

Suspected Drug Overdose

As Seen and Treated by the Denver Health Paramedic Division

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Clinical Performance Captain



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<https://www.denverhealth.org/paramedics>

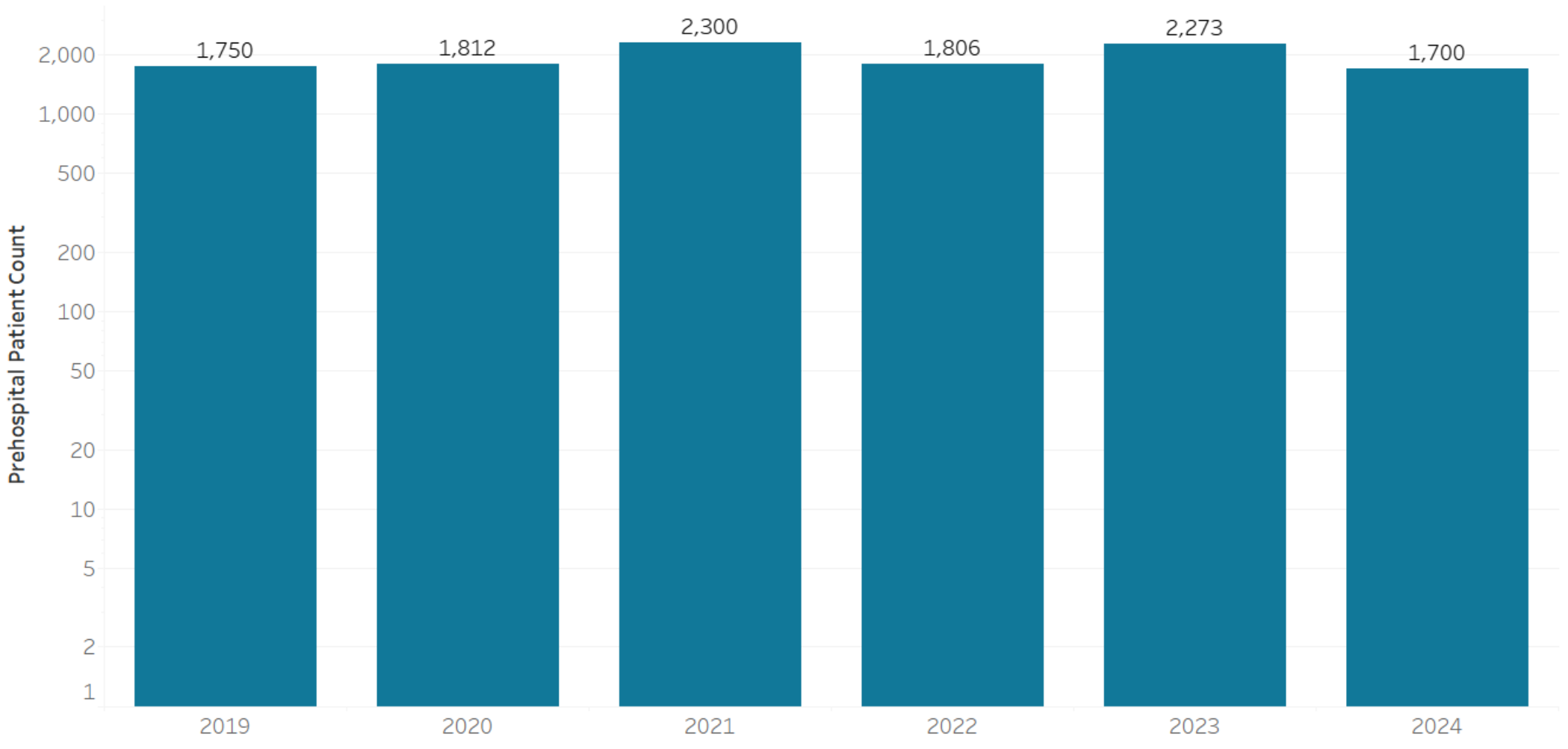


Data Methods and Considerations

- Date range: 1/1/2019 – 11/30/2024
- Source: DHPD electronic health records with provider impression including overdose
- City and County of Denver only
- Limitation: Likely underestimating actual drug overdoses, as providers often use less-specific impressions (e.g. altered mental status, respiratory distress)

