



# Mental health and substance use during COVID-19

Presenters:

Marcy Campbell

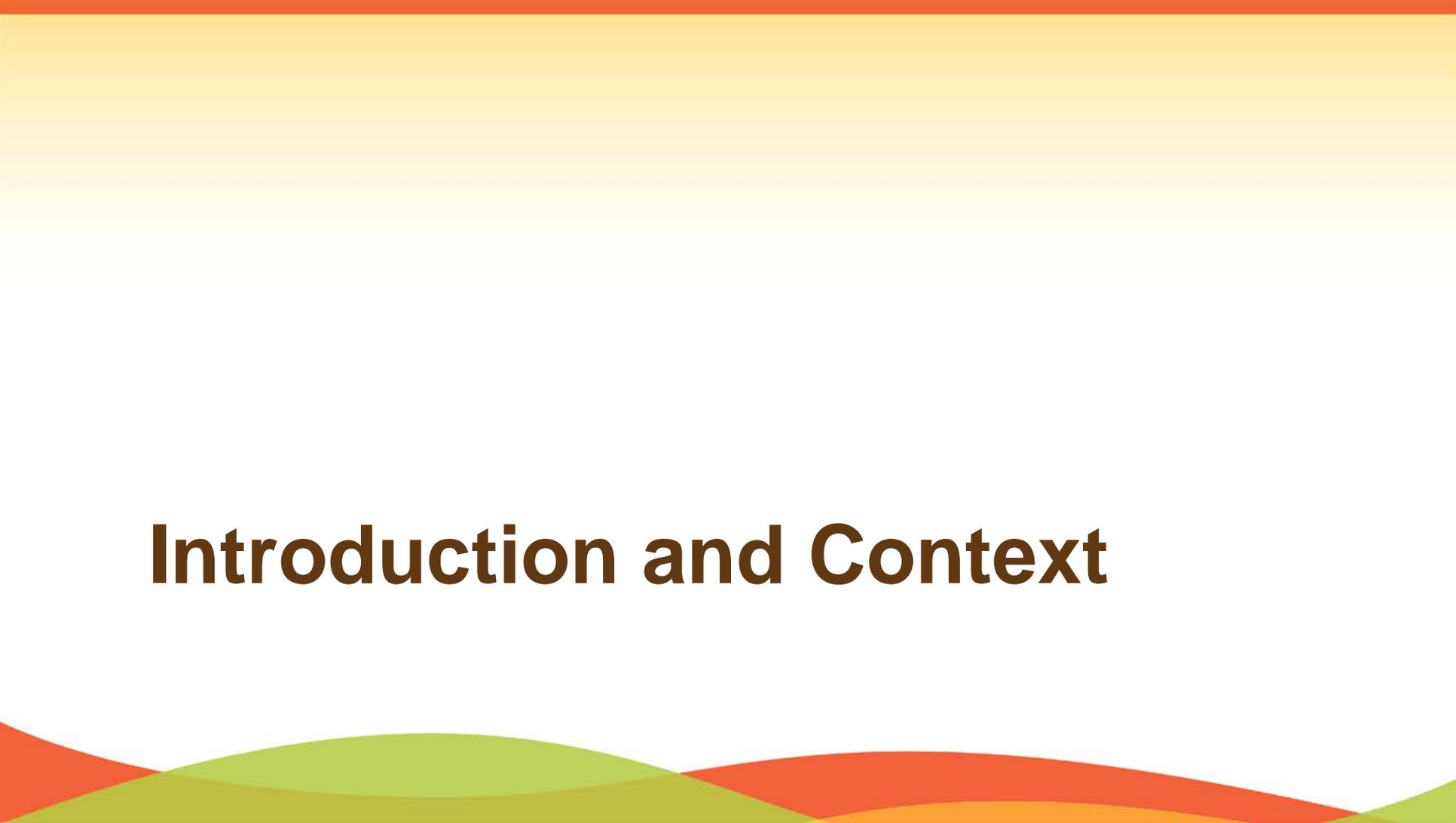
Steffie Goodman

Kristen Daly



BOULDER COUNTY  
PUBLIC HEALTH

Opportunity for a healthy life.



# **Introduction and Context**



# Colorado and national mental health context

- Significant unmet mental health needs existed prior to the pandemic
  - Colorado: 40th for Adults and 48th for youth in 2018
  - Healthy Kids Colorado Survey 2019
    - 30.5% or nearly 1 in 3 youths said they were so sad and hopeless that they stopped regular activity
      - 55.6% for LGBTQ
    - 16% or 1 in 6 youth seriously considered suicide
      - 39.5% for LGBTQ
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# COVID has complex impacts on mental health

- Isolation, economic challenges, grief
  - Young Adults
  - First Responders, Medical staff, Frontline workers
  - Those who have contracted COVID-19
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# Our data sources for today

- Syndromic surveillance emergency department visit data for Boulder County (SyS)
  - Vital statistics (i.e., death certificates)
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# Emergency department visits (ESSENCE/SyS)

Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE)  
National Syndromic Surveillance Platform (NSSP)

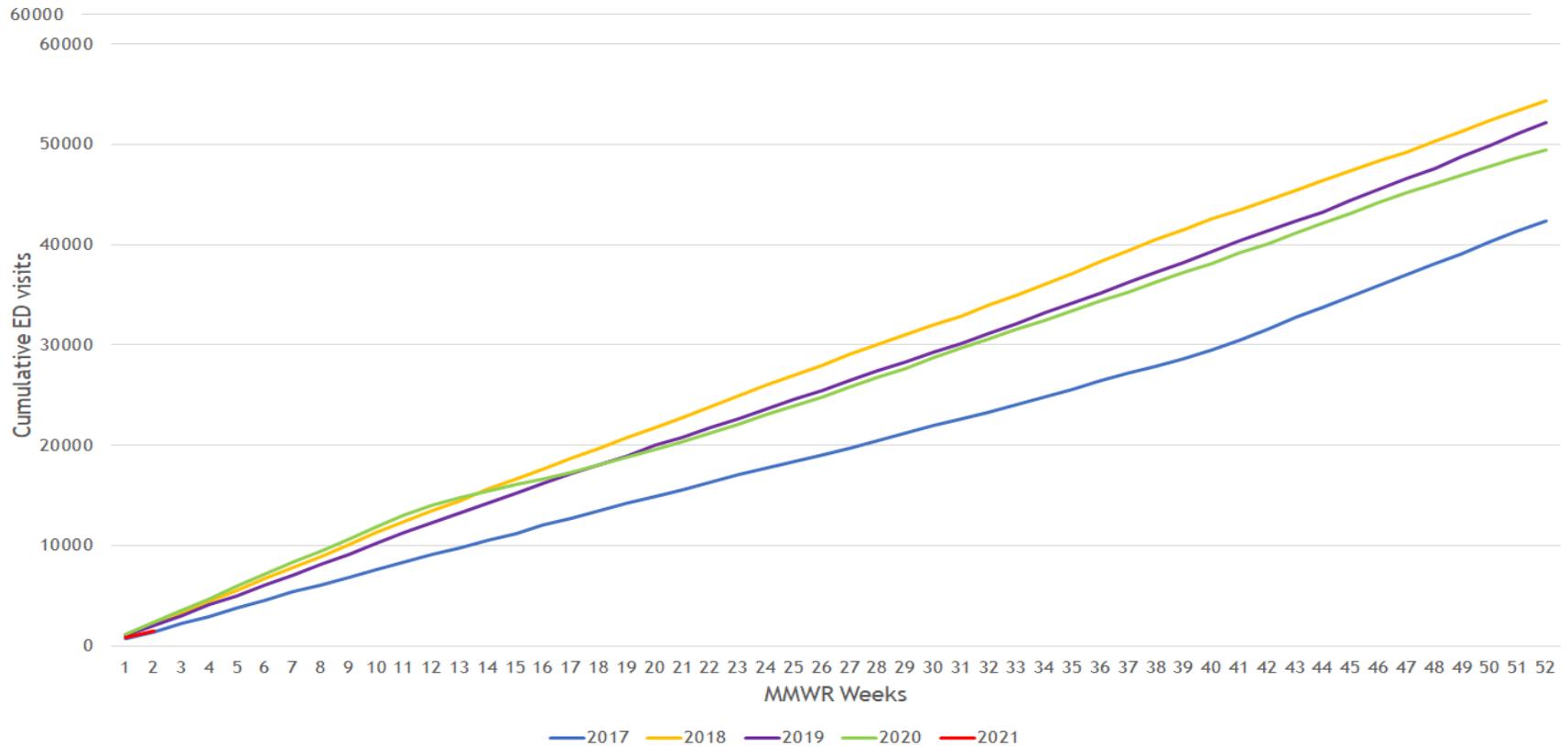


# Emergency Department Visits by Boulder County Residents

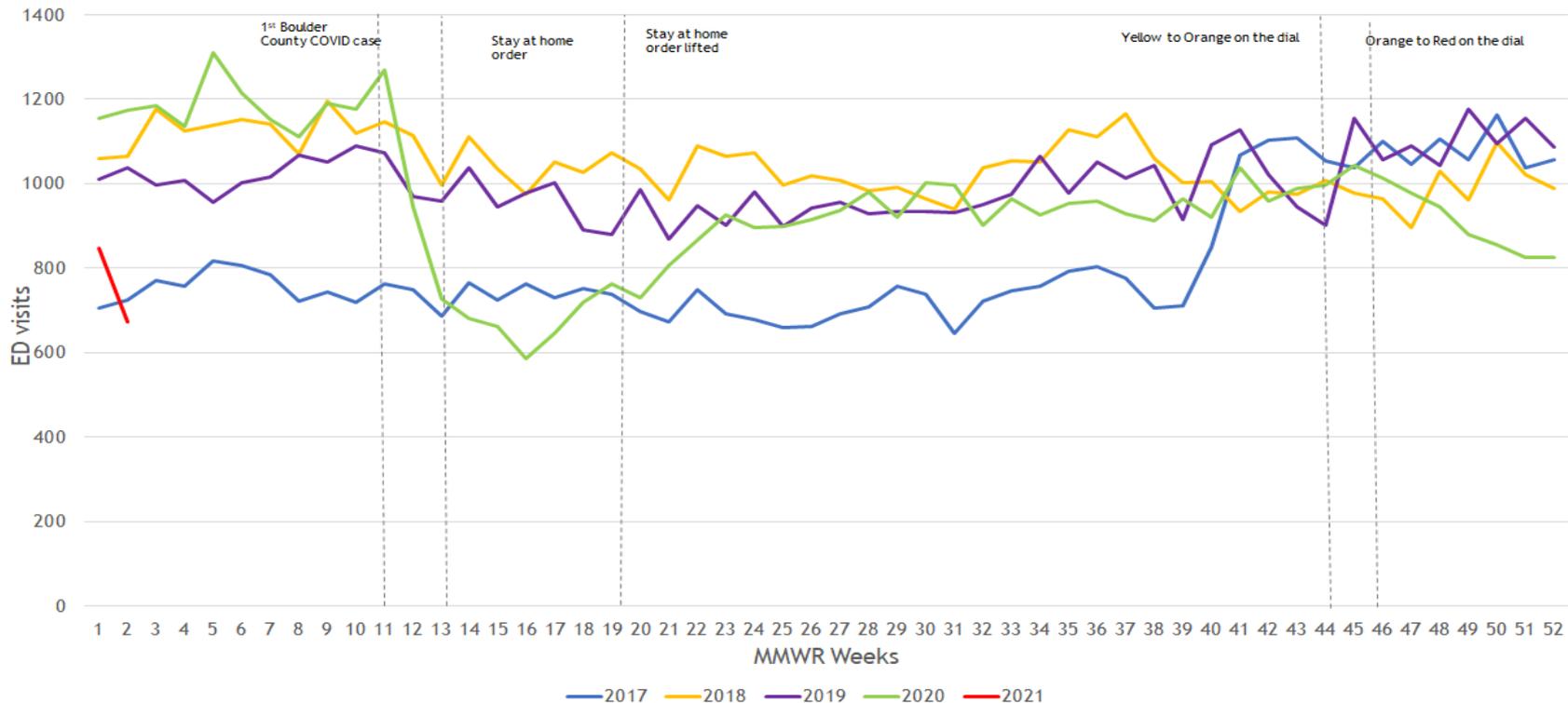
- Suicide Attempt
- Alcohol Overdose
- Opioid Overdose
- Sexual Violence
- Age (0-9, 10-17, 18-24, 25-29, 30-39, 40-49, 50-59, 60-69, 70+)
- Gender
- Race/Ethnicity



