



Indiana
Department
of
Health

INDIANA INFANT MORTALITY AND BIRTH OUTCOMES, 2023

FAMILY HEALTH DATA AND FATALITY
PREVENTION

03/26/2025

OUR MISSION:

To promote, protect, and improve the health and safety of all Hoosiers.

OUR VISION:

Every Hoosier reaches optimal health regardless of where they live, learn, work, or play.



Data details

- 2023 infant mortality by the numbers
 - Based on death records from 2023
 - These deaths encompass births that could have taken place in 2022 or 2023.
 - These deaths encompass pregnancies that could have taken place from 2021-2023.
- Infant mortality is calculated by taking the number of infant deaths divided by the number of live births for a given calendar year.
- Both birth and infant death records are reported to the Indiana Department of Health Vital Records Division.
- These data are based on residency rather than location of occurrence.

Infant mortality quick facts

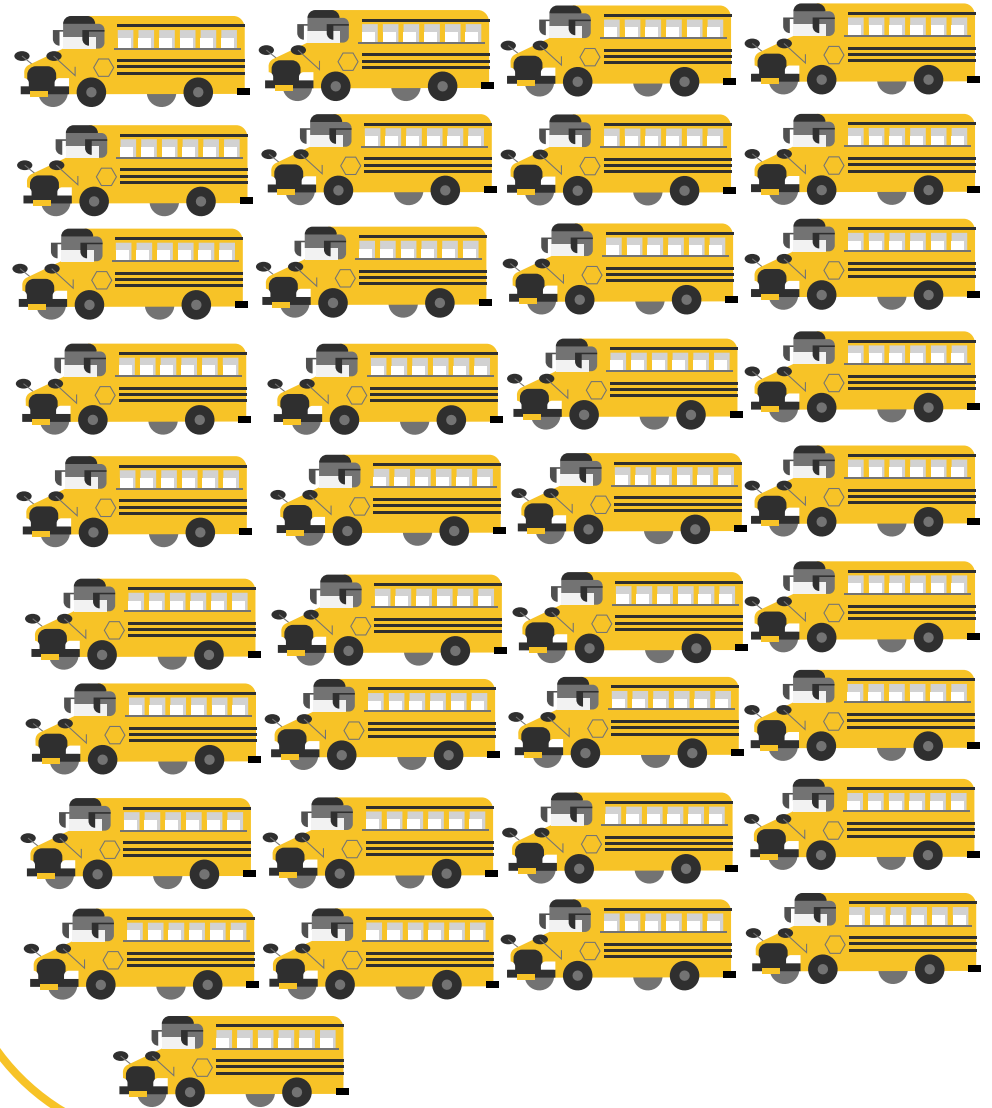
- Infant Mortality is defined as the death of a baby before his/her first birthday.
- **Infant Mortality Rate** is an estimate of the number of infant deaths for every 1,000 live births.
- Infant Mortality is the **#1 indicator** of health status in the world.

Infant mortality in Indiana



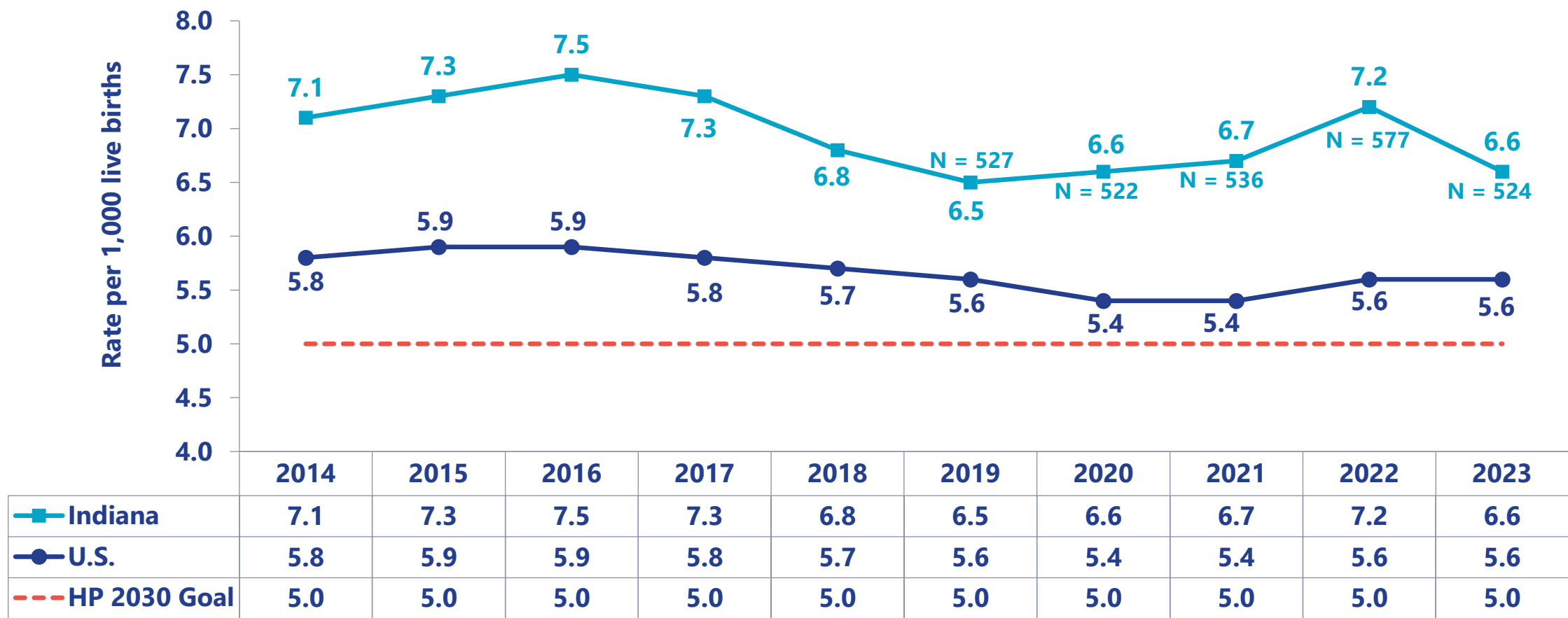
Infant mortality in Indiana

- 524 Hoosier babies died before their 1st birthday in 2023:
 - About 44 babies EVERY month
 - About 10 babies EVERY week
- Almost 2,700 infant lives lost in the last 5 years:
 - Over 37 school buses at maximum capacity



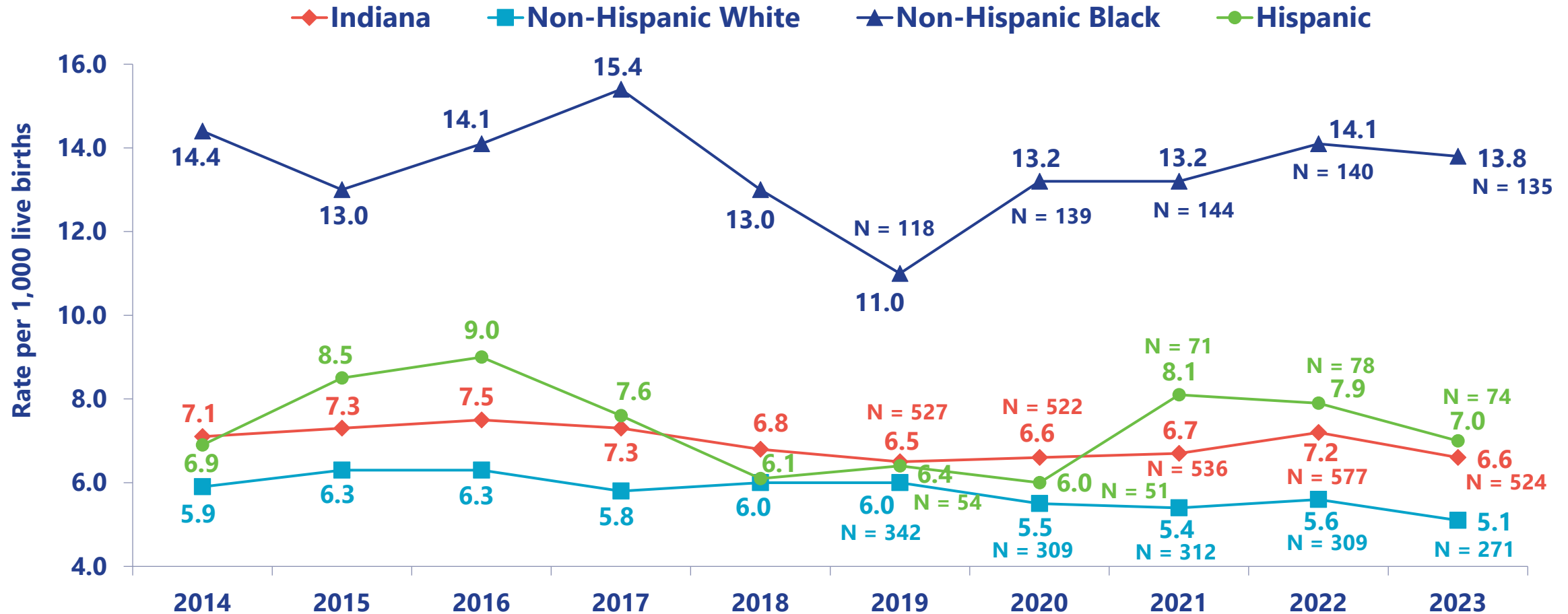
Infant mortality rates (IMRs)

