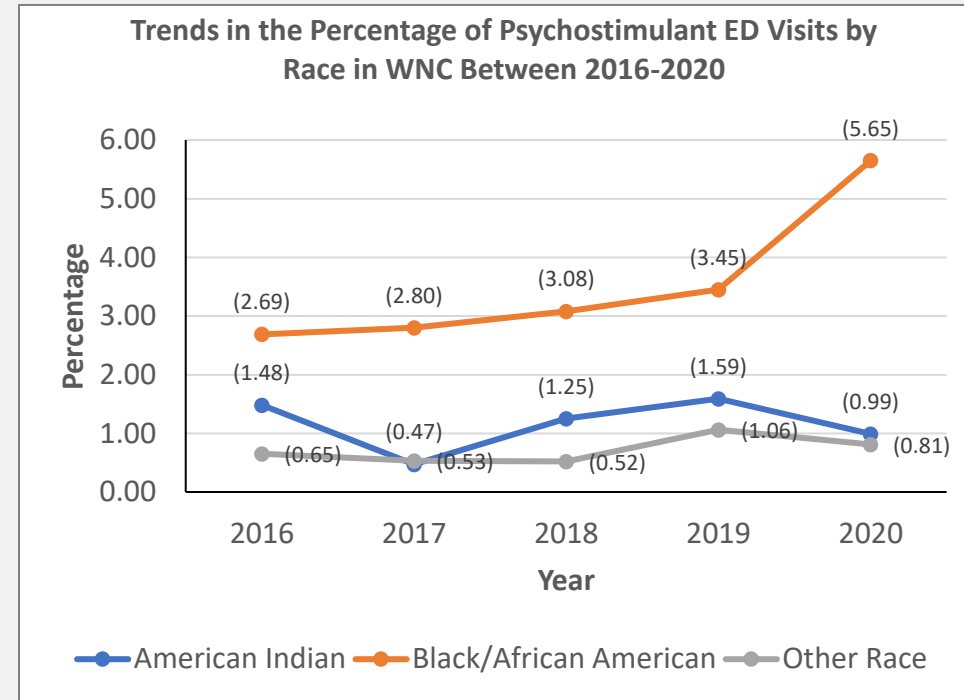
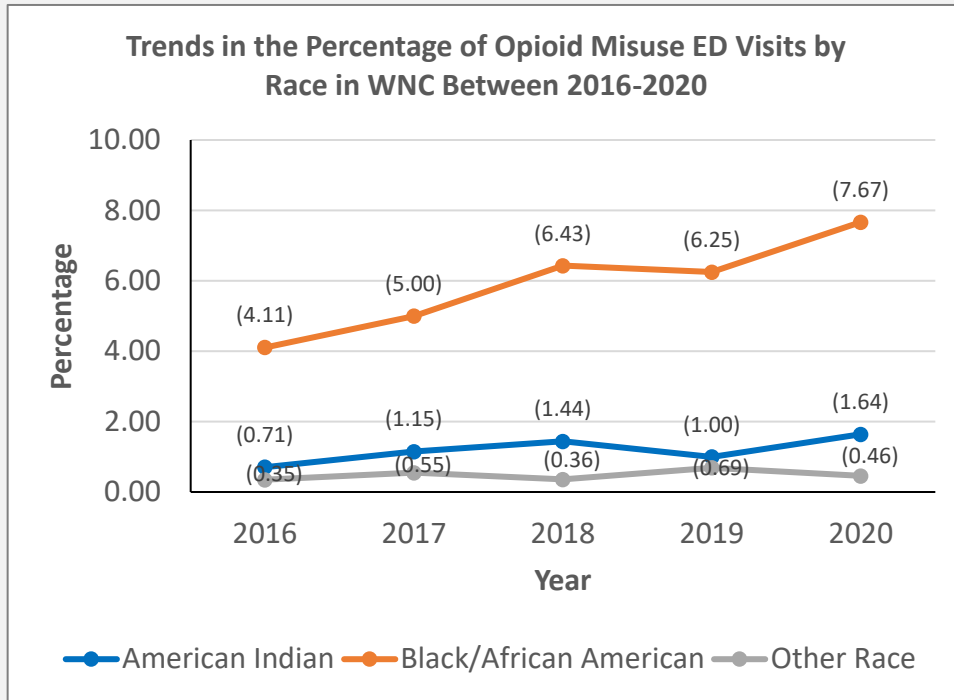


Psychostimulant-Related ED Visits Increased

- Percentage of Opioid-related ED Visits declined between 2016-2019 and stayed steady between 2019-2020.
- Percentage of Cocaine-related ED Visits generally steady but declined between 2019-2020.
- Proportionally, the percentage of Psychostimulant-related ED visits Increased overall.



Opioid and Psychostimulant ED Visits Increased for Black/African Americans in WNC



- Out of ED visits involving single substance use of only an opioid, cocaine, or psychostimulant, we found that the percentage of Black/African American patients using only an opioid or psychostimulant doubled between 2016-2020.
- Patients reporting as White made up the largest proportion of single substance users in the region and were excluded from the above charts to improve chart readability.
- Proportionally, ED visits for White patients decreased (Opioids -4.60% , Psychostimulants -2.63%) over the five years compared to single substance users who were American Indian/ Alaska Native, Black/ African American or Other Race.

Mental Health/ Socioeconomic Characteristics

- Compared to those with single substance misuse, WNC residents going to the ED for polysubstance misuse were:
 - More than 26 times (OR=26.38) as likely to have a diagnosis of a mental illness.
 - 76% more likely to have suicidal ideation or behavior (OR=1.76) -- controlled for intentional overdoses.
 - Two times more likely (OR=2.08) to have housing/economic problems.

- Compared to patients going to the ED using only opioids or psychostimulants, patients going to the ED who were only using cocaine were:
 - More than six times (OR=6.61) as likely to have a mental illness

- Compared to patients going to the ED using only opioids or cocaine, patients going to the ED who were only using psychostimulants were:
 - More than four times (OR=4.59) as likely to have a mental illness
 - 38% more likely to have housing/economic problems.
 - 75% more likely (OR=1.75) to live in a rural county.

Conclusions

Hospitals and Emergency services can:

- Use data to better understand the demographics of the patients coming into their EDs and with what types of substance use disorders or other types of issues (i.e., housing and economic issues, etc.)

Researchers/Epidemiologists/Analysts can:

- Focus on regional data
- Study polysubstance misuse – help influence funding, policy, and programs

Substance Misuse Programs can:

- Use data to better understand the demographics of the patients coming into community EDs and with what types of substance use disorders or other types of issues (i.e., housing and economic issues, etc.)

Informaticists can:

- Help make health data accessible



Thank you!

For questions, please reach out to
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