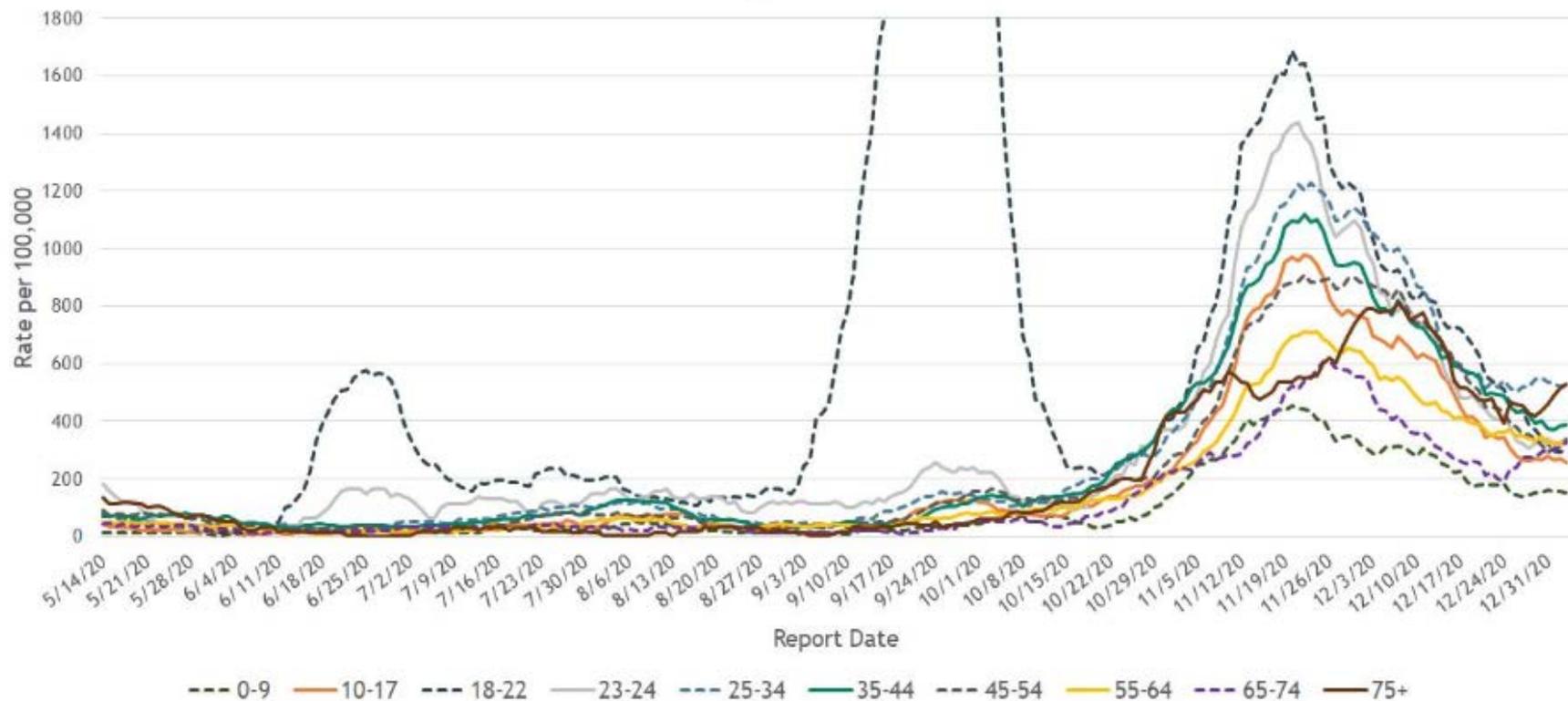
# Cumulative ED visits by Boulder County residents by year



# ED visits by Boulder County residents by year



Trend in two-week incidence of new COVID-19 cases among Boulder County residents, by age group (1/4/21)