2014-2023



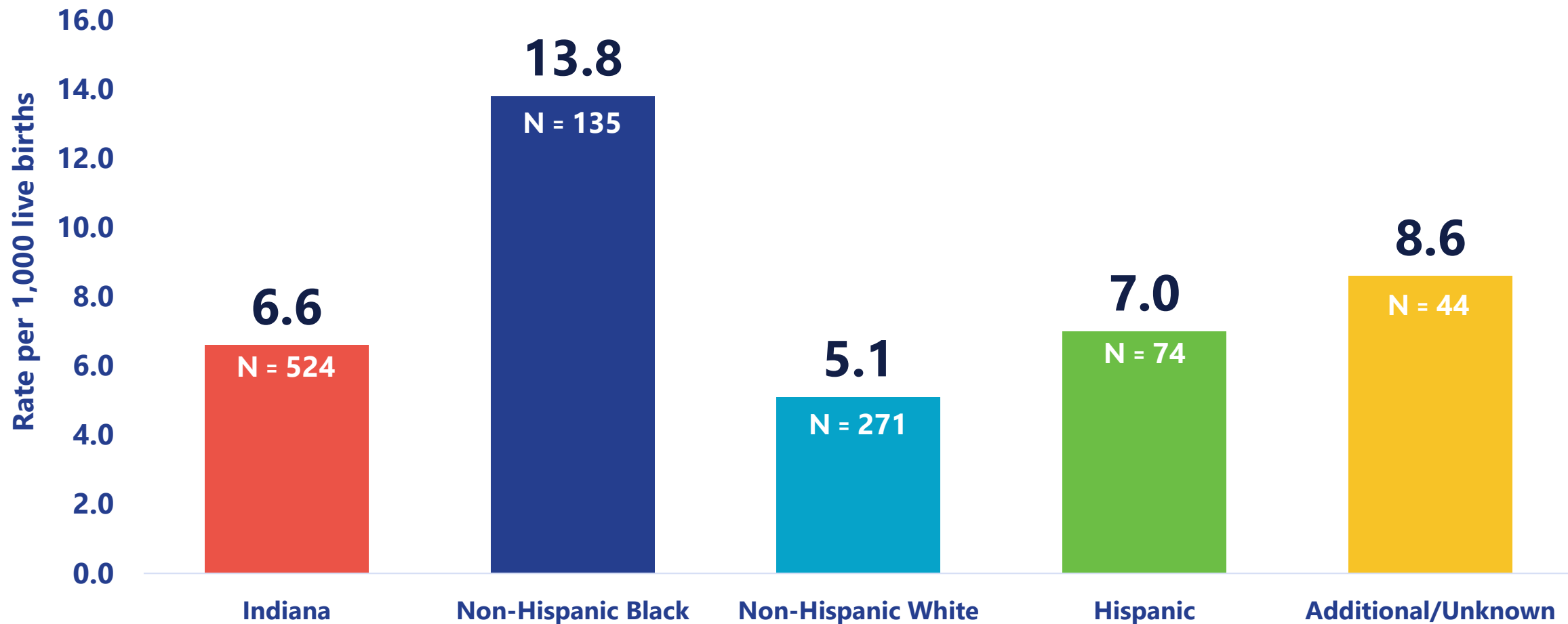
Indiana IMRs by race and ethnicity

2014-2023



Infant mortality by race and ethnicity

Indiana, 2023

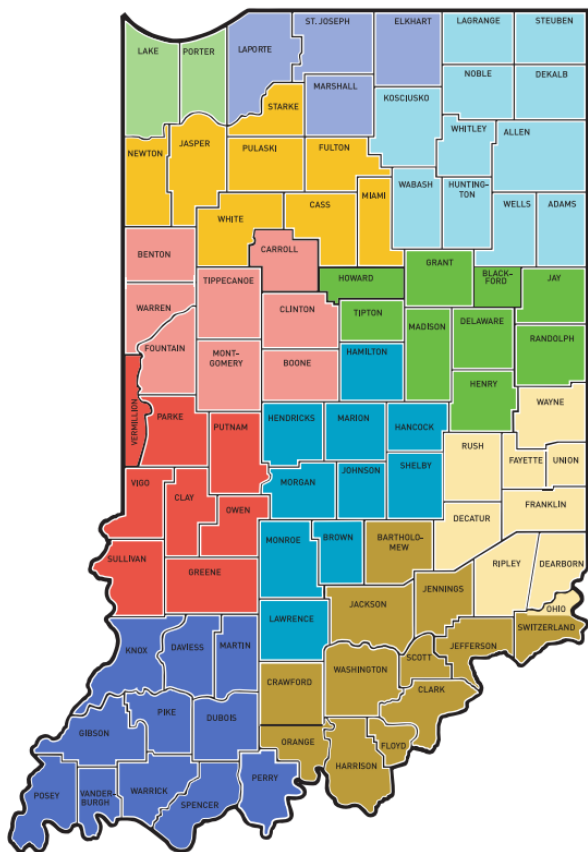


Infant mortality by geography



Infant mortality by hospital region

Indiana, 2019-2023



Region	Total	Non-Hispanic White	Non-Hispanic Black	Hispanic
Central	6.7	4.8 (N = 354)	10.9 (N = 294)	7.1 (N = 118)
Central Southwestern	7.6	7.0 (N = 93)	18.3* (N = 9)	** (N < 5)
Eastern	7.8	6.8 (N = 155)	17.3 (N = 39)	6.2* (N = 9)
Midwestern	6.1	6.0 (N = 55)	** (N < 5)	6.2* (N = 10)
Northeastern	7.0	6.0 (N = 246)	16.9 (N = 69)	8.5 (N = 39)
Northern	7.8	6.0 (N = 153)	18.3 (N = 92)	7.0 (N = 51)
Northwest	6.3	4.1 (N = 74)	11.4 (N = 92)	6.4 (N = 47)
Southeastern	6.1	6.1 (N = 75)	** (N < 5)	** (N < 5)
Southern	6.2	5.7 (N = 136)	17.7* (N = 22)	8.2 (N = 21)
Southwest	6.1	5.5 (N = 125)	15.1 (N = 28)	3.9* (N = 6)
Western	6.0	4.7 (N = 77)	18.9 (N = 27)	9.5 (N = 23)

*Rates based on counts less than 20 are considered unstable and should be interpreted with caution.