Suspected Drug Overdose Patients by Year

Denver Health Paramedic Division
City and County of Denver

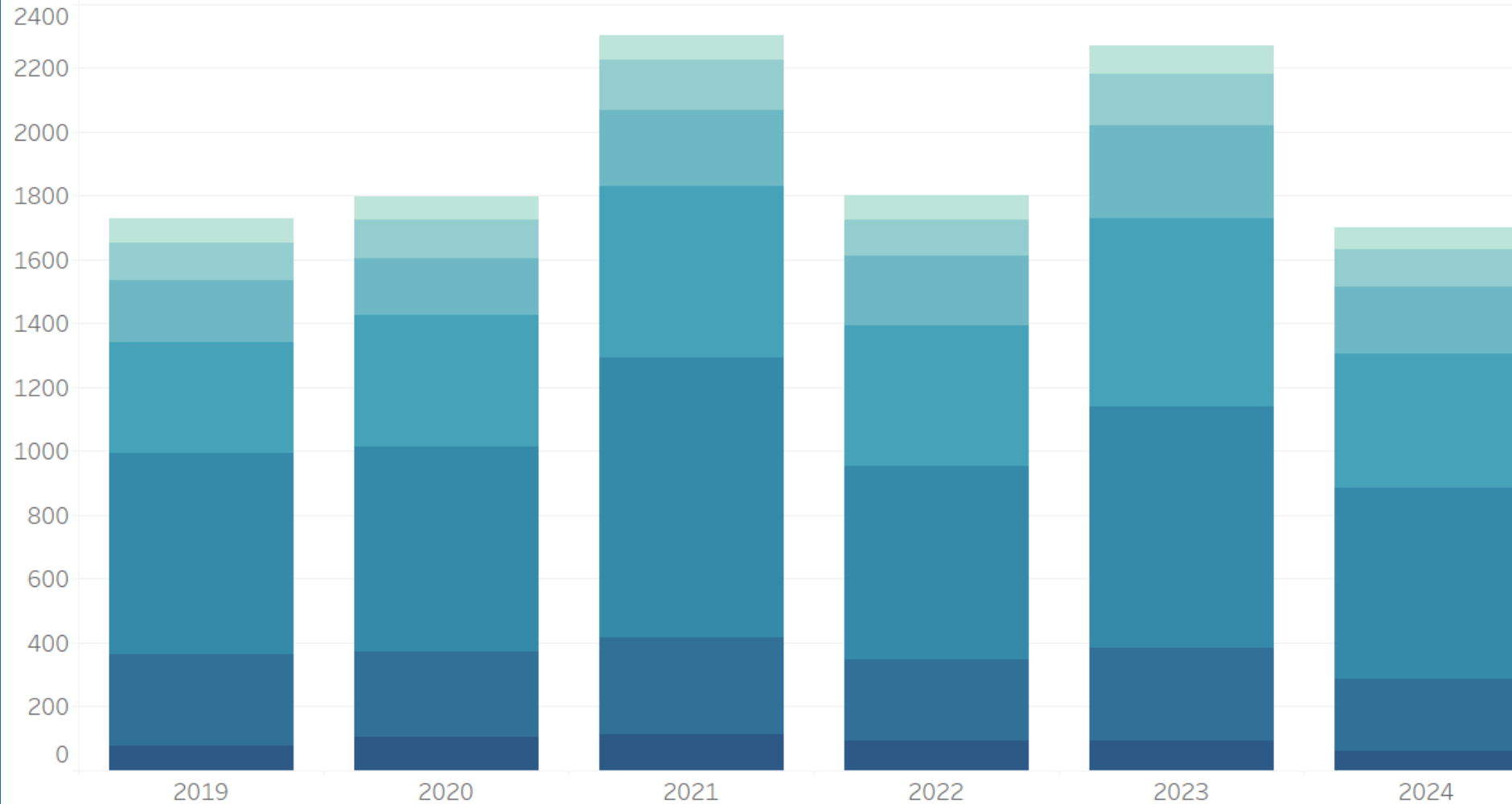


2024 data updated through 11/30/24



Suspected Drug Overdose Patients by Age

Denver Health Paramedic Division