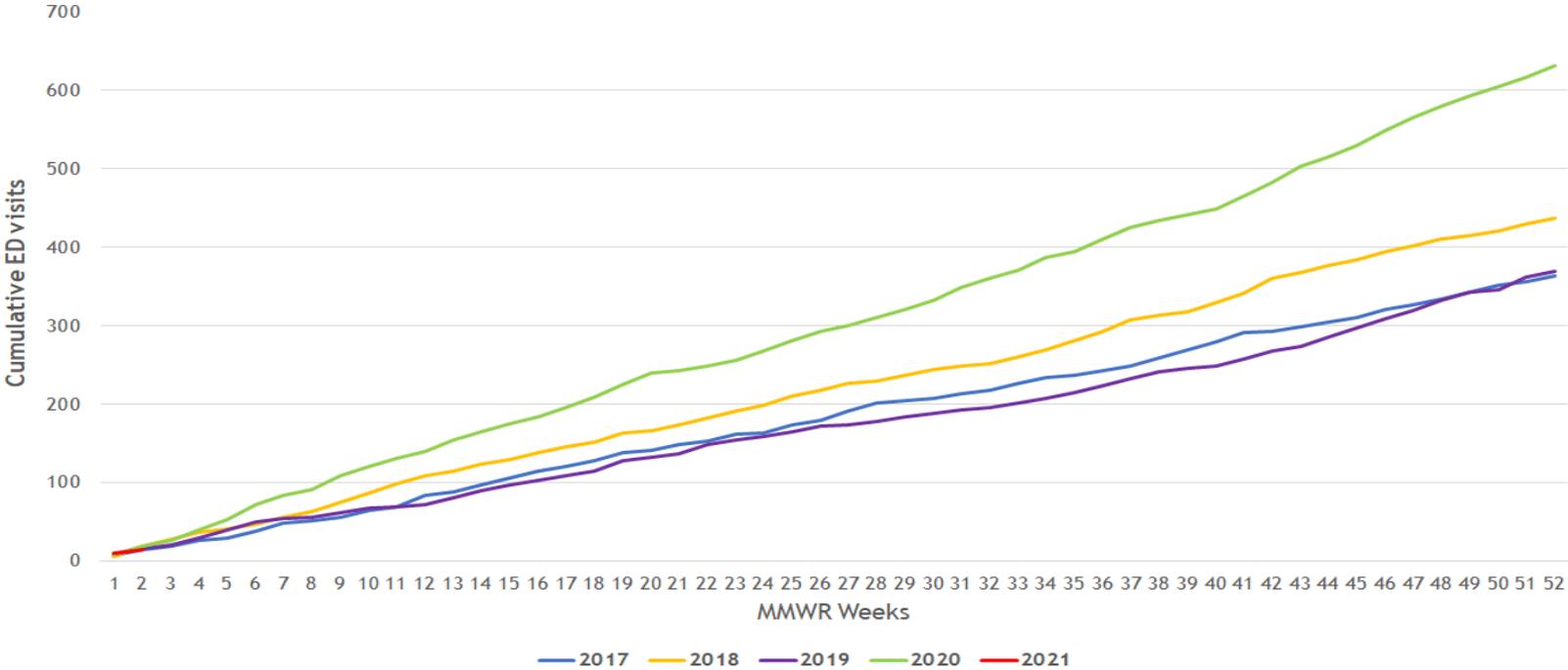


# Suicide Attempt

2017-2020

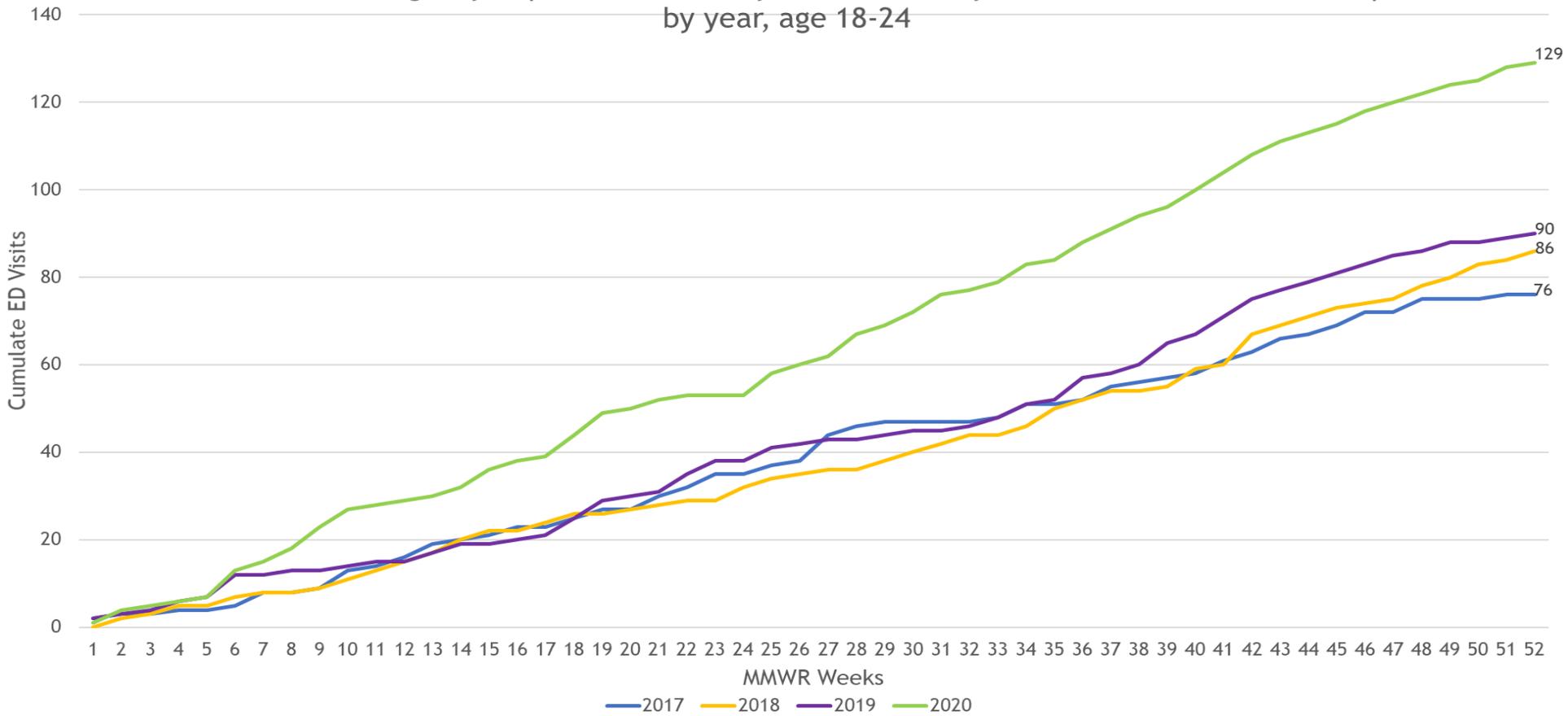


# Cumulative ED visits for suicide attempt by Boulder County residents by year





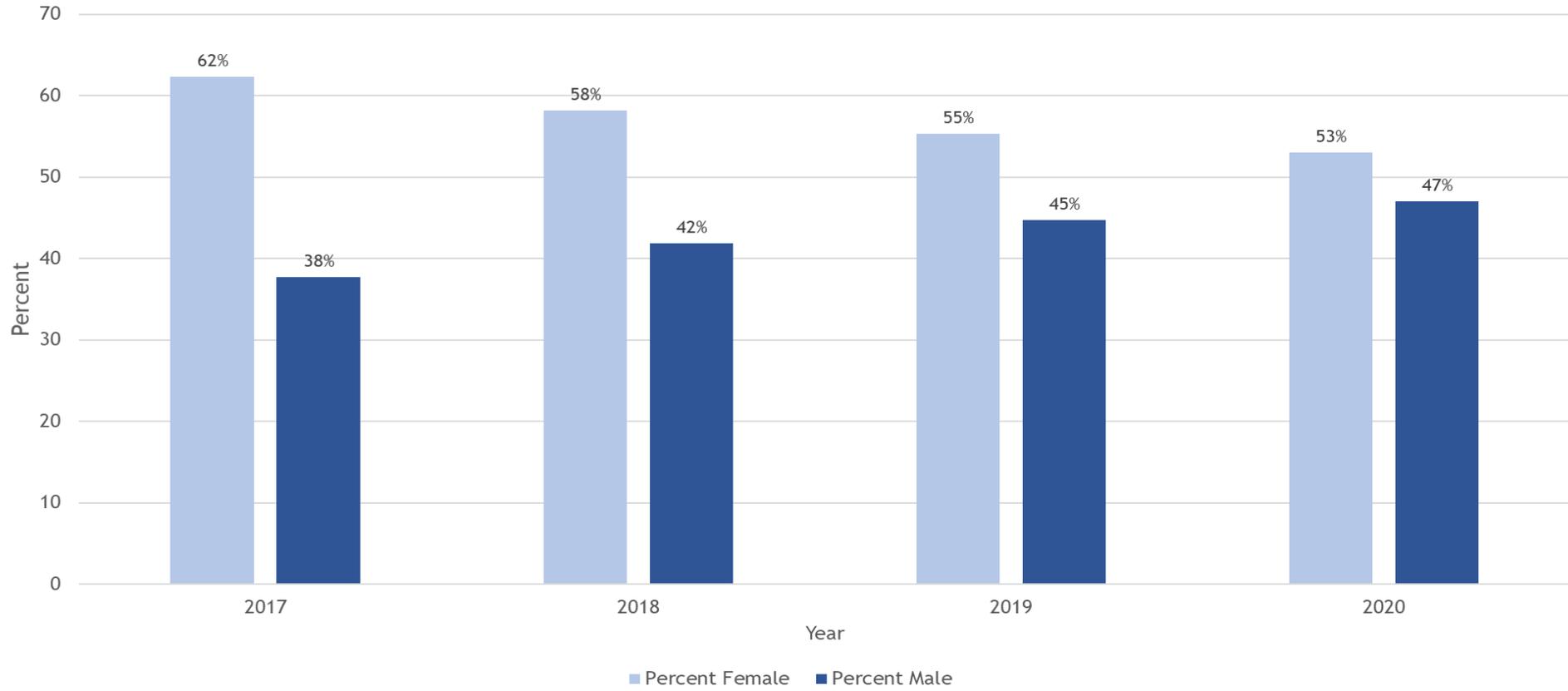
# Cumulative emergency department visits by Boulder County residents for suicidal attempt by year, age 18-24



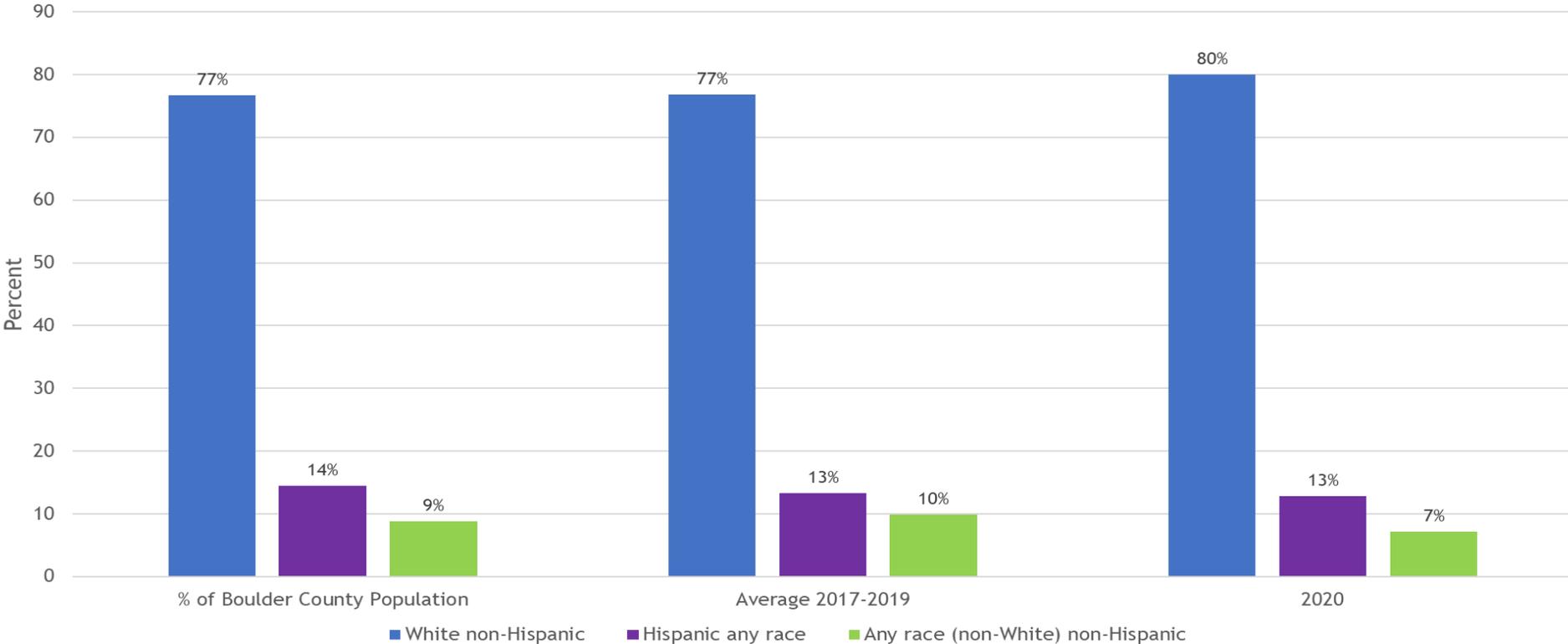
Percent increase of cumulative emergency department visits by Boulder County residents for suicide attempt by age group, 2017-2020

	Average 2017-2019	2020	% increase in 2020
0-9	5.33	17	219%
10-17	112	127	13%
18-24	84	129	53%
25-29	40	85	113%
30-39	67.67	97	43%
40-49	51.67	92	77%
50-59	45.67	72	57%
60-69	26	66	150%
70+	18	61	239%

# Gender comparison of emergency department visits for suicidal attempt by Boulder County residents by year



Percent by race/ethnicity of emergency department visits for suicide attempt by Boulder County residents, (average years 2017-2019, 2020) compared to overall percent by race/ethnicity Boulder County population