**Rates based on counts less than 5 have been suppressed.

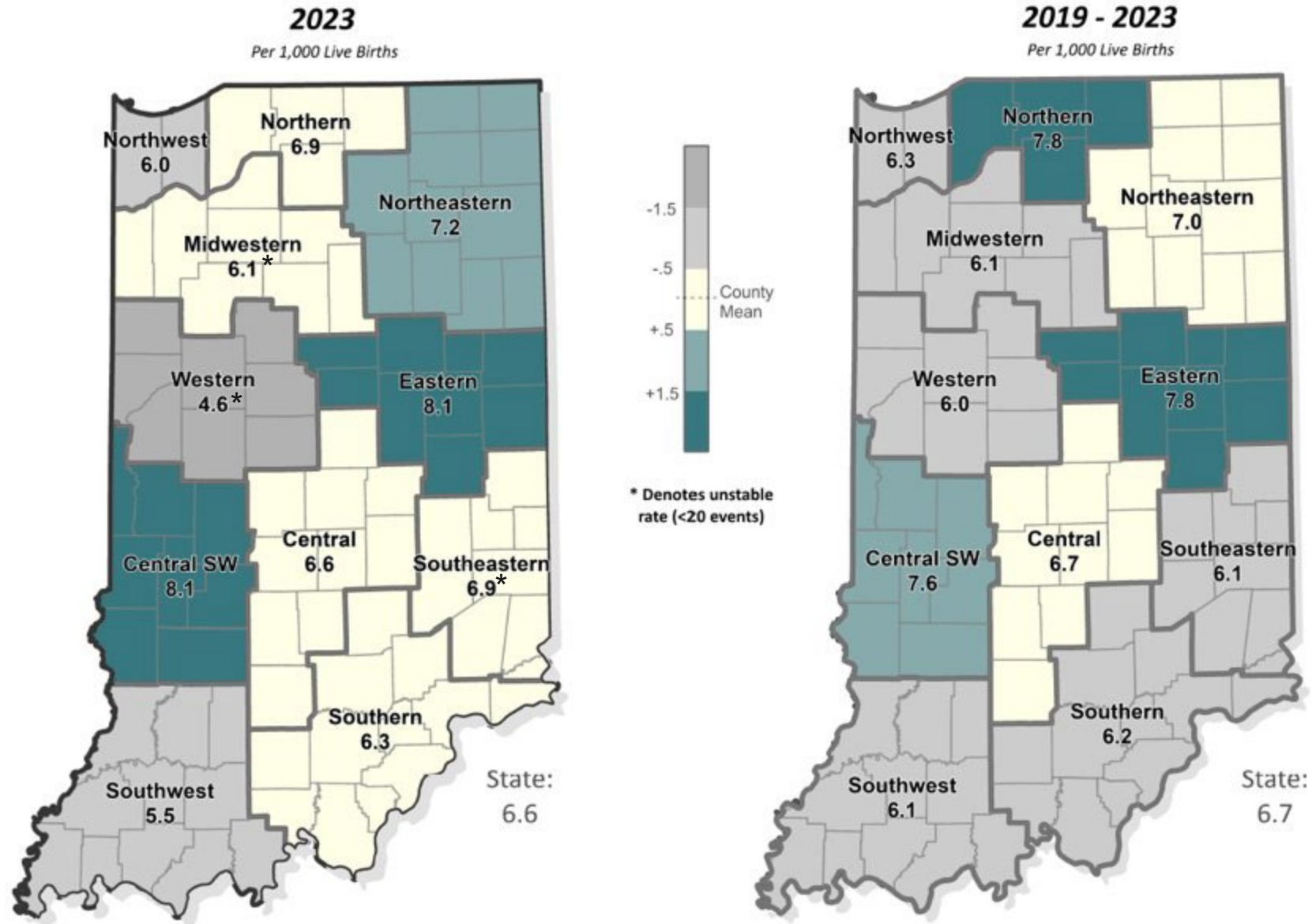
Indiana, 2019-2023



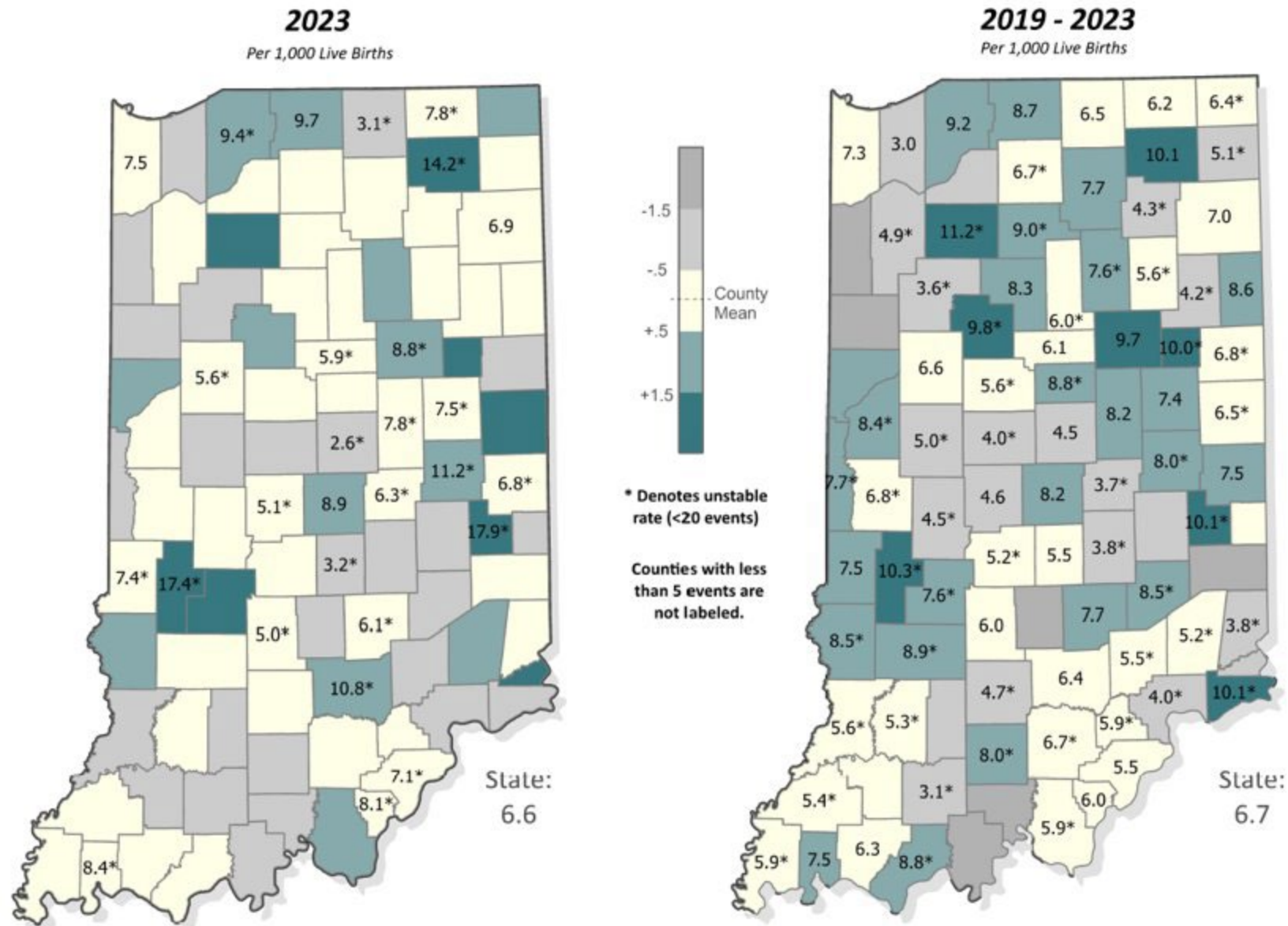
*Rates based on counts less than 20 are considered unstable and should be interpreted with caution.

Source: Indiana Department of Health, Family Health Data and Fatality Prevention Division [March 10, 2025]
Indiana Original Source: Indiana Department of Health, Vital Records, ODA, Data Analysis Team

Infant Mortality by Region



Infant Mortality by County



County-level Indiana infant mortality rates

2019-2023, stable rates

10 highest stable infant mortality rates

Noble, 10.1
Grant, 9.7
LaPorte, 9.2
St. Joseph, 8.7
Adams, 8.6
Cass, 8.3
Marion, 8.2
Madison, 8.2
Bartholomew, 7.7
Kosciusko, 7.7

Stable rates achieving Healthy People

2030 Goal (IMR<5.0)

Porter, 3.0
Hamilton, 4.5
Hendricks, 4.6

County-level Indiana infant mortality rates

2019-2023, unstable rates

Top 10 unstable infant mortality rates*

Pulaski, 11.2
Clay, 10.3
Switzerland, 10.1
Fayette, 10.1
Blackford, 10.0
Carroll, 9.8
Fulton, 9.0
Greene, 8.9
Spencer, 8.8
Tipton, 8.8

Unstable rates* achieving Healthy People 2030 Goal (IMR<5.0)

Dubois, 3.1
White, 3.6
Hancock, 3.7
Shelby, 3.8
Dearborn, 3.8
Jefferson, 4.0
Boone, 4.0
Wells, 4.2
Whitley, 4.3
Putnam, 4.5
Lawrence, 4.7
Jasper, 4.9

County Infant Mortality Rates Compared to the State 2019 - 2023

Per 1,000 Live Births



Only counties with stable rates are marked 'High' or 'Low' (>=20 events between 2019-2023).

Highest Stable Infant Mortality Rates

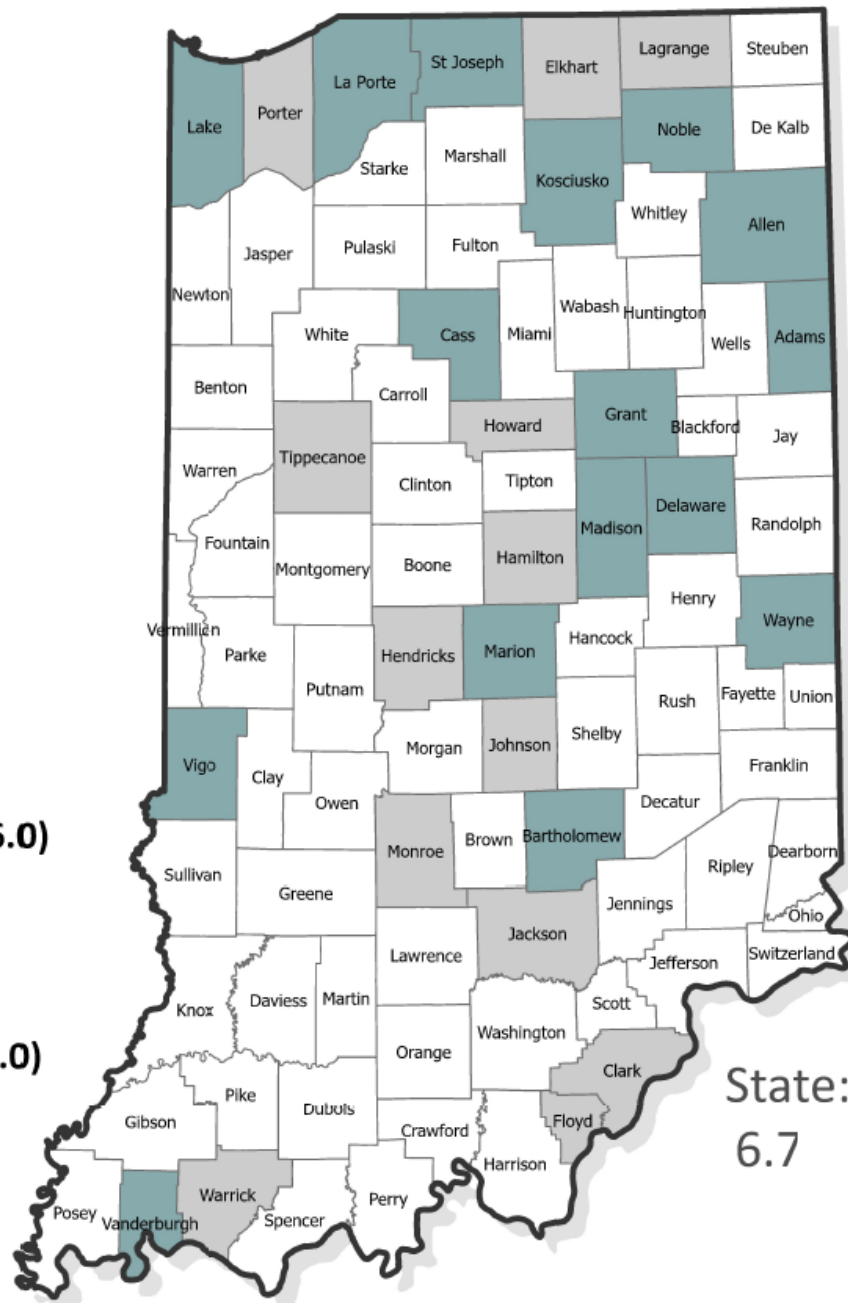
Noble, 10.1	Cass, 8.3
Grant, 9.7	Marion, 8.2
LaPorte, 9.2	Madison, 8.2
St. Joseph, 8.7	Bartholomew, 7.7
Adams, 8.6	Kosciusko, 7.7

Stable Rates Achieving Healthy People 2020 Goal (IMR<6.0)

Porter, 3.0
Hamilton, 4.5
Hendricks, 4.6
Johnson, 5.5
Clark, 5.5

Stable Rates Achieving Healthy People 2030 Goal (IMR<5.0)

Porter, 3.0
Hamilton, 4.5
Hendricks, 4.6



County-level rates by race and ethnicity

Indiana, 2019-2023

Stable non-Hispanic Black infant mortality rates

LaPorte, 28.5
Vanderburgh, 18.0
Tippecanoe, 18.0
St. Joseph, 17.4
Allen, 16.2
Lake, 11.8
Marion, 11.2

Stable Hispanic infant mortality rates

St. Joseph, 8.5
Allen, 7.4
Marion, 7.4
Elkhart, 6.9
Lake, 6.9

Stable non-Hispanic White infant mortality rates*

Adams, 9.1
Grant, 8.3
Noble, 7.7
Wayne, 7.3
Kosciusko, 7.2
Bartholomew, 6.8

Highest infant mortality rates by ZIP code

Indiana, 2019-2023

ZIP Code	County	Births	Deaths	IMR	NH White IMR	NH Black IMR	Hispanic IMR
46241	Marion	2,563	38	14.8	12.3*	22.6*	12.3*
46628	St. Joseph	1,921	26	13.5	8.4*	19.5*	**
46360	La Porte	2,460	33	13.4	8.5*	26.5*	**
46218	Marion	2,539	31	12.2	**	13.4	12.9*
46806	Allen	2,491	30	12.0	19.6*	16.1*	7.0*
46410	Lake	2,061	24	11.6	**	15.3*	**
46201	Marion	2,462	27	11.0	9.4*	17.7*	7.9*
46219	Marion	2,385	26	10.9	6.0*	20.3*	10.1*
46222	Marion	3,155	32	10.1	**	19.4	5.3*
46224	Marion	3,646	35	9.6	8.0*	8.7*	8.5*

*Rates based on counts less than 20 are considered unstable and should be interpreted with caution.