City and County of Denver



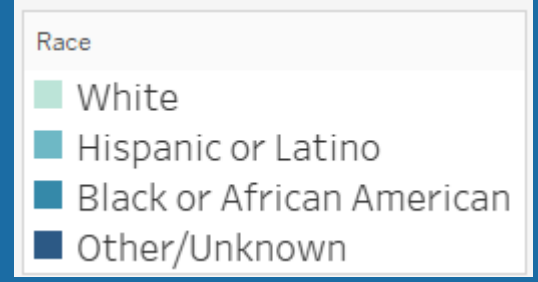
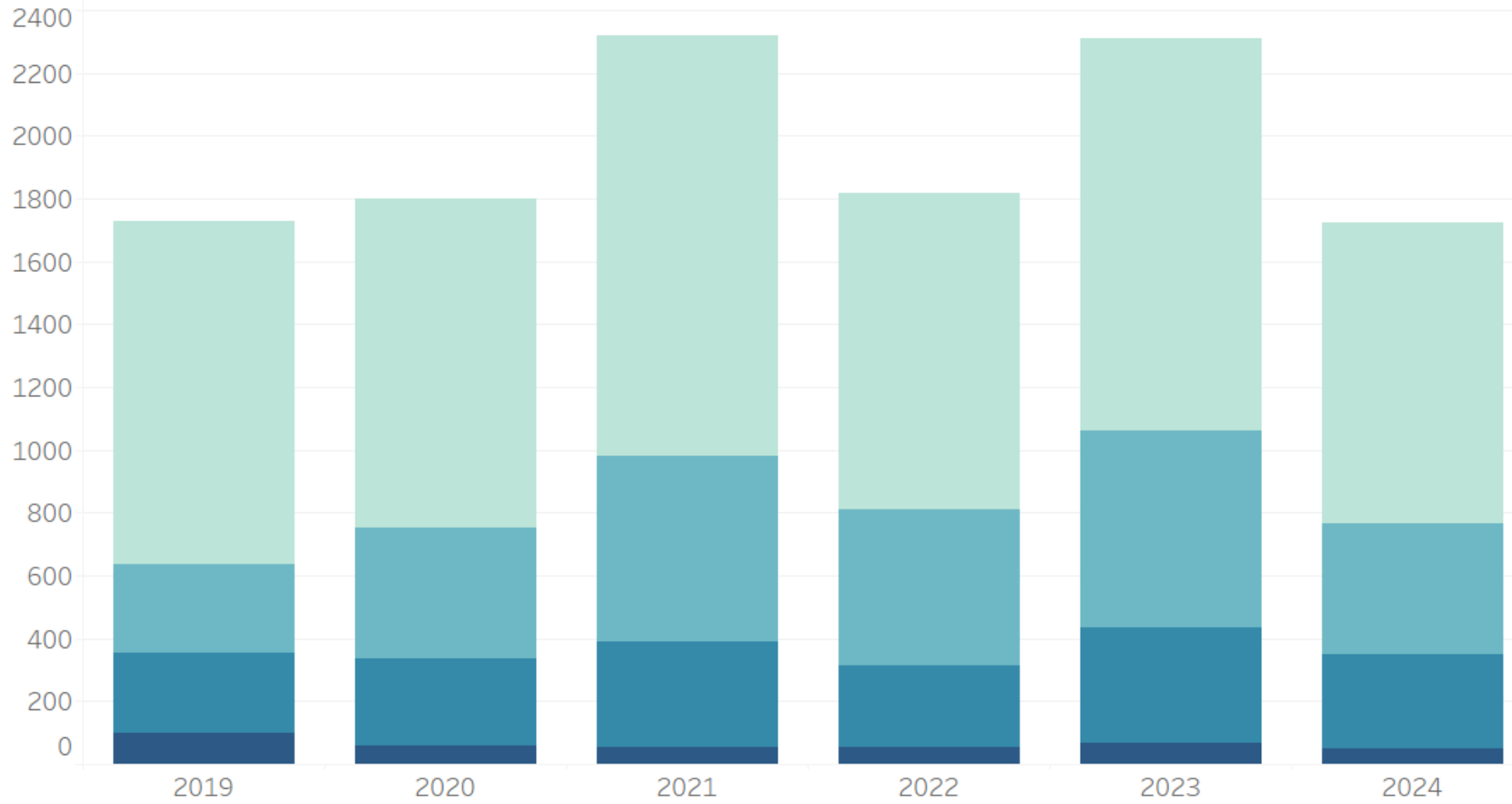
2024 data updated through 11/30/24



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Suspected Drug Overdose Patients by Race/Ethnicity