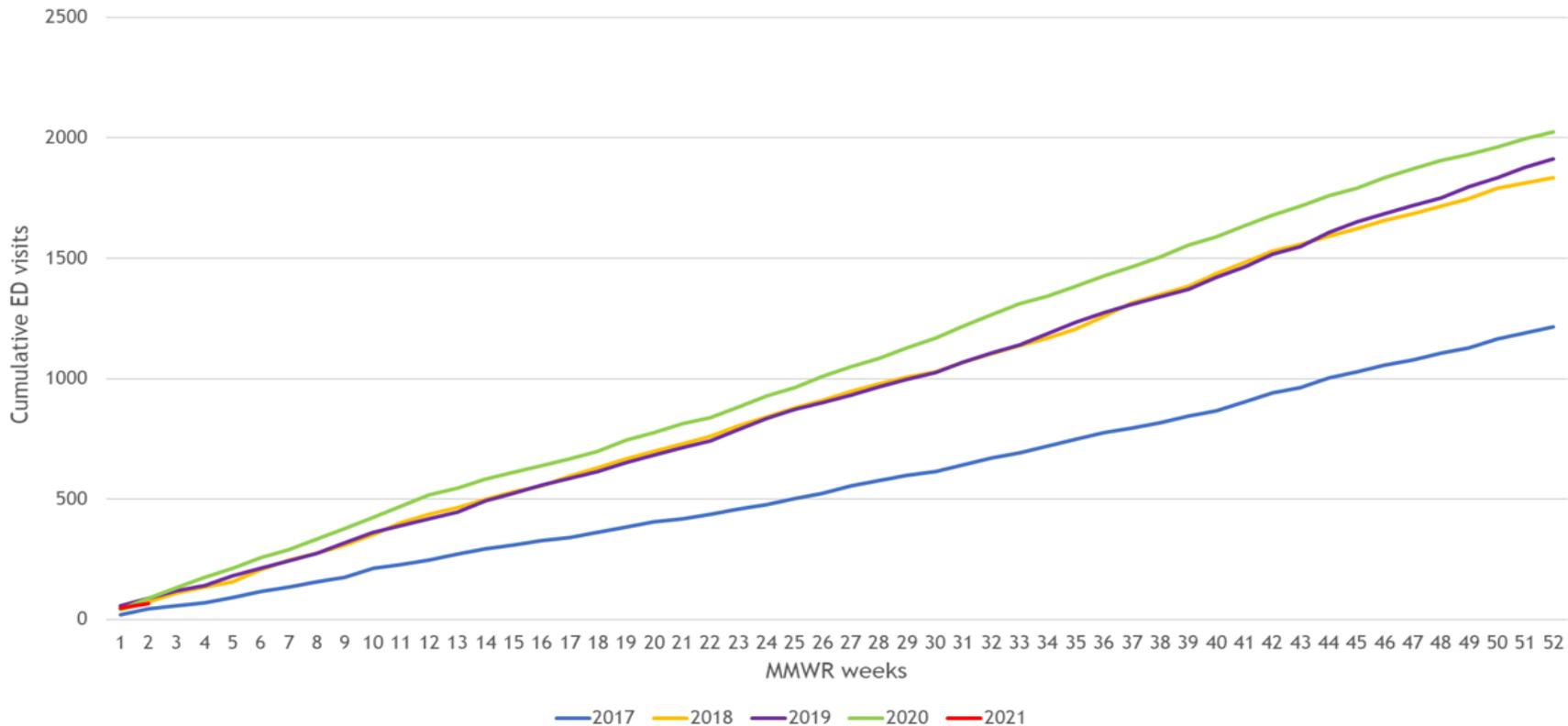
Source: Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE) (AKA Syndromic Surveillance)

# Alcohol Overdose

2017-2020



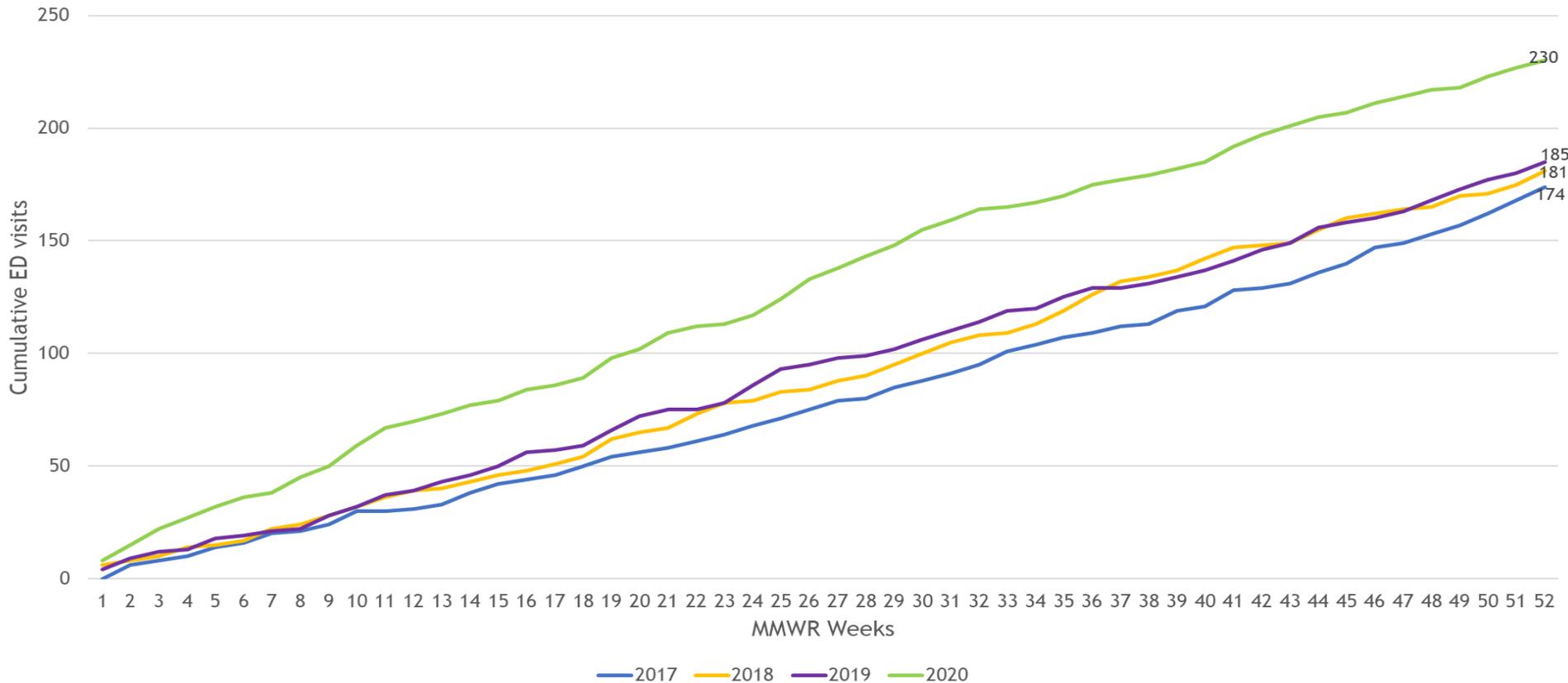
## Cumulative emergency department visits for alcohol overdose in Boulder County, by year



Source: Electronic Surveillance System for the Early Notification of Community-based Epidemics (AKA Syndromic Surveillance)



# Cumulative emergency department visits for alcohol overdose by Boulder County residents by year ages 25-29

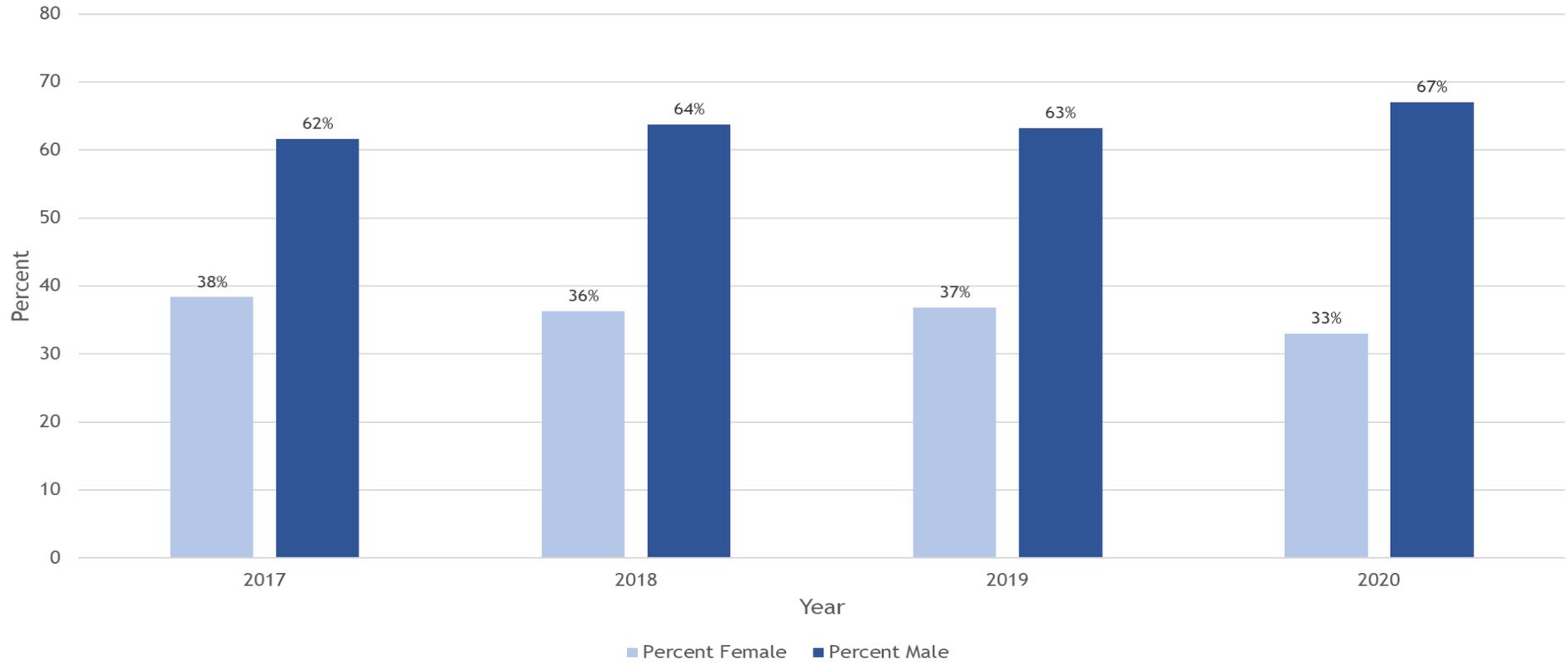


## Percent increase of cumulative emergency department visits by Boulder County residents for alcohol overdose by age group, 2017-2020