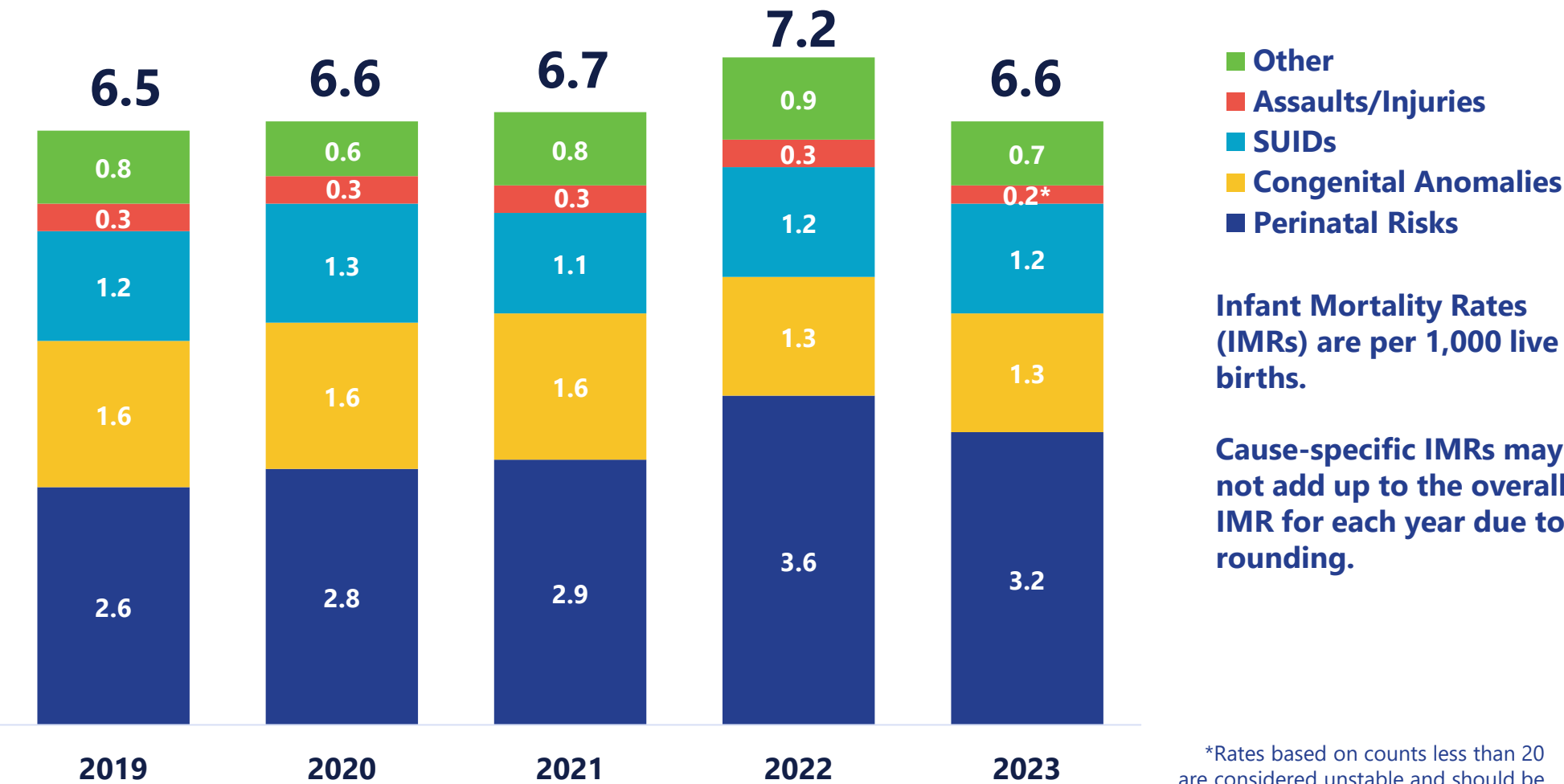
**Rates based on counts less than 5 have been suppressed.

- This table is sorted by overall infant mortality rate in descending order with Zip Code 46241 in Marion County having the highest IMR at 14.8.
- The IMRs by race and ethnicity are not listed in descending order. For example, Zip Code 46360 in Laporte County has the highest Non-Hispanic Black IMR at 26.5*.

Cause-specific infant mortality



Causes of Indiana infant mortality

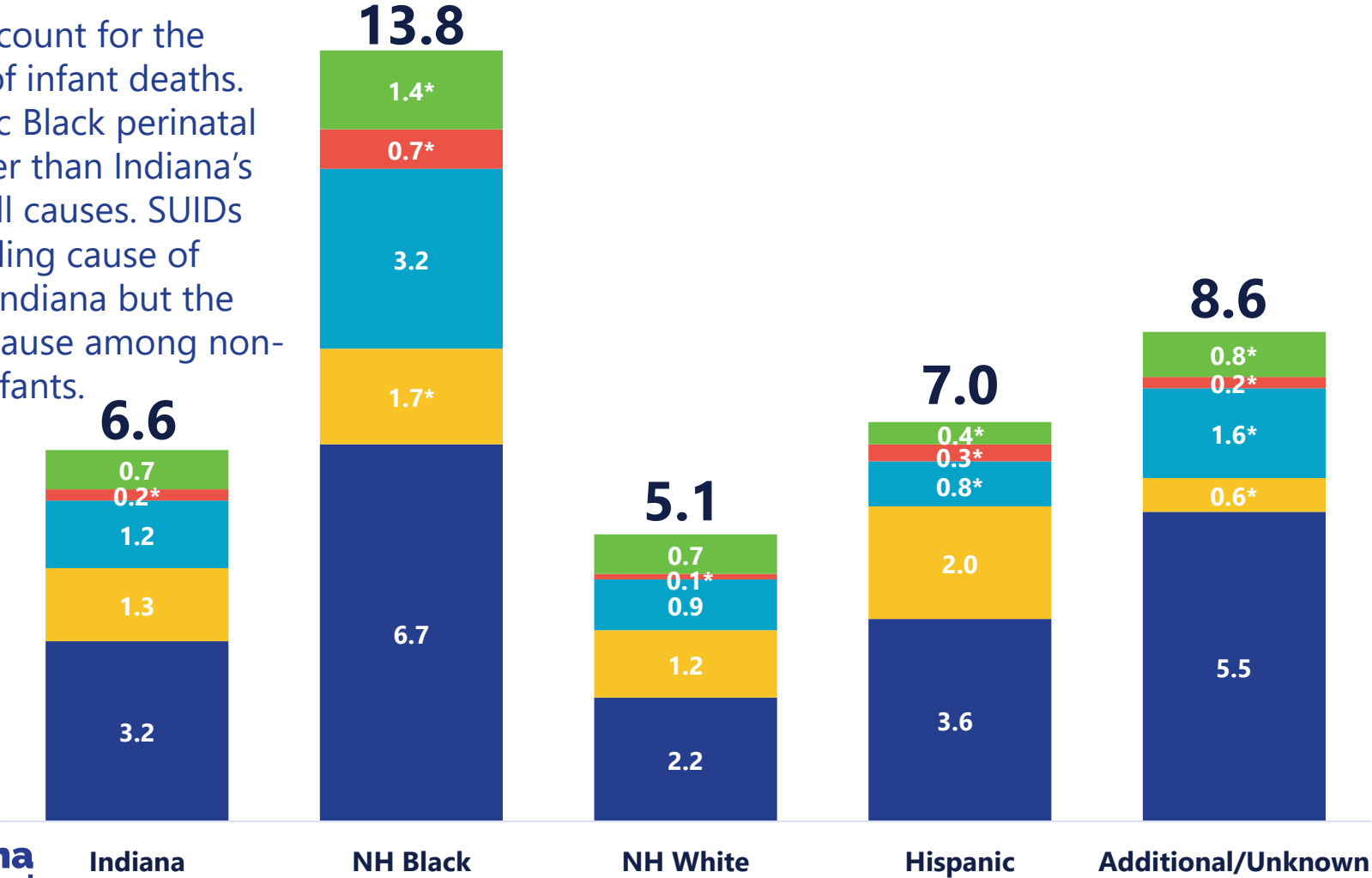


*Rates based on counts less than 20 are considered unstable and should be interpreted with caution.



2023 Indiana cause-specific IMR by race and ethnicity

Perinatal risks account for the largest number of infant deaths. The non-Hispanic Black perinatal risks rate is higher than Indiana's overall IMR for all causes. SUIDs are the third leading cause of infant deaths in Indiana but the second leading cause among non-Hispanic Black infants.



- Other
- Assaults/Injuries
- SUIDs
- Congenital Anomalies
- Perinatal Risks

Infant Mortality Rates (IMRs) are per 1,000 live births.