Denver Health Paramedic Division
City and County of Denver

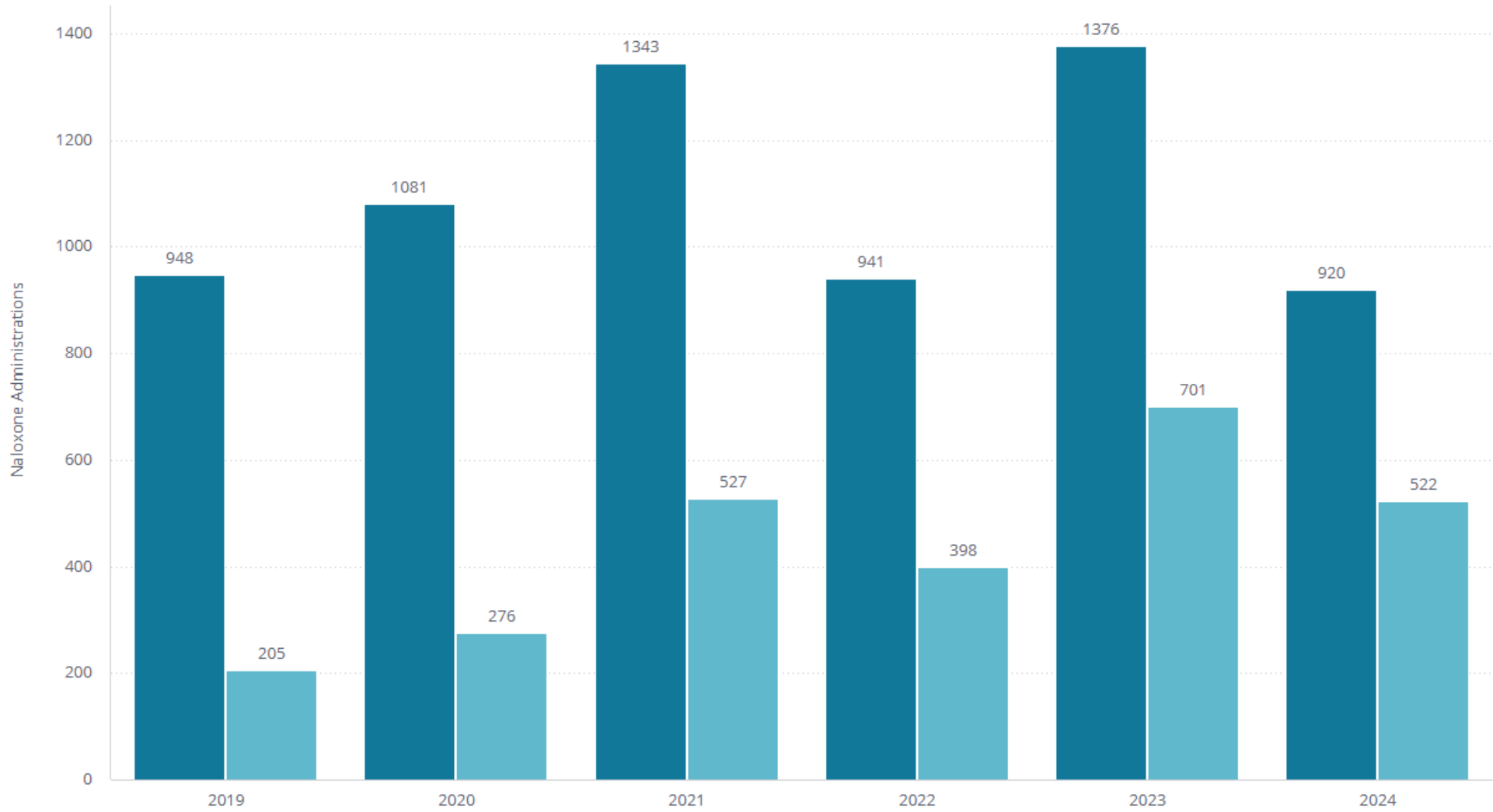


2024 data updated through 11/30/24

Naloxone Administrations by Year

Denver Health Paramedic Division
City and County of Denver

-  DHPD Administration
-  Prior to Arrival Administration



2024 data updated through 11/30/24



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There is more to this story.



Patients need more than immediate
life-saving treatment



Providers need more tools than
Naloxone



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How we support Our Community

Current Initiatives

Stigma
Reduction &
Verbal
De-escalation



Future Planning

Interagency
Collaboration

TRAINING AND
EDUCATION



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How we support Our Community

Current Initiatives

Updated
Prehospital
Protocols



Future Planning

Buprenorphine
Inductions

CLINICAL CARE
GUIDELINES



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How we support Our Community

Current Initiatives

The
Naloxone
Project



Future Planning

Hospital
Systems

STRATEGIC
PARTNERSHIPS



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Suspected Drug Overdose in the Denver Health Emergency Department

Alexandra Tillman, M.S.
Lead Epidemiologist

Brooke Bender, M.P.H.
Administrative Director



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Methods

- ED encounters from 2019-2024 (Q2) were extracted from the electronic health record for those aged 15 and older
- Flagged as an overdose-related encounter based on ICD-10-CM codes per the 2021 CDC drug overdose surveillance definition ([Vivolo-Kantor 2021](#))
 - Includes all intents
 - Excludes underdosing/adverse effects
 - Excludes subsequent encounters and sequelae
- Patient characteristics (age, race/ethnicity, housing status) also extracted
 - Access to housing status limited to 2023-2024
- Reported as rates of overdose-related ED visits per 1,000 all-cause ED visits
 - Binomial 95% confidence intervals applied
 - Z-tests for pairwise comparison of years