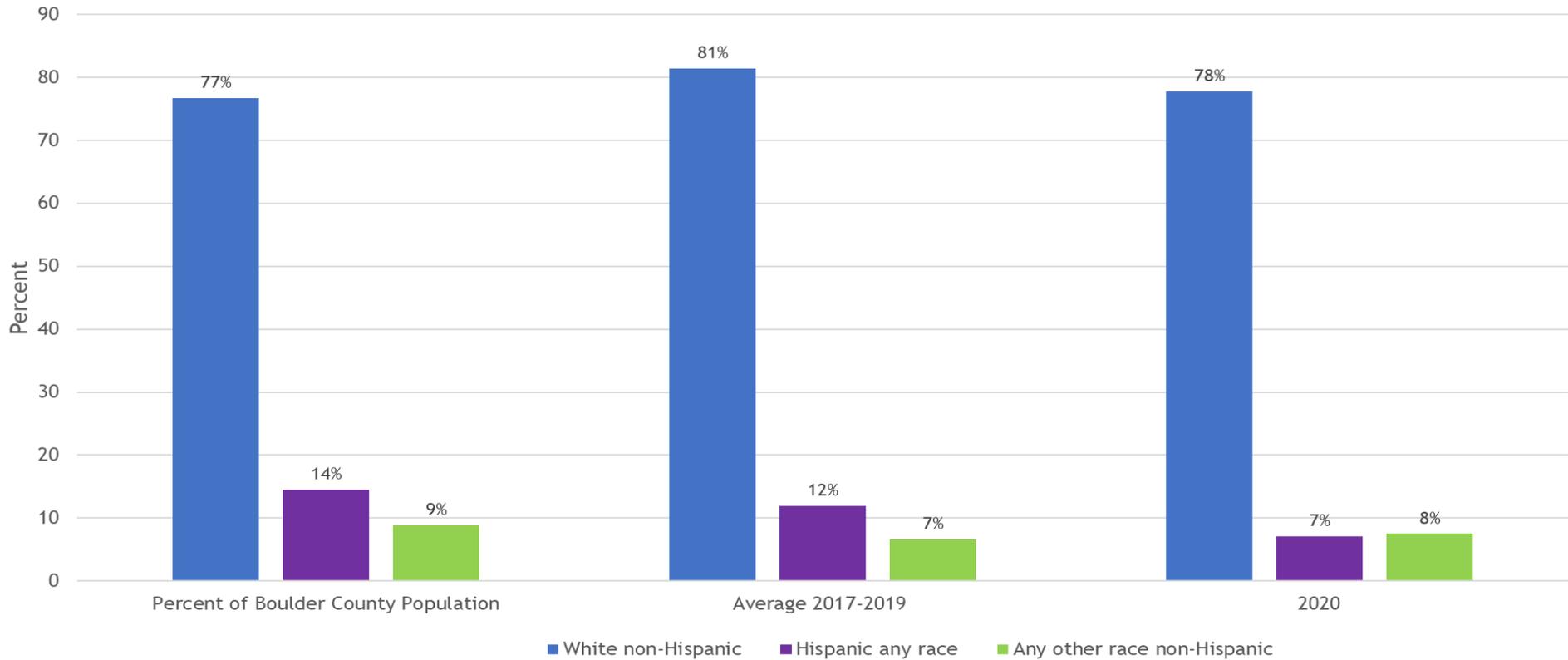
	Average 2017-2019	2020	% increase in 2020
25-29	180	230	28%
30-39	264	404	53%
40-49	283	373	32%
50-59	352	509	45%
60-69	241	379	6%



# Gender comparison of emergency department visits for alcohol overdose by Boulder County residents by year



# Percent by race/ethnicity of emergency department visits for alcohol overdose by Boulder County residents, (average years 2017-2019, 2020) compared to overall percent by race/ethnicity Boulder County population