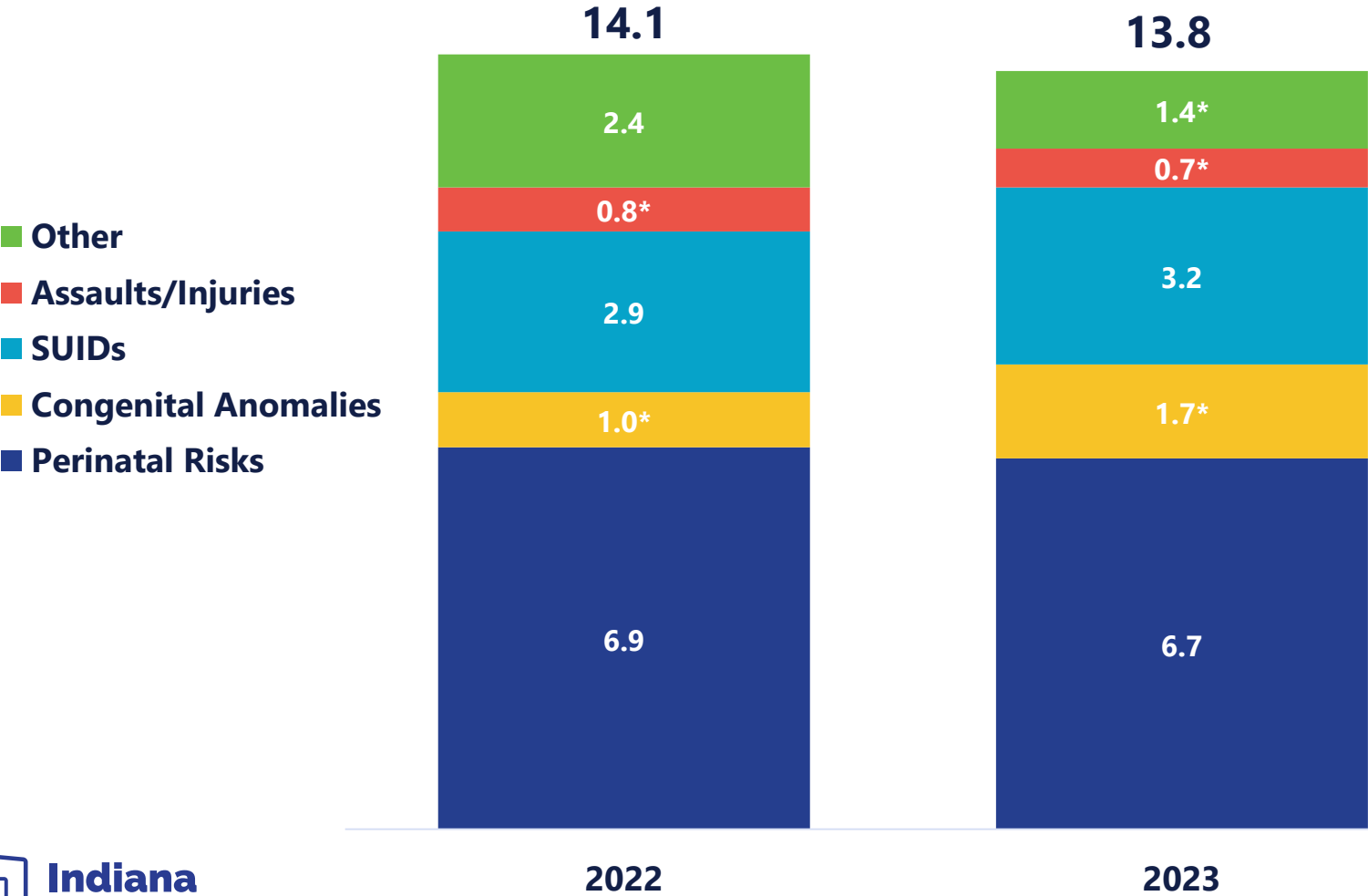
Cause-specific IMRs may not add up to the overall IMR for each group due to rounding.

* Rates based on counts fewer than 20 are considered unstable and should be interpreted with caution.

NH = Non-Hispanic



Causes of Indiana non-Hispanic Black infant mortality

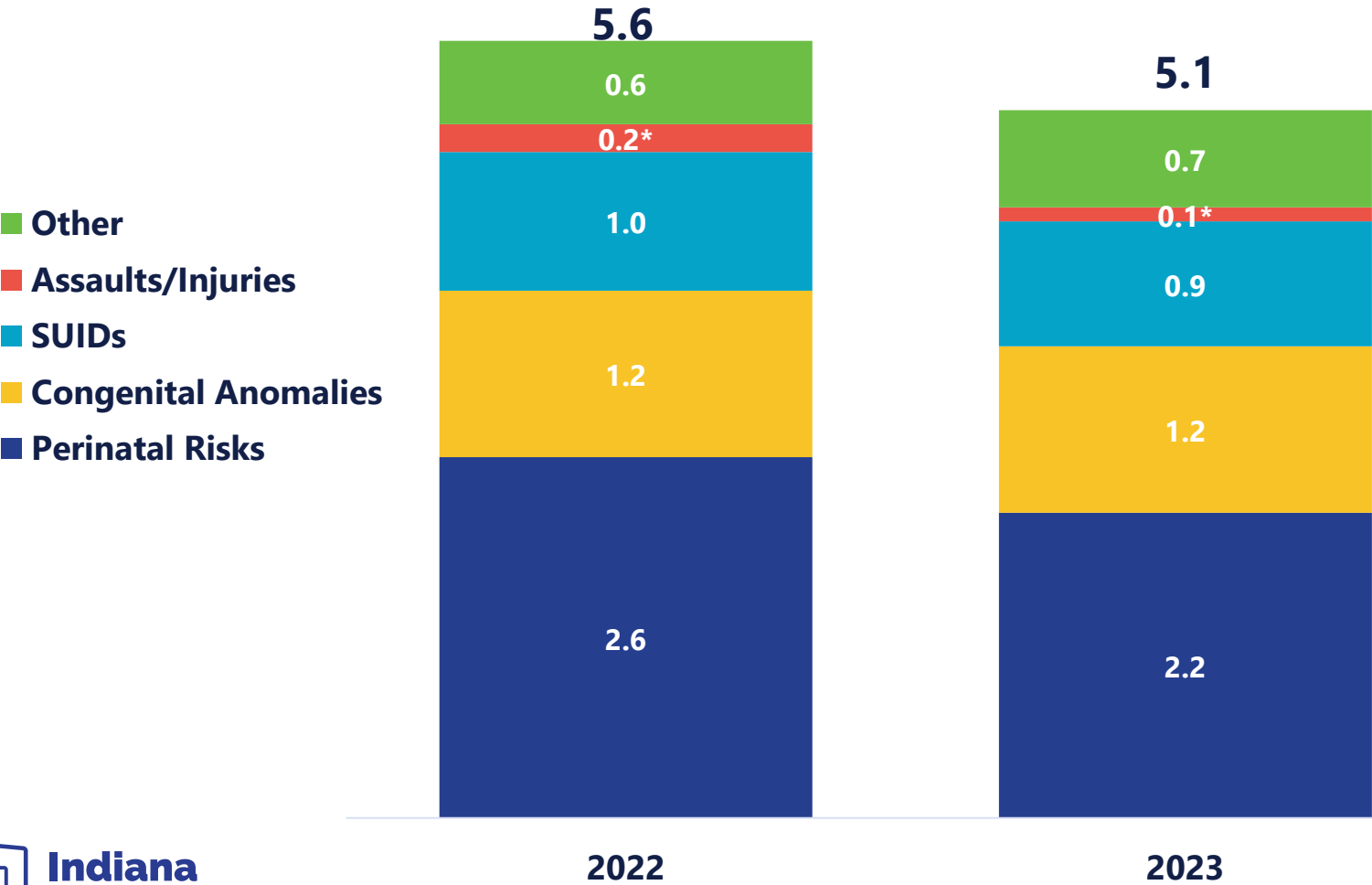


Infant Mortality Rates (IMRs) are per 1,000 live births.

Cause-specific IMRs may not add up to the overall IMR for each year due to rounding.

* Rates based on counts less than 20 are considered unstable and should be interpreted with caution.

Causes of Indiana non-Hispanic White infant mortality

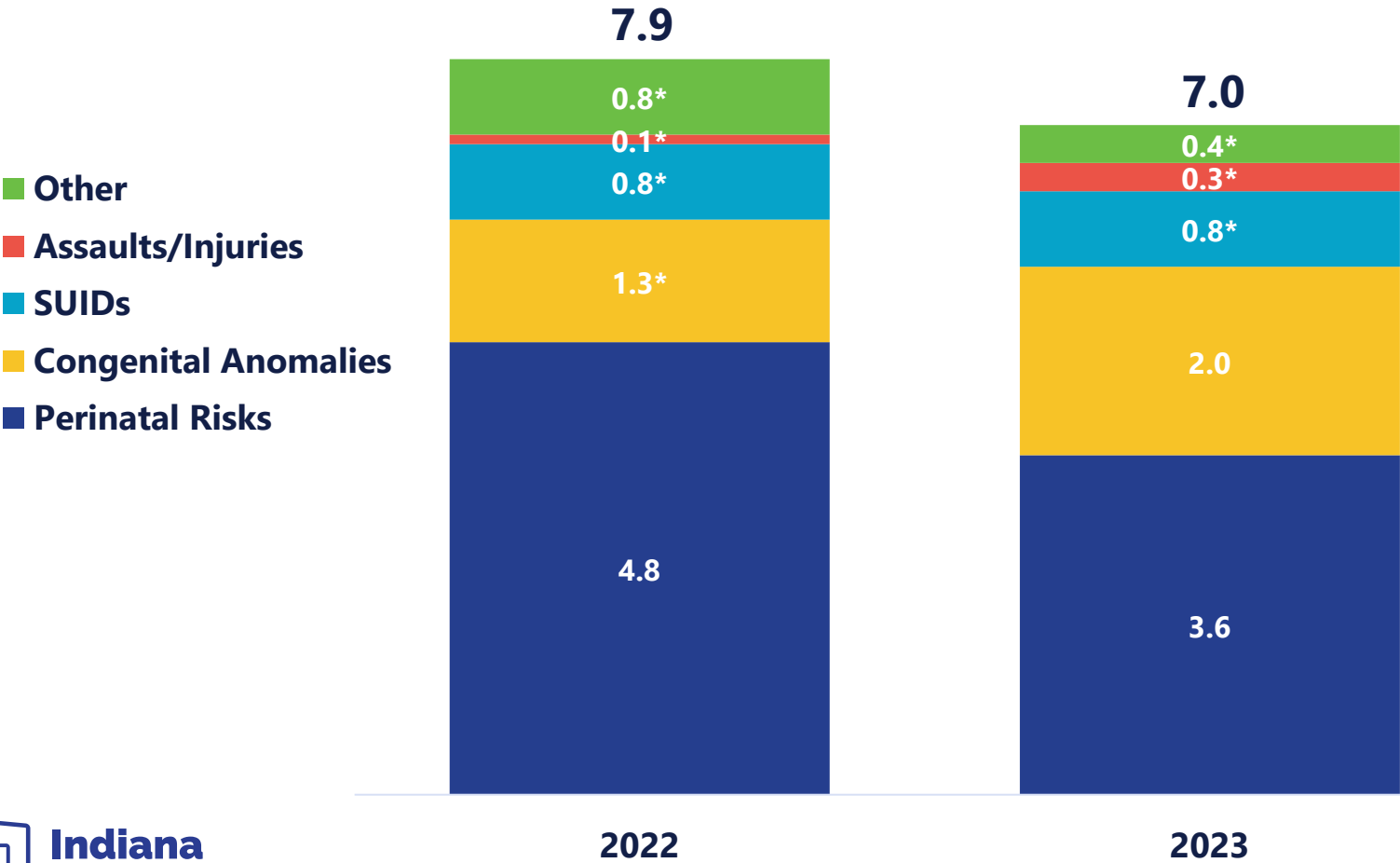


Infant Mortality Rates (IMRs) are per 1,000 live births.