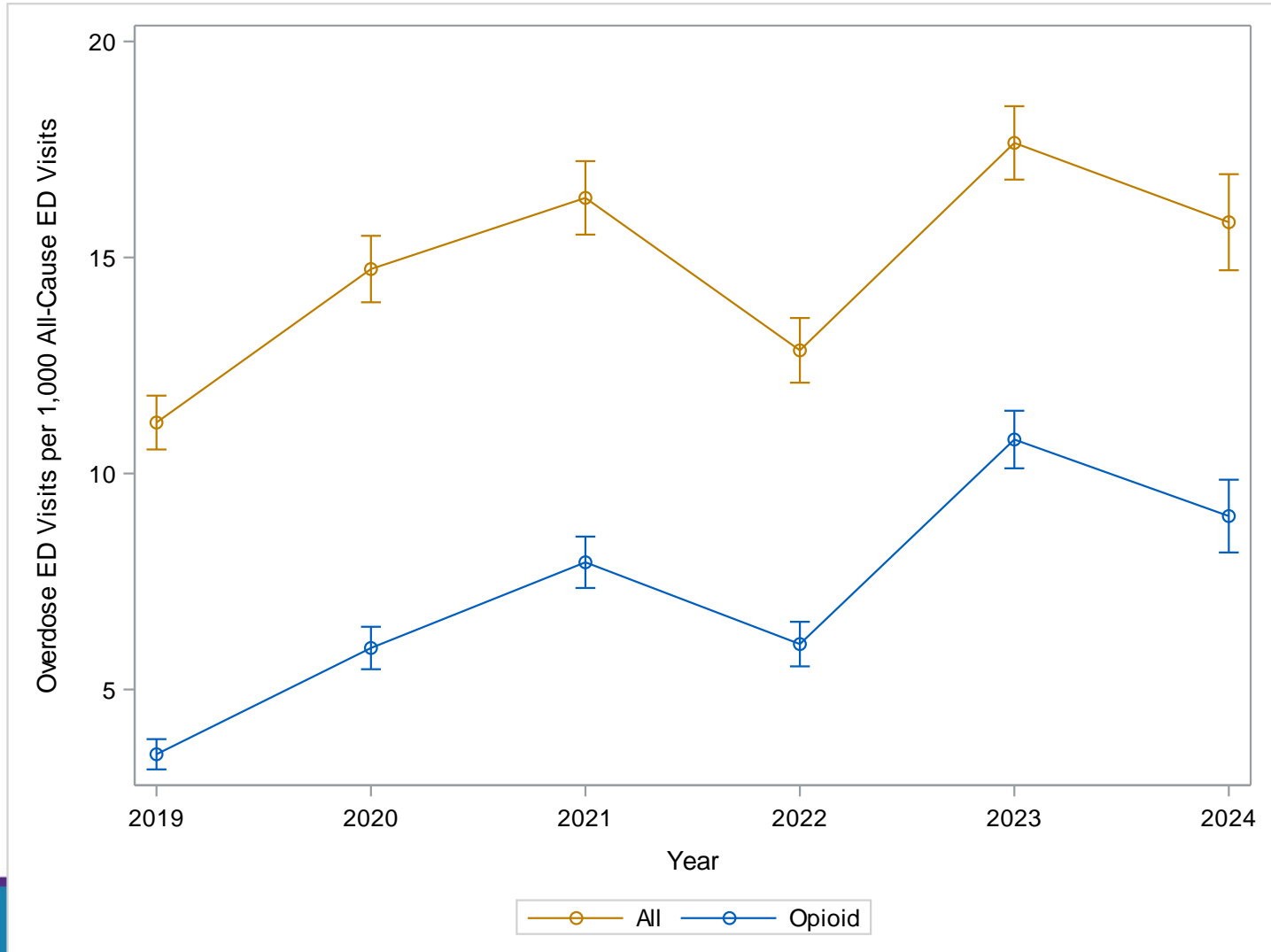


Data Considerations

- Likely an underestimate due to coding practices
 - Often non-specific codes like 'altered mental status' are used for a suspected overdose if the provider isn't confident about the cause
 - Opioid-specific codes may be used if a provider is confident that an opioid caused the suspected overdose
 - Fentanyl codes are rarely used as providers are rarely 100% sure that is what someone used
 - Similar for stimulants
- Diagnosis coding is lagging process, therefore data presented through Q2 2024
- Toxicology testing was not utilized as it is qualitative in our ED (present/not present) and can't distinguish between recent use, intoxication, and overdose