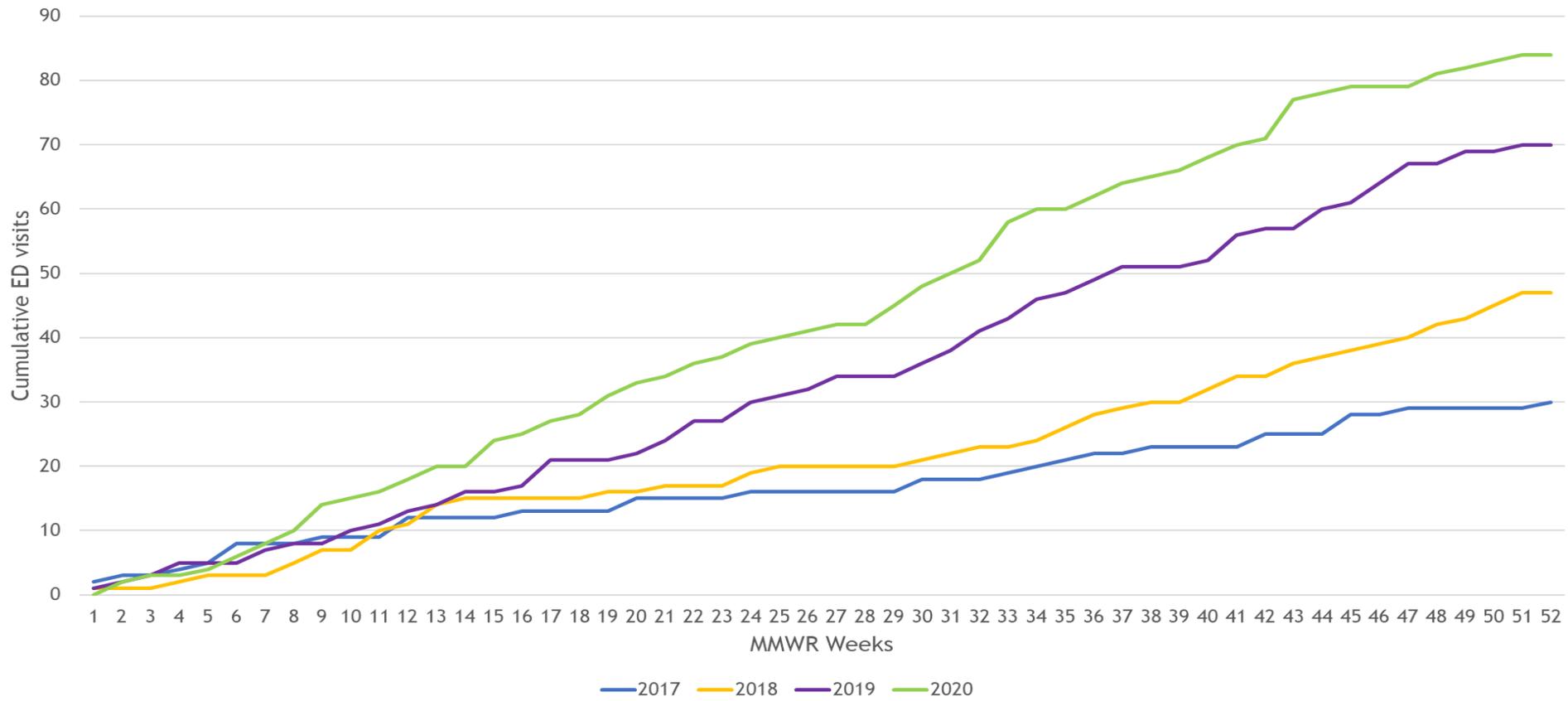
# Opioid Overdose

2017-2020



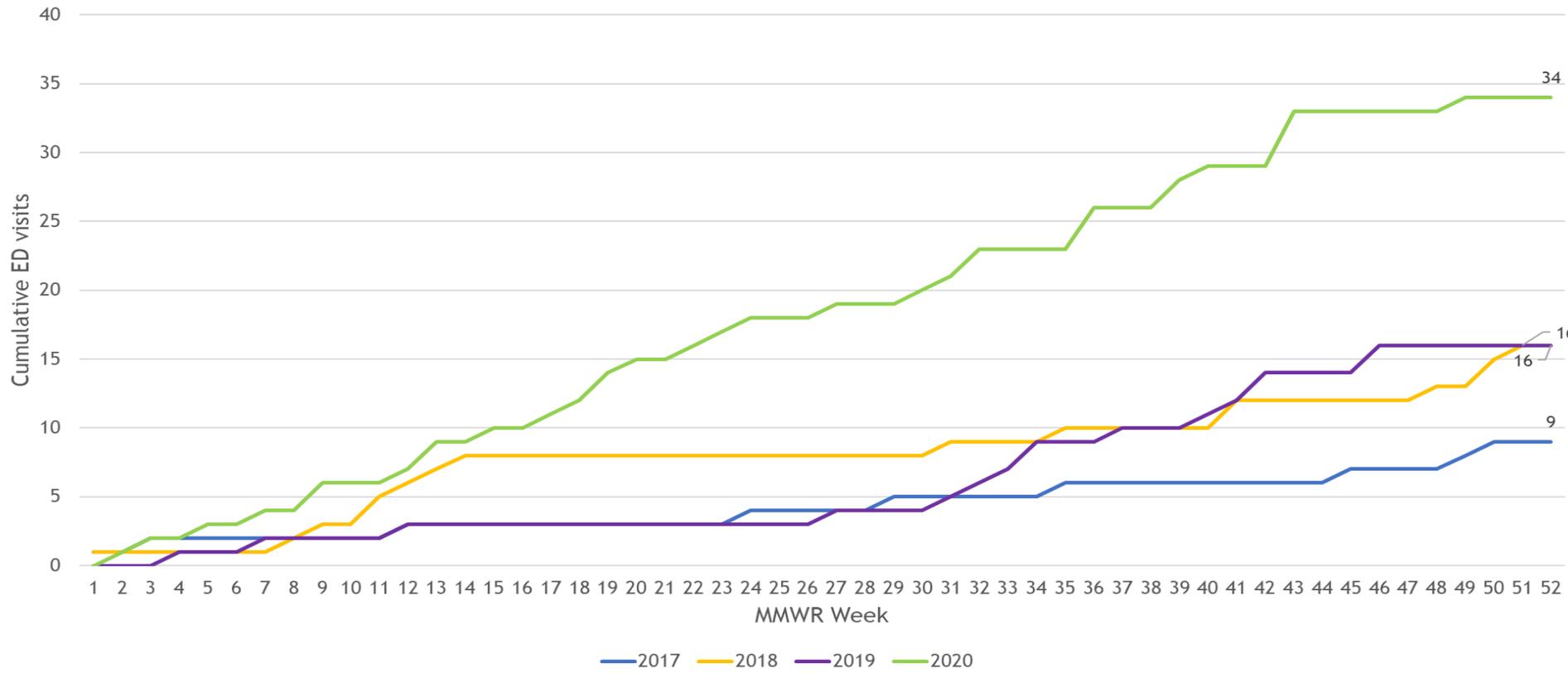


# Cumulative emergency department visits for opioid overdose in Boulder County, by year

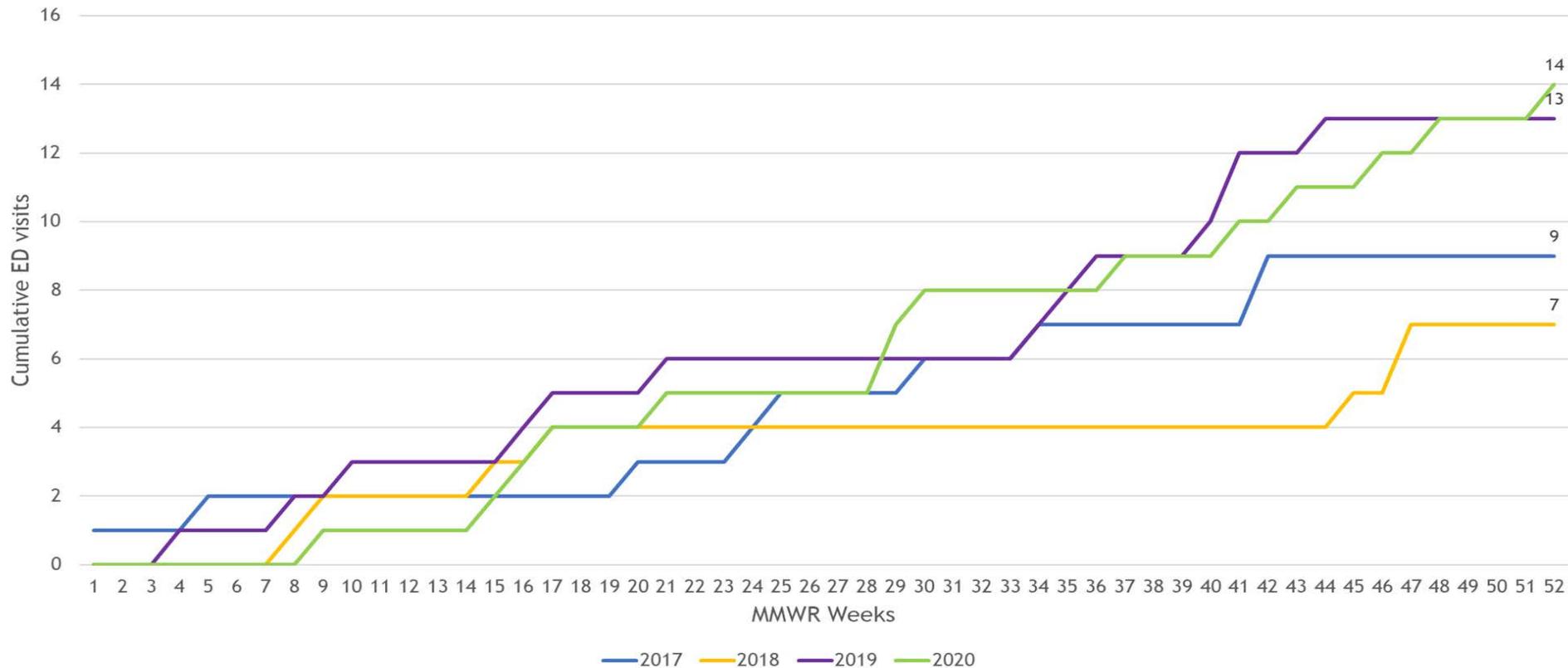




# Cumulative emergency department visits by Boulder County residents for opioid overdose by year, age 25-29



# Cumulative emergency department visits of Boulder County residents for opioid overdose by year, age 18-24

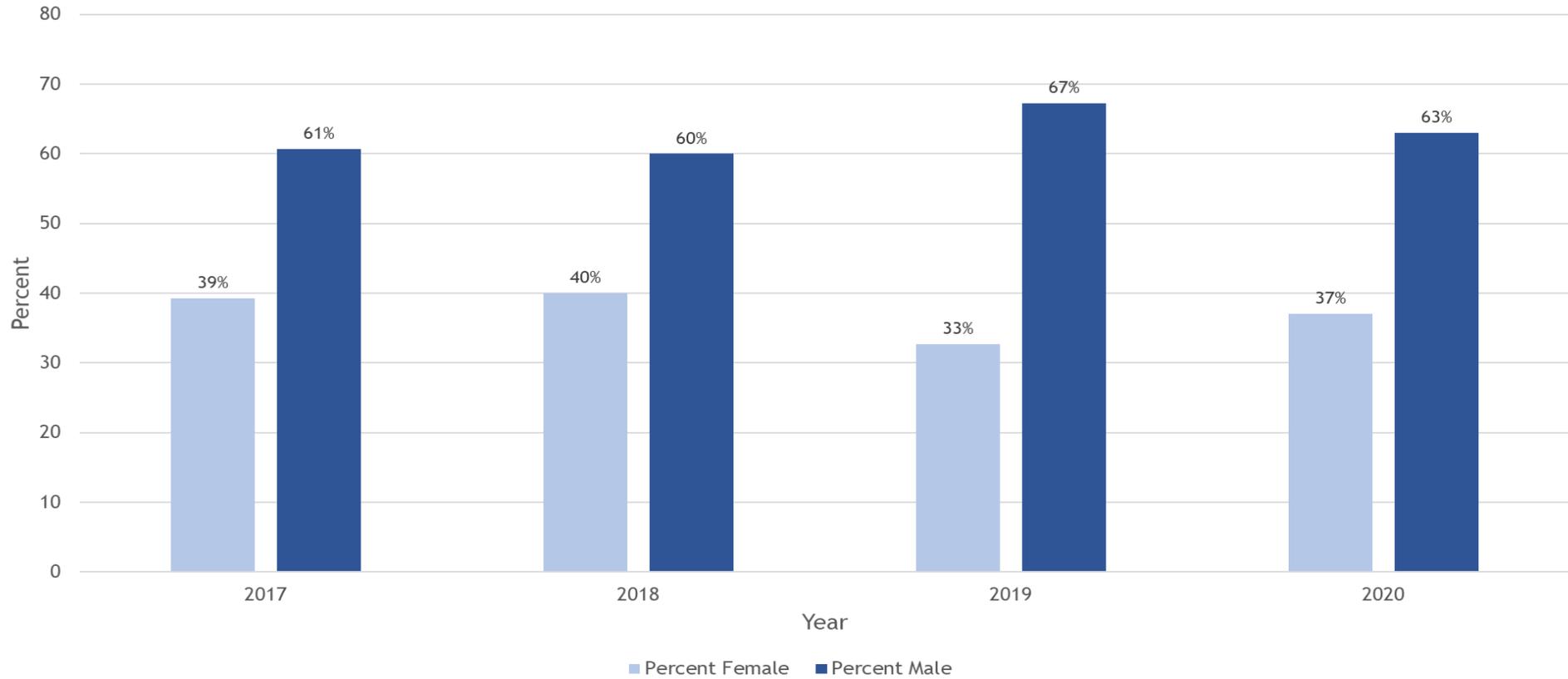




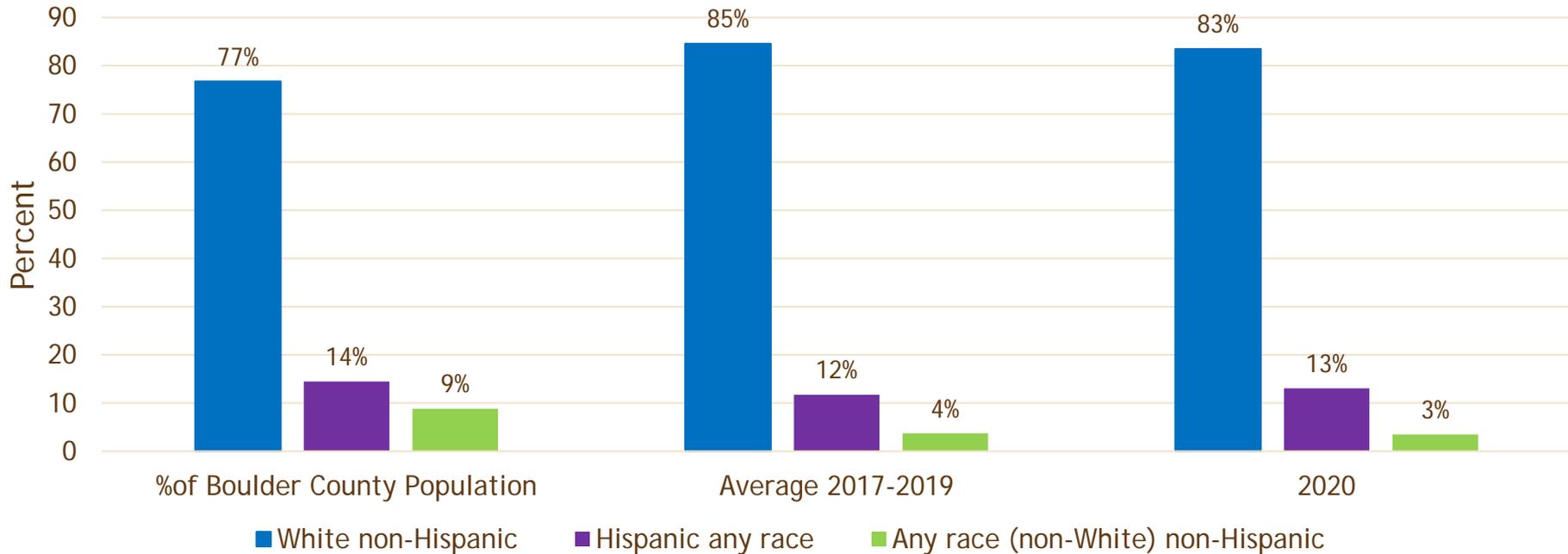
## Percent increase of cumulative emergency department visits by Boulder County residents for opioid overdose by age group, 2017-2020

	Average 2017-2019	2020	% increase in 2020
25-29	14	34	143%
40-49	9	15	67%
50-59	6	22	267%
70+	7	14	100%