Cause-specific IMRs may not add up to the overall IMR for each year due to rounding.

* Rates based on counts less than 20 are considered unstable and should be interpreted with caution.

Causes of Indiana Hispanic infant mortality



Infant Mortality Rates (IMRs) are per 1,000 live births.

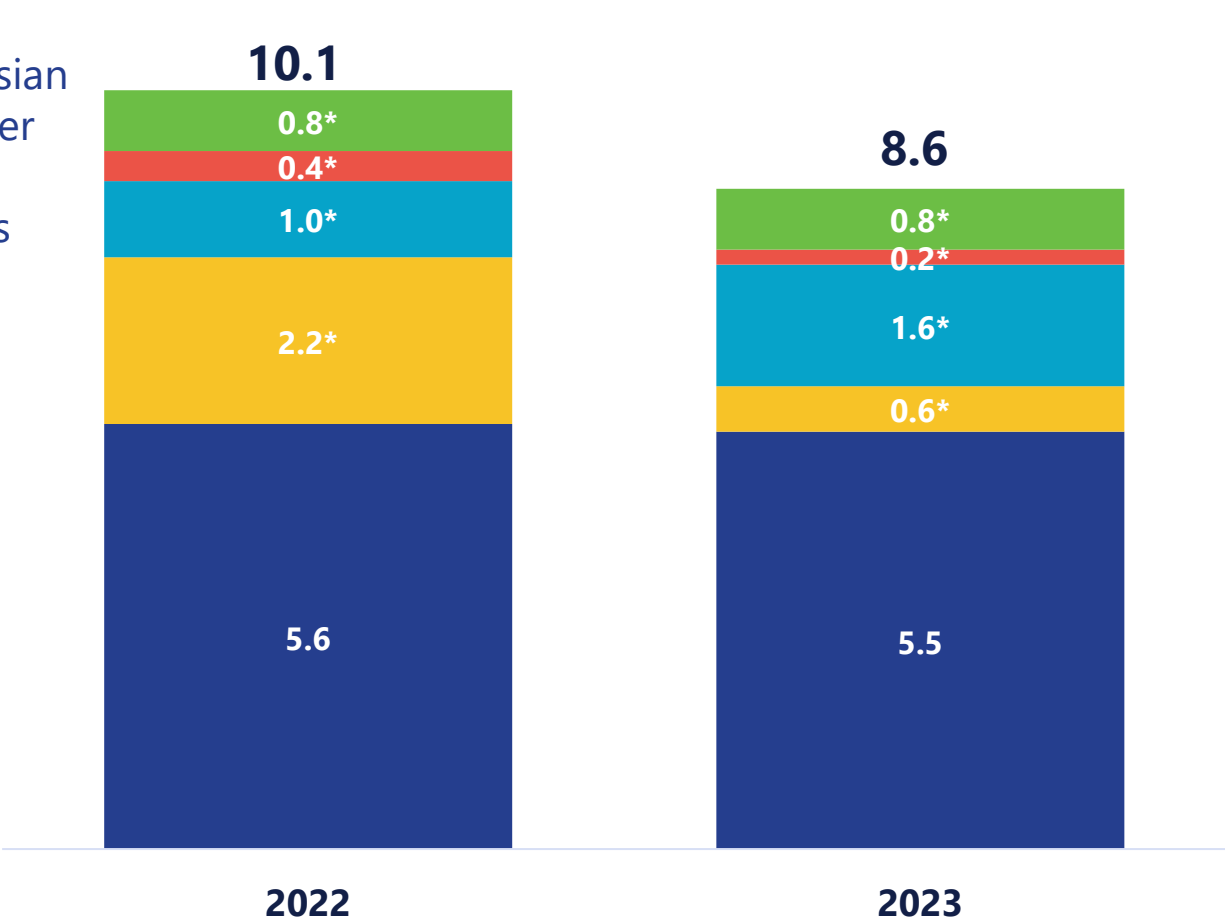
Cause-specific IMRs may not add up to the overall IMR for each year due to rounding.

* Rates based on counts less than 20 are considered unstable and should be interpreted with caution.



Causes of Indiana other/unknown race infant mortality

“Other” includes multi-race, Indian, Chinese, Japanese, Hawaiian, Filipino, other Asian or Pacific Islander, and other races that are not already described in the categories listed.



Infant Mortality Rates (IMRs) are per 1,000 live births.

Cause-specific IMRs may not add up to the overall IMR for each year due to rounding.

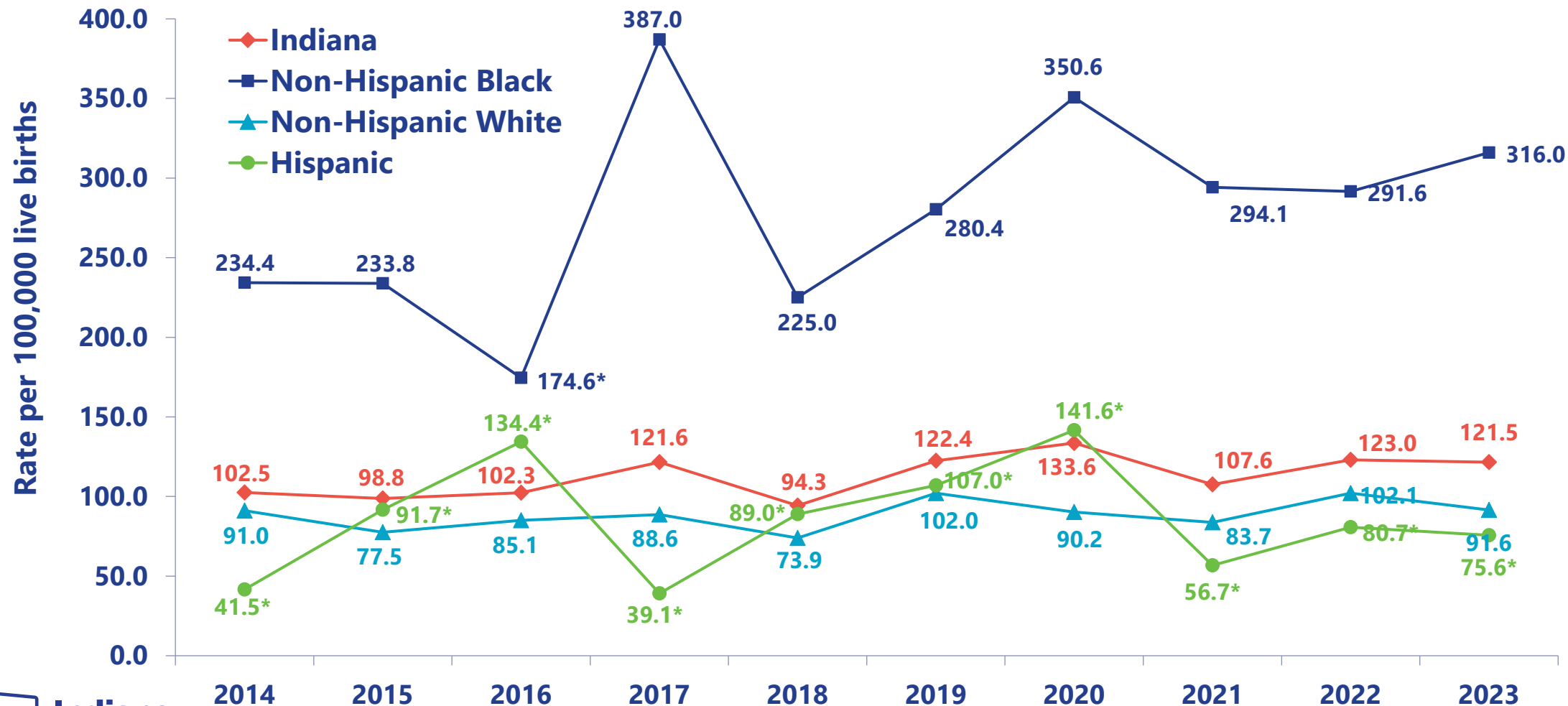
* Rates based on counts less than 20 are considered unstable and should be interpreted with caution.

- Other
- Assaults/Injuries
- SUIDs
- Congenital Anomalies
- Perinatal Risks



SUIDs rates by race and ethnicity

Indiana, 2014-2023



* Rates based on counts less than 20 are considered unstable and should be interpreted with caution.