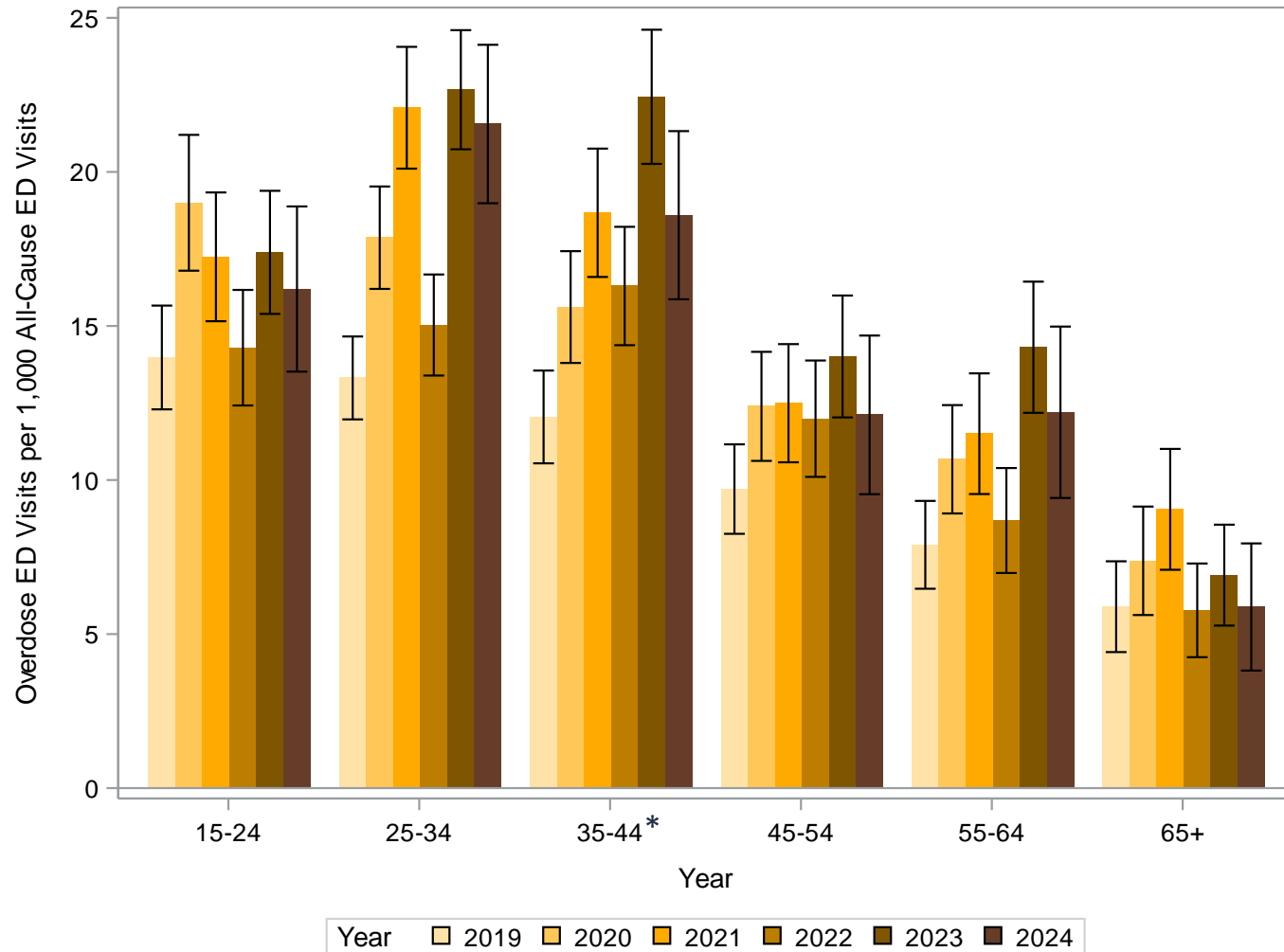
Suspected Drug Overdose Rates in Denver Health ED by Year



- Rates trending upward for both all drug (orange) and opioid (blue) overdoses in DH ED