# Gender comparison of emergency department visits for opioid overdose by Boulder County residents by year

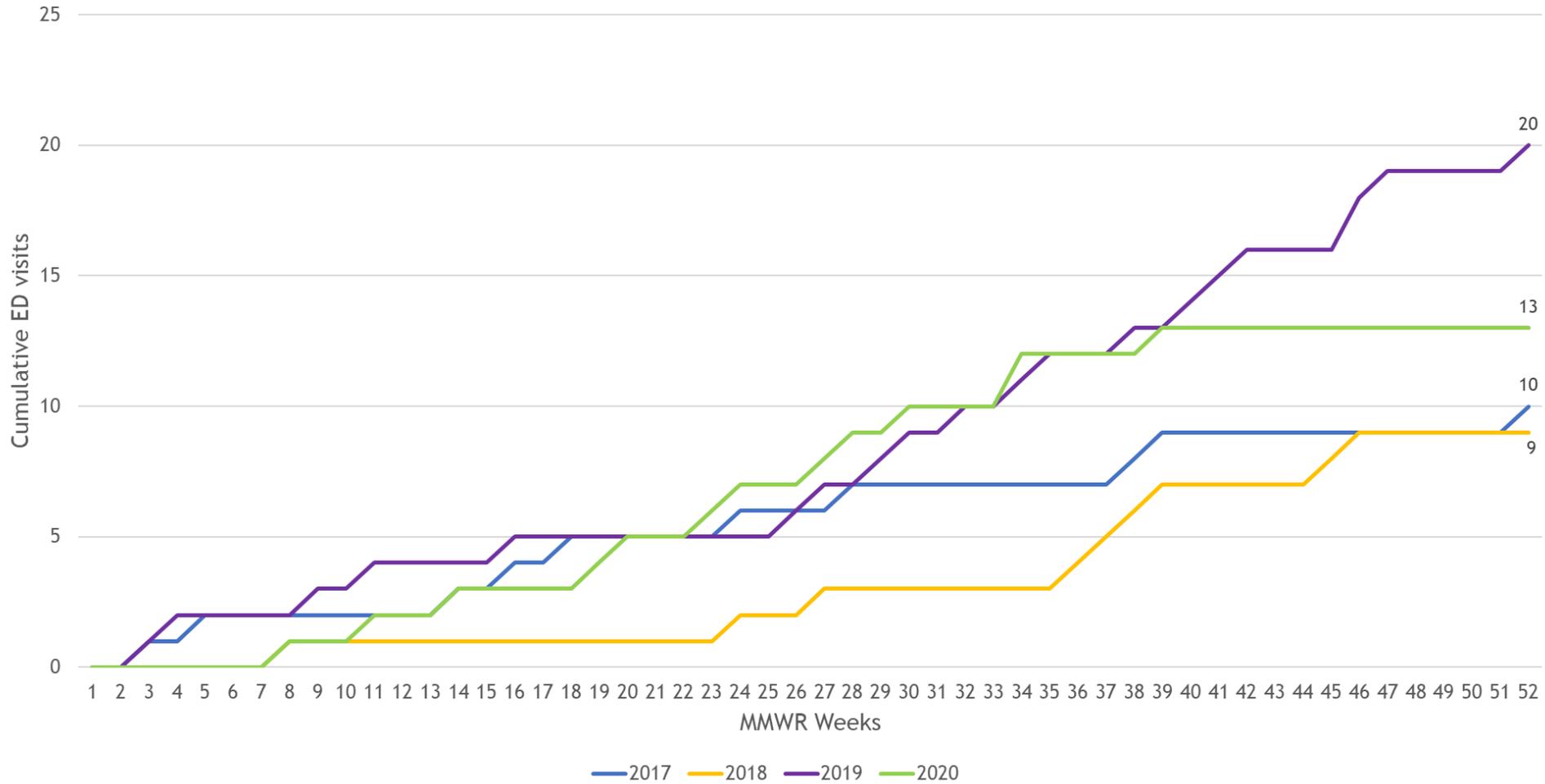


# Percent by race/ethnicity of emergency department visits for opioid overdose by Boulder County residents , (average years 2017-2019, 2020) compared to overall percent by race/ethnicity Boulder County population





# Cumulative ED visits for stimulant overdose to Boulder County Hospitals by year





# Summary of findings

- Indicators most concerning
    - Suicide attempt
      - 9/9 age groups affected (13-239% increase in 2020)
      - F>M
    - Alcohol overdose
      - 5/9 age groups affected (6-53% increase in 2020)
      - M>F
    - Opioid overdose
      - 4/9 age groups affected (67-267% increase in 2020)
      - M>F
  - Race/ethnicity does not seem to be a driving force
  - Limitations of data
    - ED data only
    - Gender binary only
- 

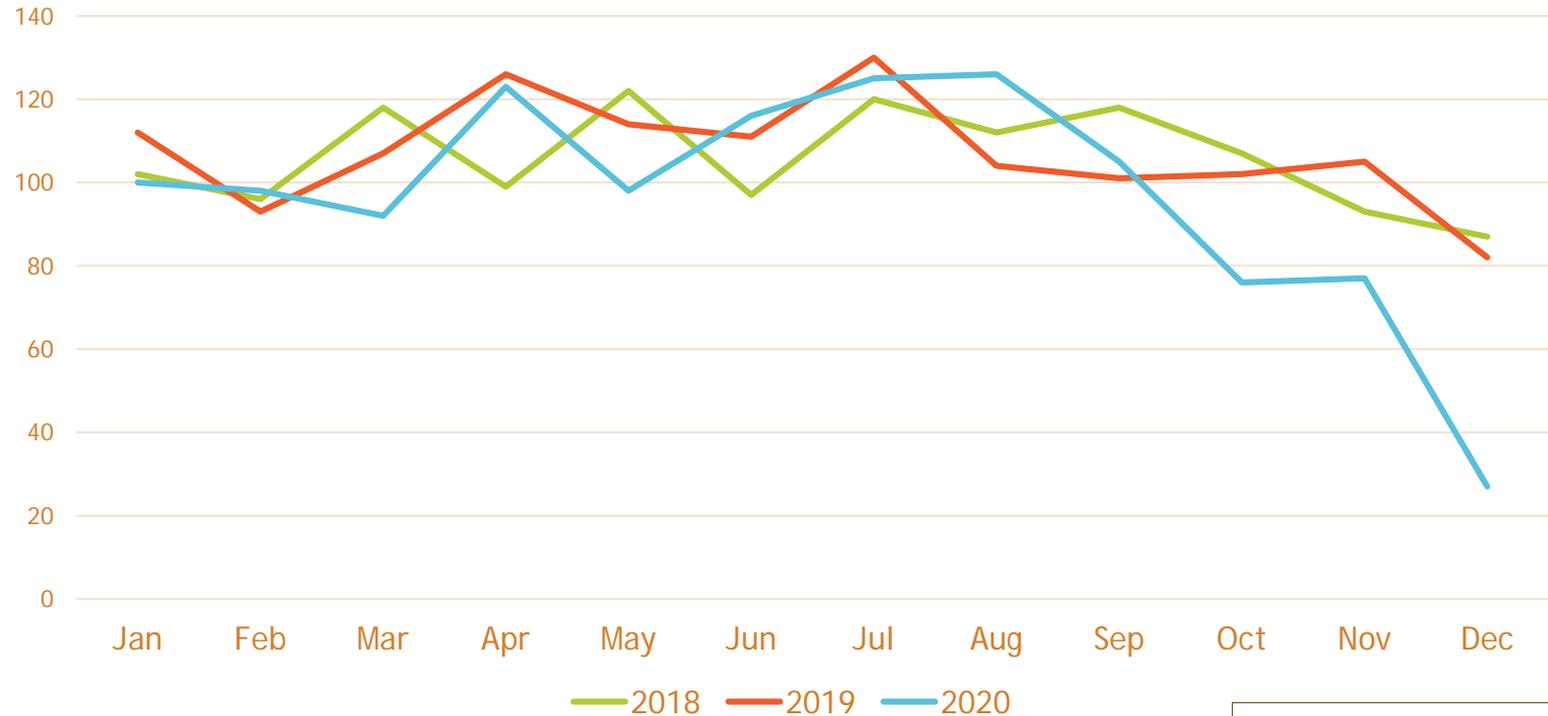


# Death data from Vital Statistics

[https://www.cdc.gov/nchs/nvss/about\\_nvss.htm](https://www.cdc.gov/nchs/nvss/about_nvss.htm)

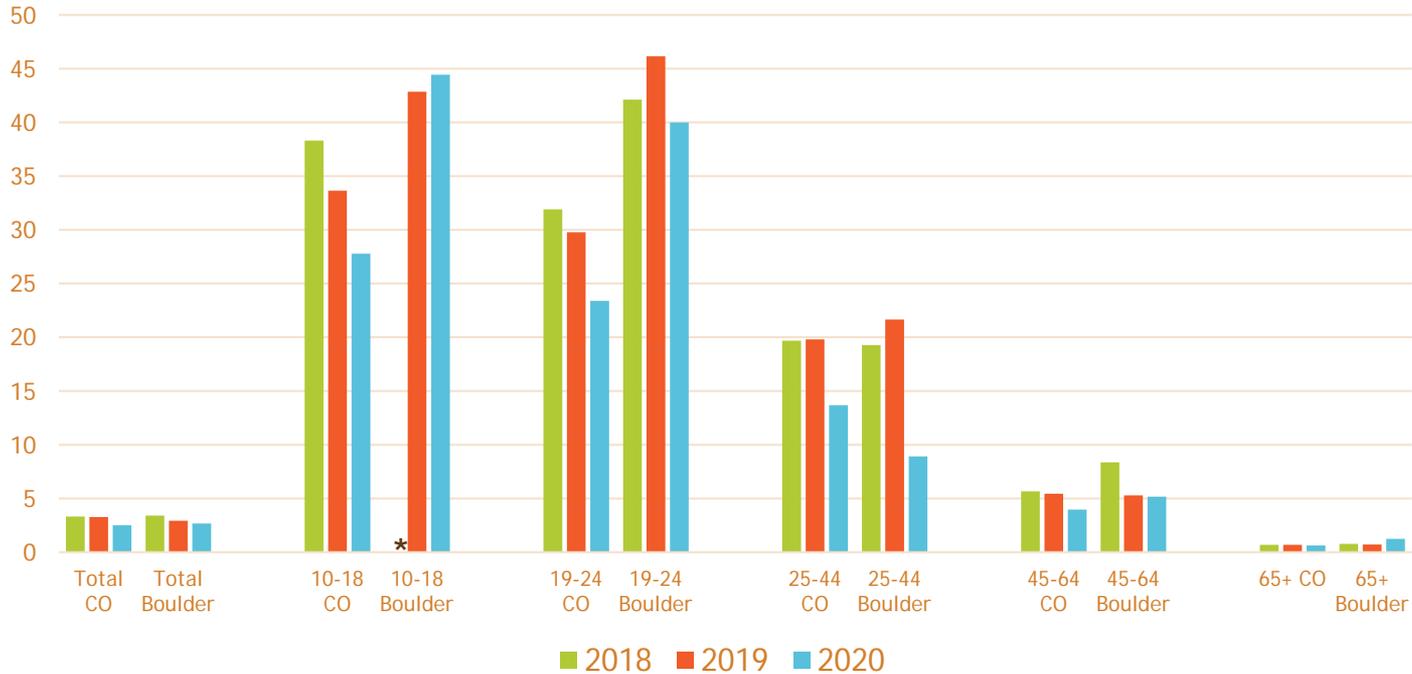


## Number of Suicide Deaths in Colorado by Month 2018-2020



Please note that 4<sup>th</sup> Quarter 2020 data is not yet complete.