SUIDS = W75 (Accidental Suffocation and Strangulation in Bed), R95 (Sudden Infant Death Syndrome/SIDS), R99 (Unknown)

Source: Indiana Department of Health, Family Health Data and Fatality Prevention Division [May 10, 2025]

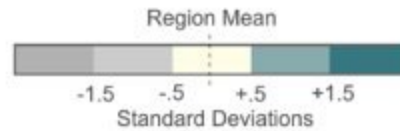
Indiana Original Source: Indiana Department of Health, Vital Records, ODA



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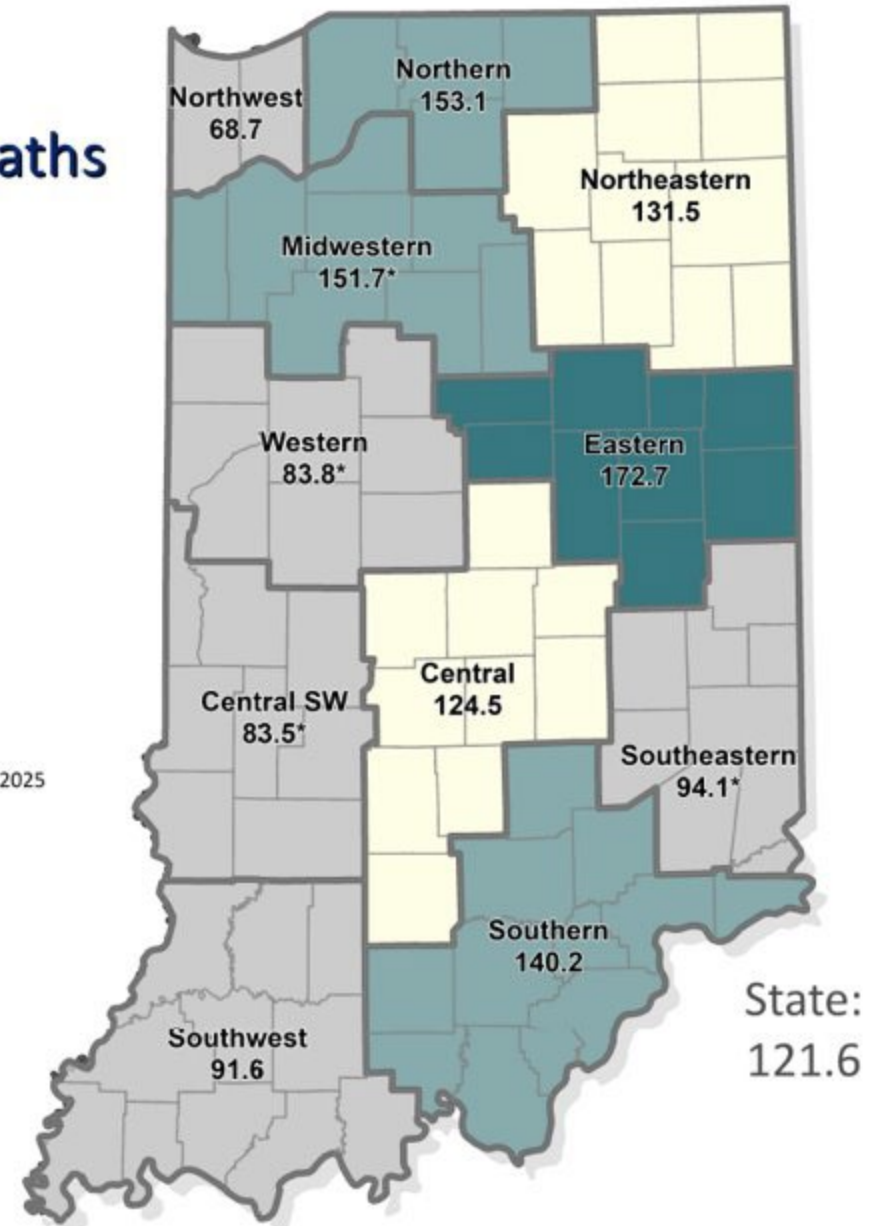
Sudden Unexpected Infant Deaths By Hospital Region 2019 - 2023

Per 100,000 Live Births



* Denotes unstable rate (<20 events)

Data Source: IDOH MCH, ODA DAT, VR | Map Author: IDOH ODA PHG, March 2025



Infant mortality by age

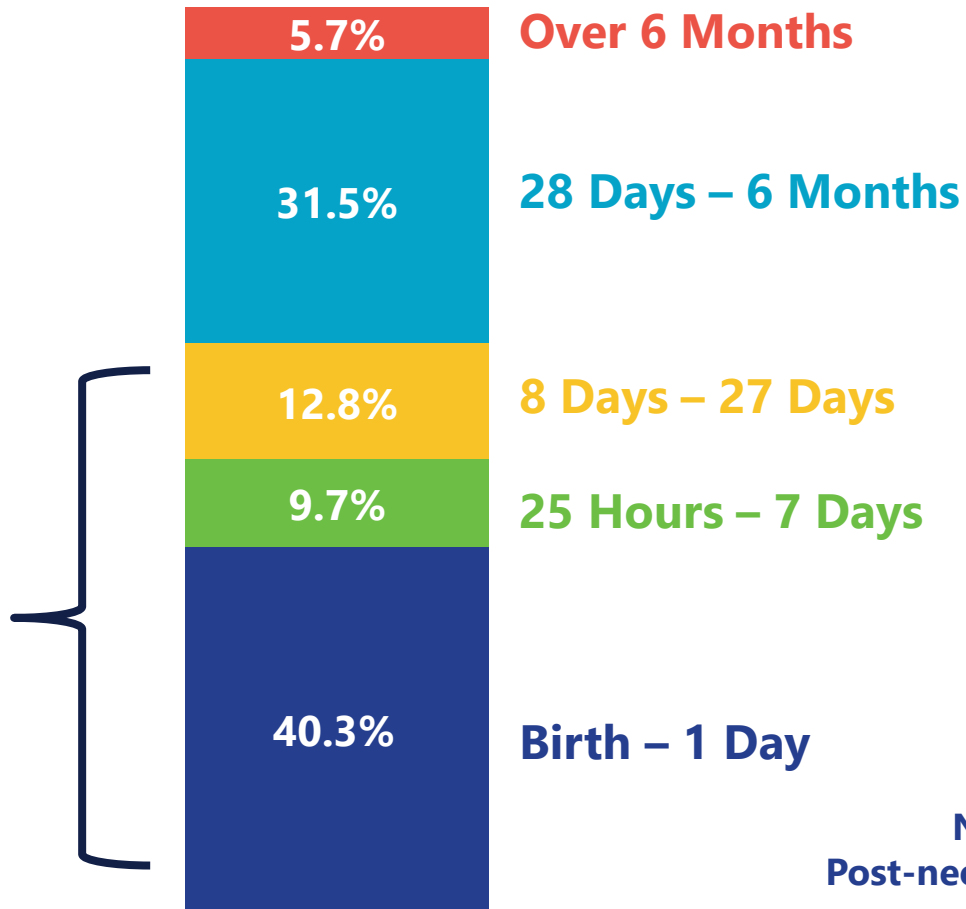


2023 Indiana infant deaths by age

N = 524
Total neonatal = 329
Total post-neonatal = 195

62.8%

of Indiana infant deaths
occurred during the
neonatal (0-27 days)
period



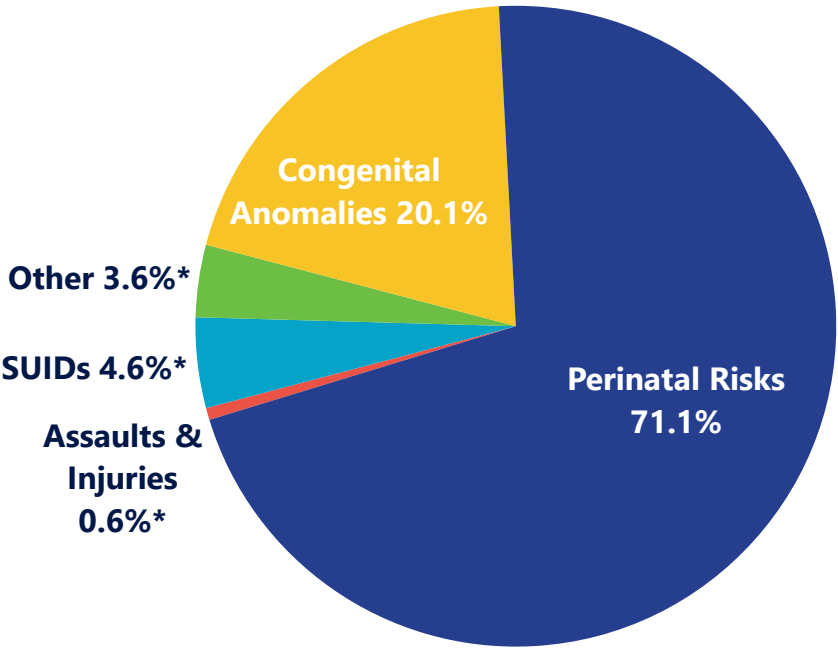
Neonatal = 0-27 days
Post-neonatal = 28-364 days

Time-specific percentages may not add up
to 100% due to rounding.