Suspected Drug Overdose Rates in Denver Health ED by Age

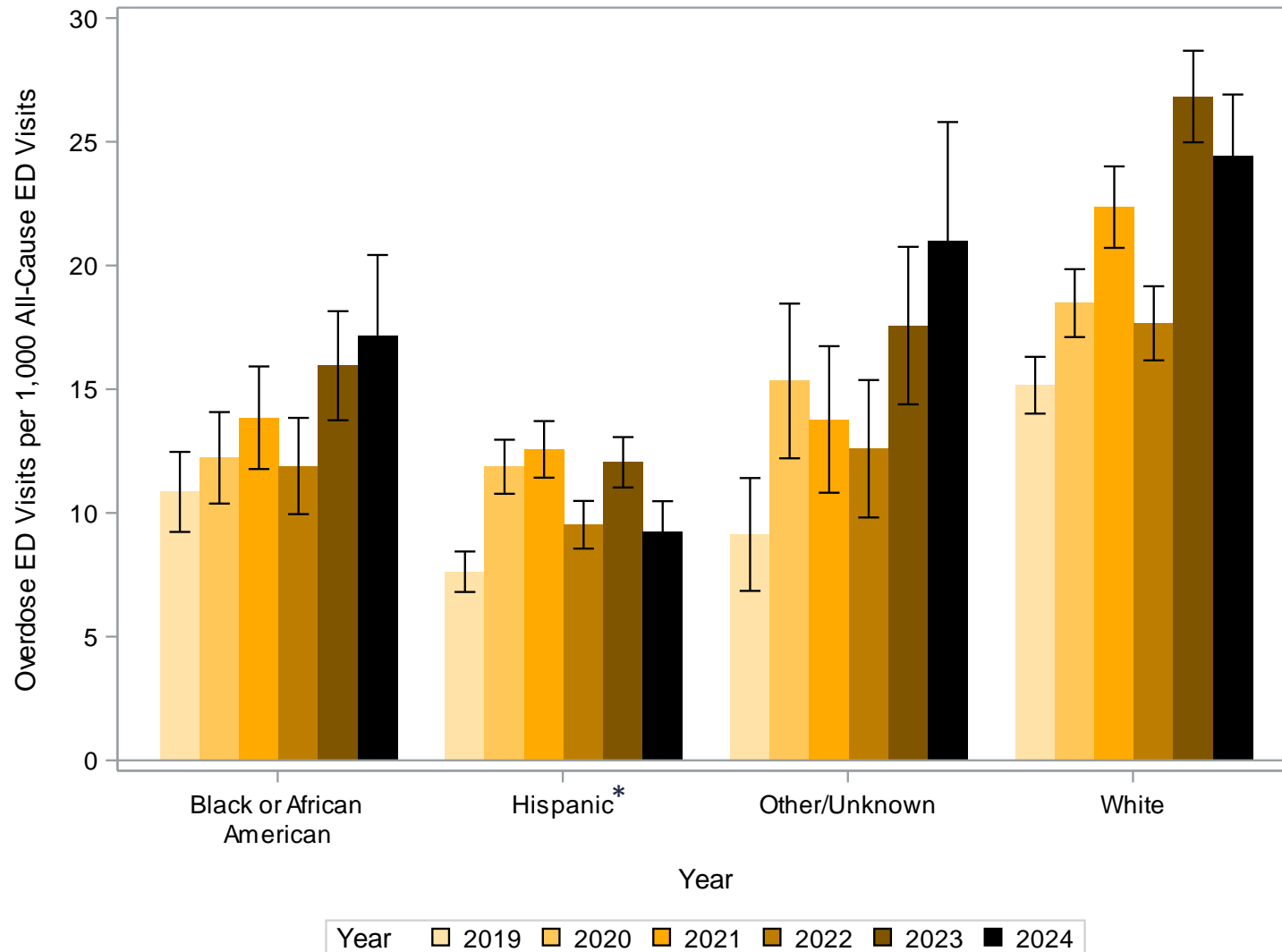


- Rates higher in younger age groups
- However, overdose is not just a 'young person' issue