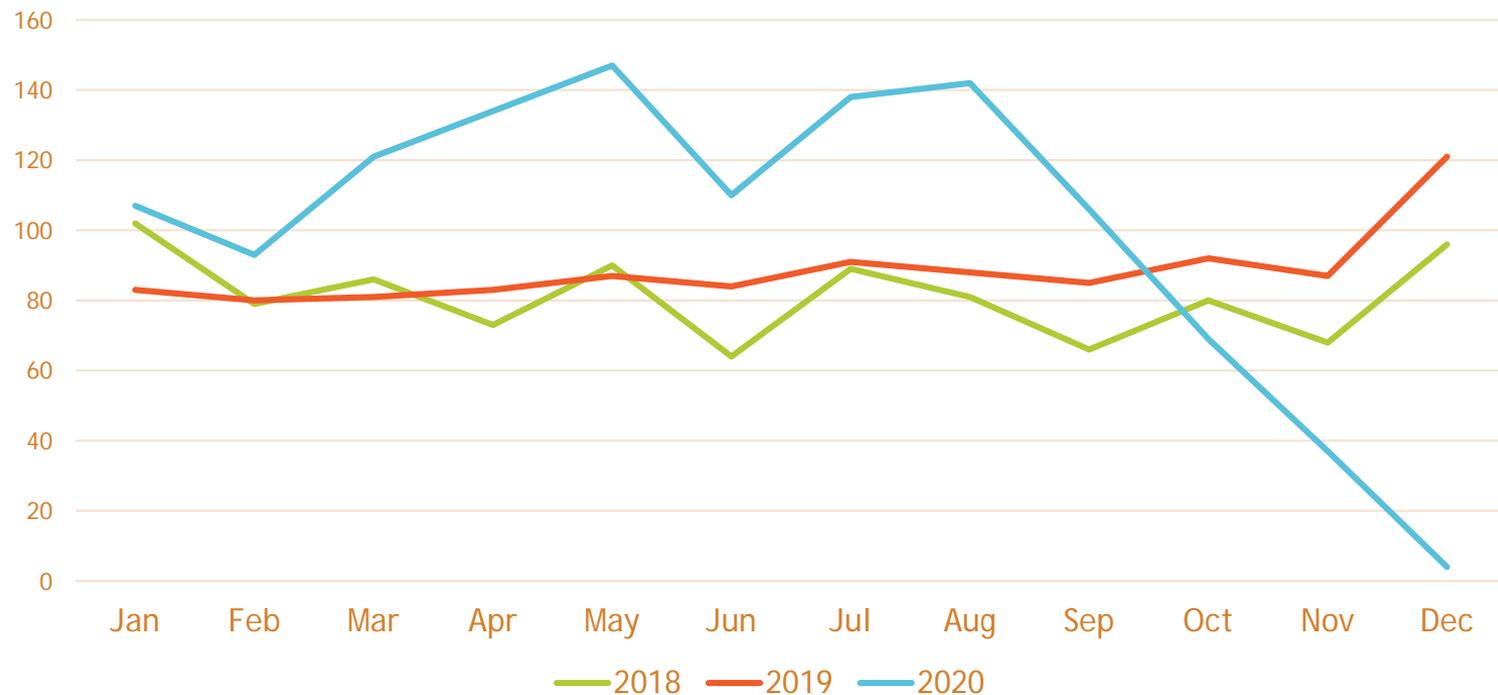
# Suicide Deaths as a Percent of Total Deaths by Age Group in Colorado and Boulder County 2018-2020



\* indicates fewer than three events in category.

Please note that 4<sup>th</sup> Quarter 2020 data is not yet complete.

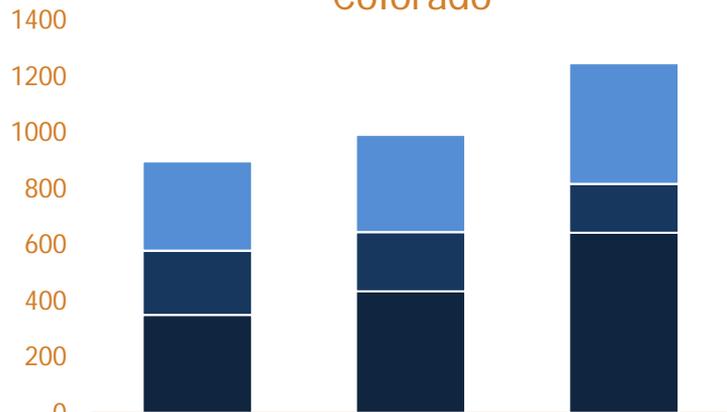
## Number of Drug Poisoning Deaths in Colorado by Month 2018-2020



Please note that 4<sup>th</sup> Quarter 2020 data is not yet complete.

# Number of Poisoning Deaths from Methamphetamine, Heroin, and Any Opioid Analgesic from 2018-2020

## Colorado



	2018	2019	2020
■ Methamphetamine	318	347	430
■ Heroin	229	211	174
■ Any opioid analgesic	349	433	642

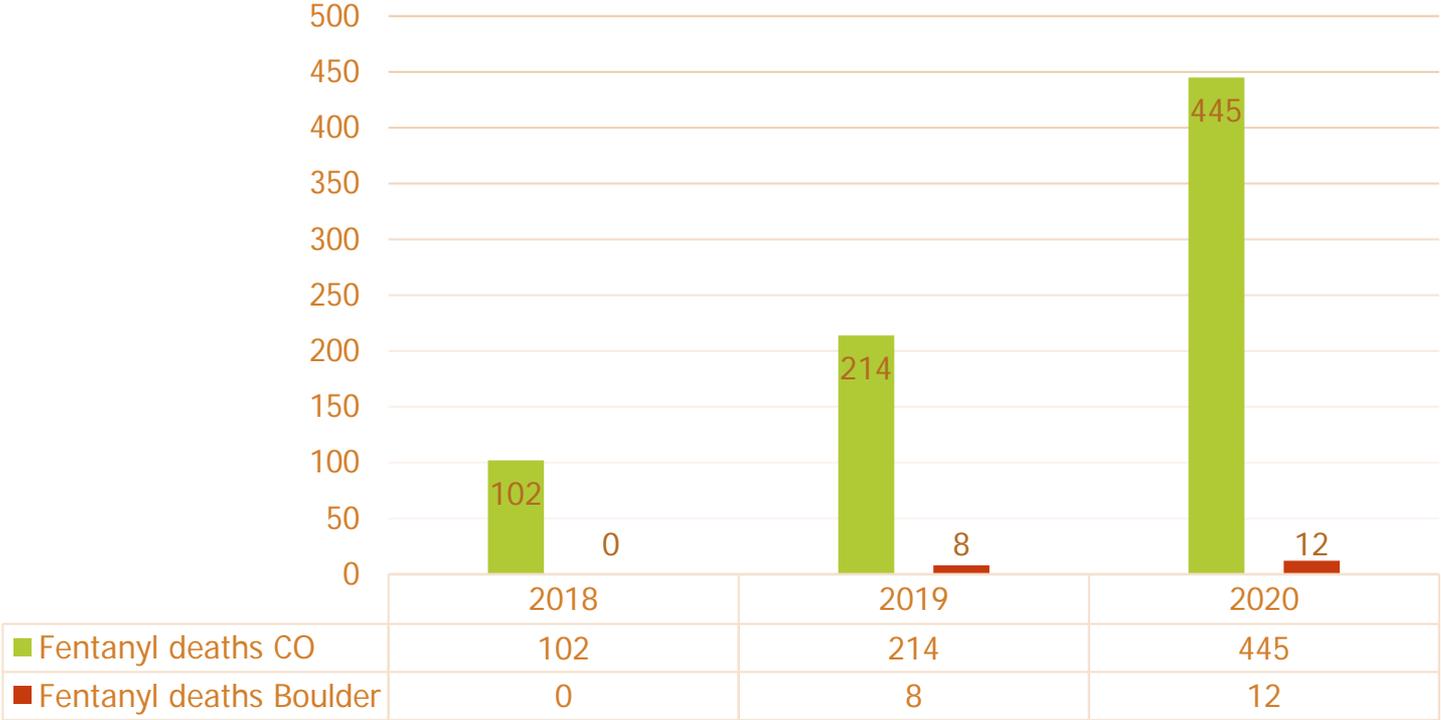
## Boulder County



	2018	2019	2020
■ Methamphetamine	14	20	18
■ Heroin	9	14	9
■ Any opioid analgesic	12	18	25

Please note that 4<sup>th</sup> Quarter 2020 data is not yet complete.

# Number of Fentanyl Deaths in Colorado and Boulder County 2018-2020



Please note that 4<sup>th</sup> Quarter 2020 data is not yet complete.

Source: Vital Statistics Program, Colorado Department of Public Health and Environment.



# National Trends

<https://www.cdc.gov/media/releases/2020/p1218-overdose-deaths-covid-19.html>

# Find more information at CoHID Colorado Health Information Dataset

**CoHID Colorado Health Information Dataset**

The Colorado Health Information Dataset (CoHID) provides access to state and local-level data and resources compiled by the Colorado Department of Public Health and Environment to help understand health and related issues affecting people in Colorado.

Instructions: Click on the data titles to view. Make sure your ad-blocker is turned off in order to view the pop-up window.

### Colorado Health Data & Statistics

<b>Live Births</b>	Live birth counts and rates for Colorado from the Colorado Vital Statistics Program, including detailed demographic and clinical characteristics about mothers and infants.	<b>Birth Defects</b>	Counts and prevalence rates of birth defects in Colorado from Colorado Responds to Children With Special Needs (CRCSN), including detailed demographic characteristics and diagnosis information.
<b>Deaths</b>	Death counts, crude rates and age-adjusted rates for Colorado from the Colorado Vital Statistics Program, including detailed demographic characteristics and cause of death.	<b>Population Estimates</b>	Population estimates at the county and state level from the Colorado Demography Office, including detailed year, sex, age, race and Hispanic origin information.
<b>Cancer Incidence</b>	Cancer incidence counts, crude rates and age-adjusted rates for Colorado from the Colorado Central Cancer Registry, including detailed demographic characteristics and cancer site and type.	<b>Chronic Disease</b>	County, regional and state data on adults and children in Colorado from multiple sources as compiled in VISION, including detailed demographic characteristics, risk factors and health behaviors.
<b>Colorado Health Indicators</b>	County, region and state-level data on a variety of health, environmental and social topics from multiple sources, for use in Colorado's Health Assessment and Planning System (CHAPS).	<b>Maternal Health</b>	State-level data on women in Colorado from the Colorado Pregnancy Risk Assessment Monitoring System (PRAMS), including detailed demographic characteristics, risk factors and Health behaviors before, during and after pregnancy.
<b>Healthy Kids Colorado Survey</b>	Regional and state-level statistics for high school-aged students in Colorado from the Healthy Kids Colorado Survey (HKCS), including detailed demographic characteristics, risk factors and health behaviors.	<b>Suicide</b>	Suicide death counts, crude rates and age-adjusted rates from the Colorado Violent Death Reporting System, including detailed demographic characteristics, cause of death, circumstances and toxicology.
<b>Environmental Public Health Tracking</b>	County, region and state-level statistics on a variety of health and environmental topics from multiple sources, prepared by the Colorado Environmental Public Health Tracking Program (EPHT).	<b>Communicable Diseases, STI/HIV, Environmental Epidemiology, &amp; Immunizations</b>	Links to data resources in the Disease Control and Epidemiology Division for communicable diseases, sexually transmitted infections, HIV and environmental epidemiology topics for Colorado.



# **Conclusion and implications**

# Strengths & limitations

Strengths: observe severe outcomes related to MH and SU and analyze by demographics

Limitations: SyS is ED only and gender binary; Vital Statistics- 2020 is incomplete and small local numbers

General limitations: Only capture most severe outcomes

# Implications- what can we do?

- Communication around this data
  - Looking upstream before severe outcome
  - Policy and Funding implications
  - Access- Telehealth
  - Other?
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# Discussion question

What other questions do you need answered by mental health and substance use data, both quantitative and qualitative?