*Rate in 2024 significantly different than 2023, $p < 0.05$



Suspected Drug Overdose Rates in Denver Health ED by Race/Ethnicity

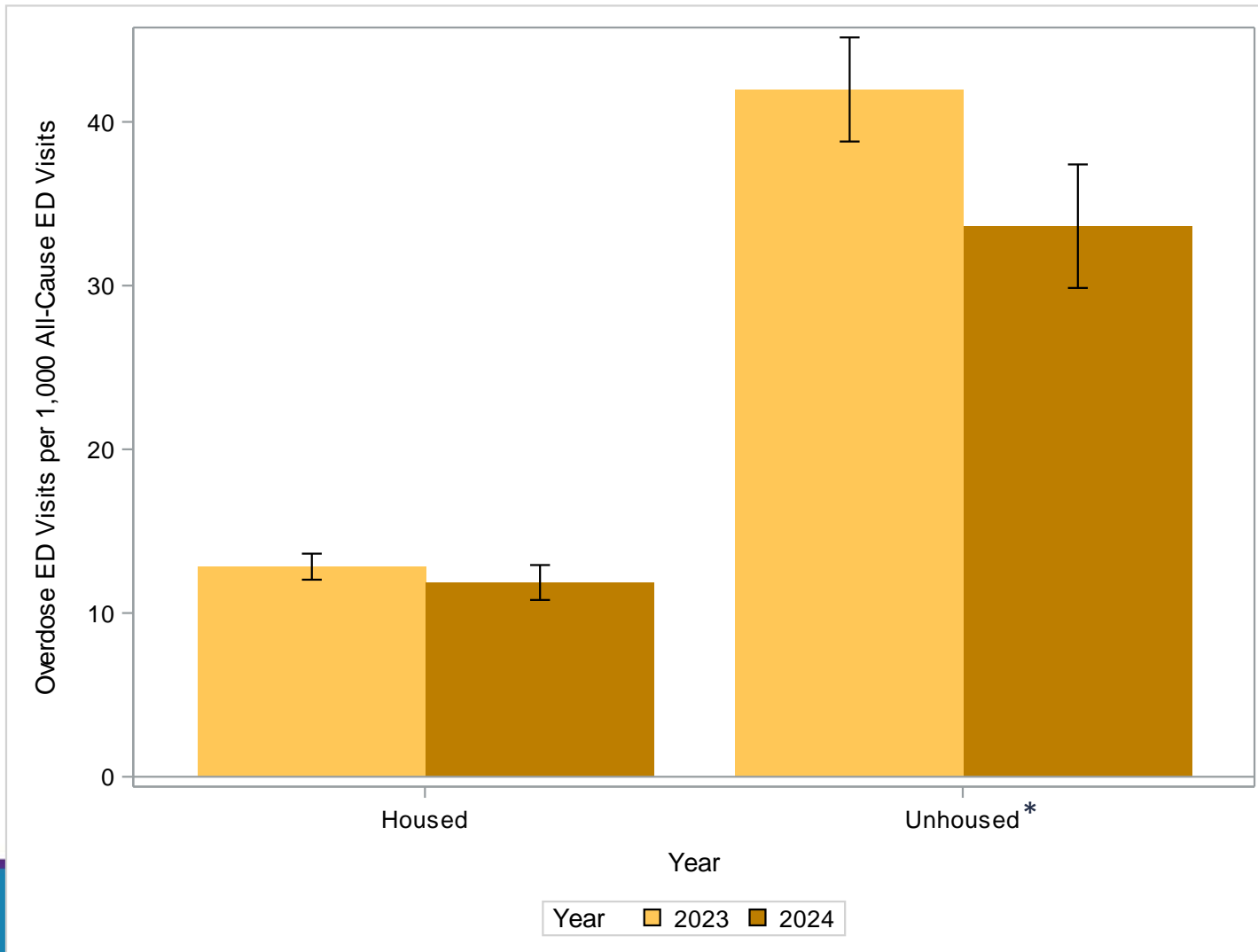


- Rising rates in recent years in all racial groups except Hispanic
- Other/Unknown includes American Indian/Alaska Native, Asian, Native Hawaiian/Other Pacific Islander, Other race, and unknown race

*Rate in 2024 significantly different than 2023, $p < 0.05$



Suspected Drug Overdose Rates in Denver Health ED by Housing Status



- Rates higher in unhoused population than in housed
- But trending downward for unhoused population
- Stable for housed population over 2023-24

*Rate in 2024 significantly different than 2023, $p < 0.05$



Services offered to Patients Identified with SUD

(Depending on diagnosis + whether applicable)

- Withdrawal management
- Initiate MAT/MOUD services
- Provide Naloxone
- Single biopsychosocial assessment that covers most programming across system
- Linkage to the right level of care (without barrier of insurance/cost)
- Choice in location for treatment (schools, primary care, campus, etc.)
- Co-occurring psychiatric treatment
- Referrals to external programs (residential treatment programs, harm reduction programs, AA, housing, etc.)
- Substance Treatment Line for when patients are ready to engage in care if not in the moment



Services offered to Patients Identified with SUD Cont.

(Depending on diagnosis + whether applicable)

- Bedside social work support (ED/Inpatient)
- Social needs screening and support
 - Basic necessities (phone, clothes, food, bus tickets, etc.)
 - Short-term housing (hotel, shelter, Recuperative Care, 655 Broadway)
- Peer support specialists
- Individual, group, family therapy
- Contingency Management
- Telehealth treatment
- Community-based programming, outreach + support



Patient Story



- 32-year-old female with history of Methamphetamine and Opioid use
- Found unresponsive downtown + was revived by a bystander with Naloxone
- Told EMS “I need to get treatment today”
- Seen by Treatment on Demand Counselor in Emergency Department
- Linked next day to Outpatient Behavioral Health Services (OBHS)
- Fell out of care and returned to OBHS
- Spent 3 weeks in transitional residential treatment program at CARES



Questions?

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