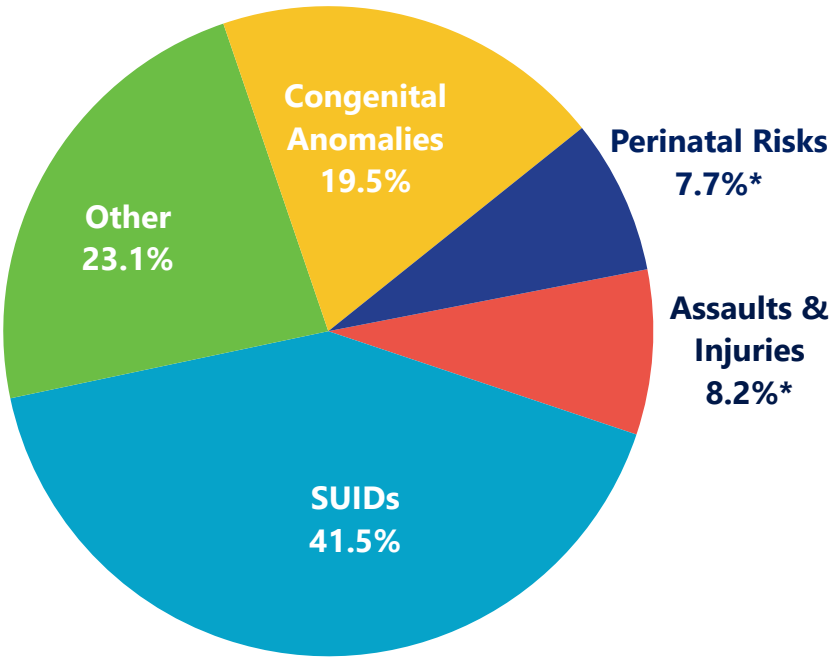
Causes of infant mortality by age

Indiana 2023

Neonatal



Post - neonatal

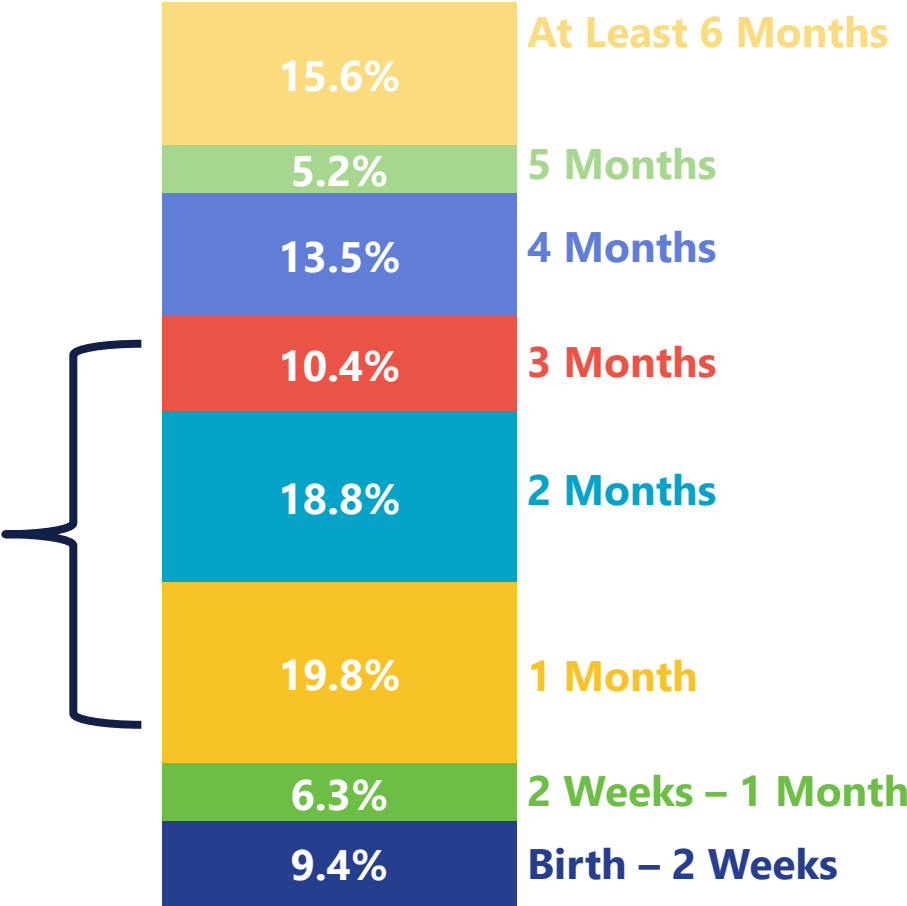


* Percentages based on counts less than 20 are considered unstable and should be interpreted with caution.

2023 SUIDs by age

About 49%

of Indiana SUIDs
occurred between
1 and 3 months of age.



Contributing factors to infant mortality



Factors contributing to infant mortality

Indiana 2023

- **Obesity**

- Indiana ranks 7th highest in the U.S. for percentage of adults who have obesity (37.8% of adults)
- 35.4% of Indiana births in 2023 were to pregnant women who have obesity (additional 26.6% overweight)
- Pregnant women who have obesity have an increased risk of preterm birth (13.3% of Indiana births to those who have obesity were preterm compared to 9.4% of births to those in the normal BMI range)

- **Smoking**

- 5.3% of births exposed to smoking during pregnancy
- 9.7% of births to women on Medicaid were exposed to smoking during pregnancy while 2.2% of births to women not on Medicaid were exposed to smoking

- **Limited prenatal care**

- 26.6% of births were to women not receiving prenatal care during the 1st trimester (a statistically significant decrease compared to 2022)

- **Unsafe sleep practices**

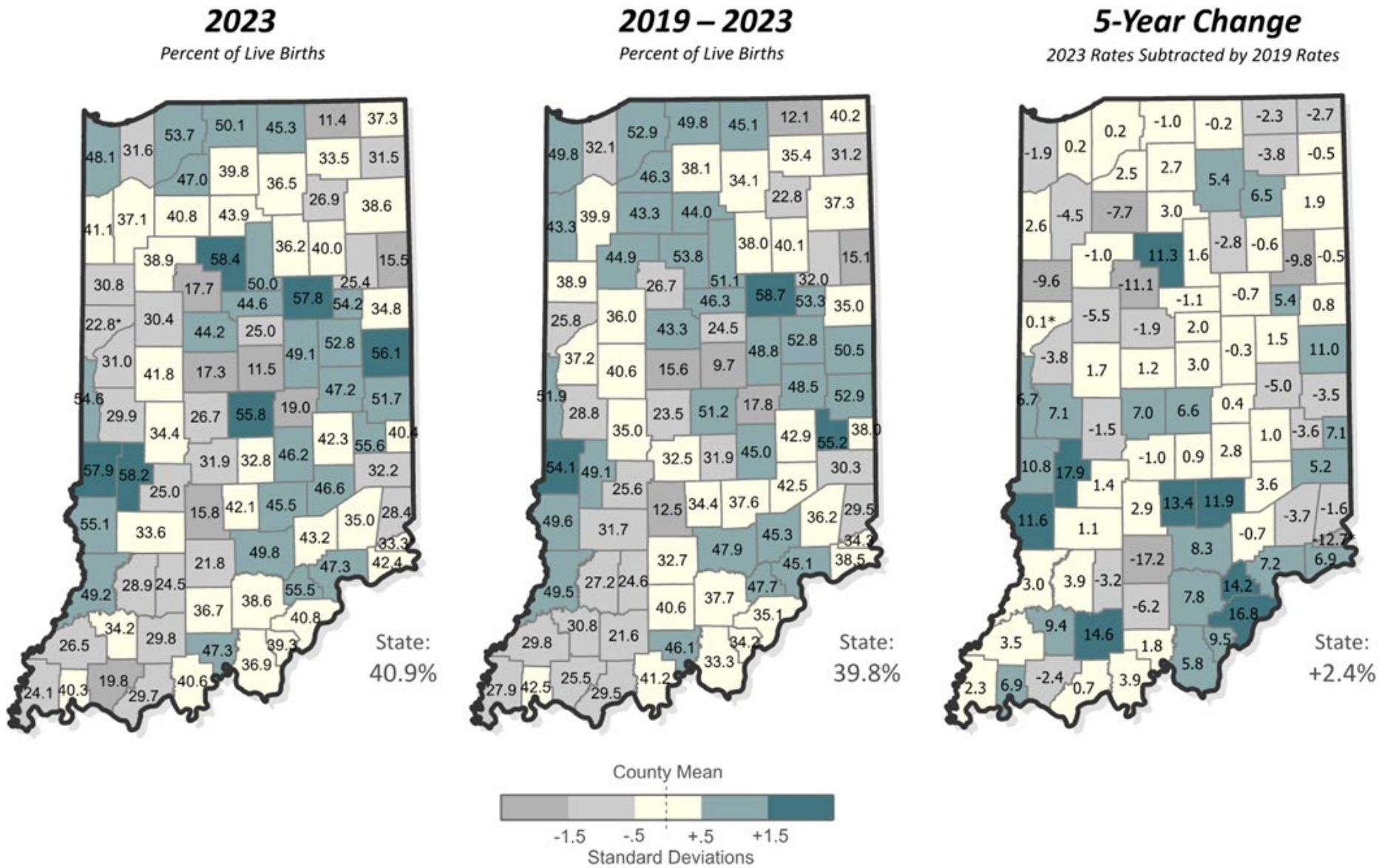
- 18.3% of infant deaths in 2023 can be attributed to SUIDs

Self-reported demographics

Indiana 2023

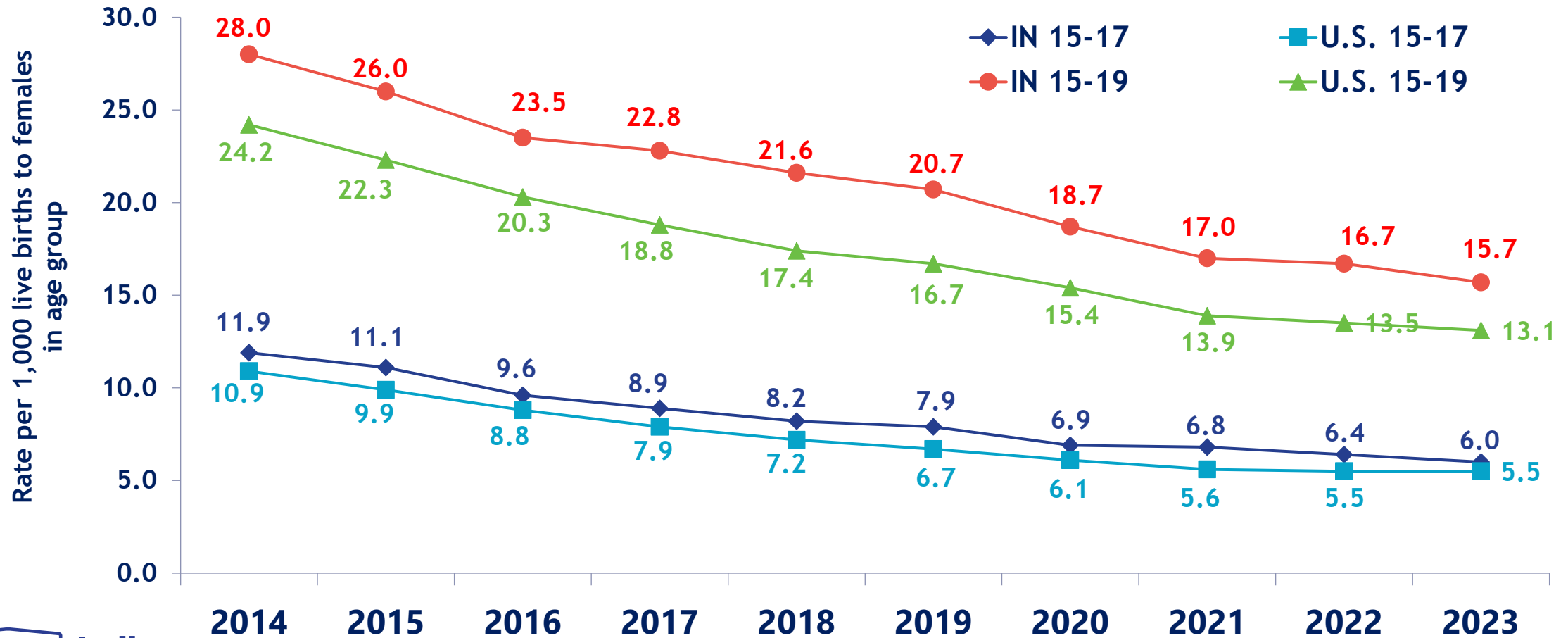
- **Average age** = 28.5 years (Range: 13 - 58)
- **Education**
 - 14.9% have less than a high school diploma
 - 30.1% have a high school diploma or GED
 - 16.4% have some college education, but no degree
 - 38.3% have an associate's degree or higher
- **Income** – 40.9% of births to mothers on Medicaid
- **Marital Status** – 55.4% to married parents

Births to Persons on Medicaid



***Denotes unstable rate (<20 events). Counties with less than 5 events are suppressed.**

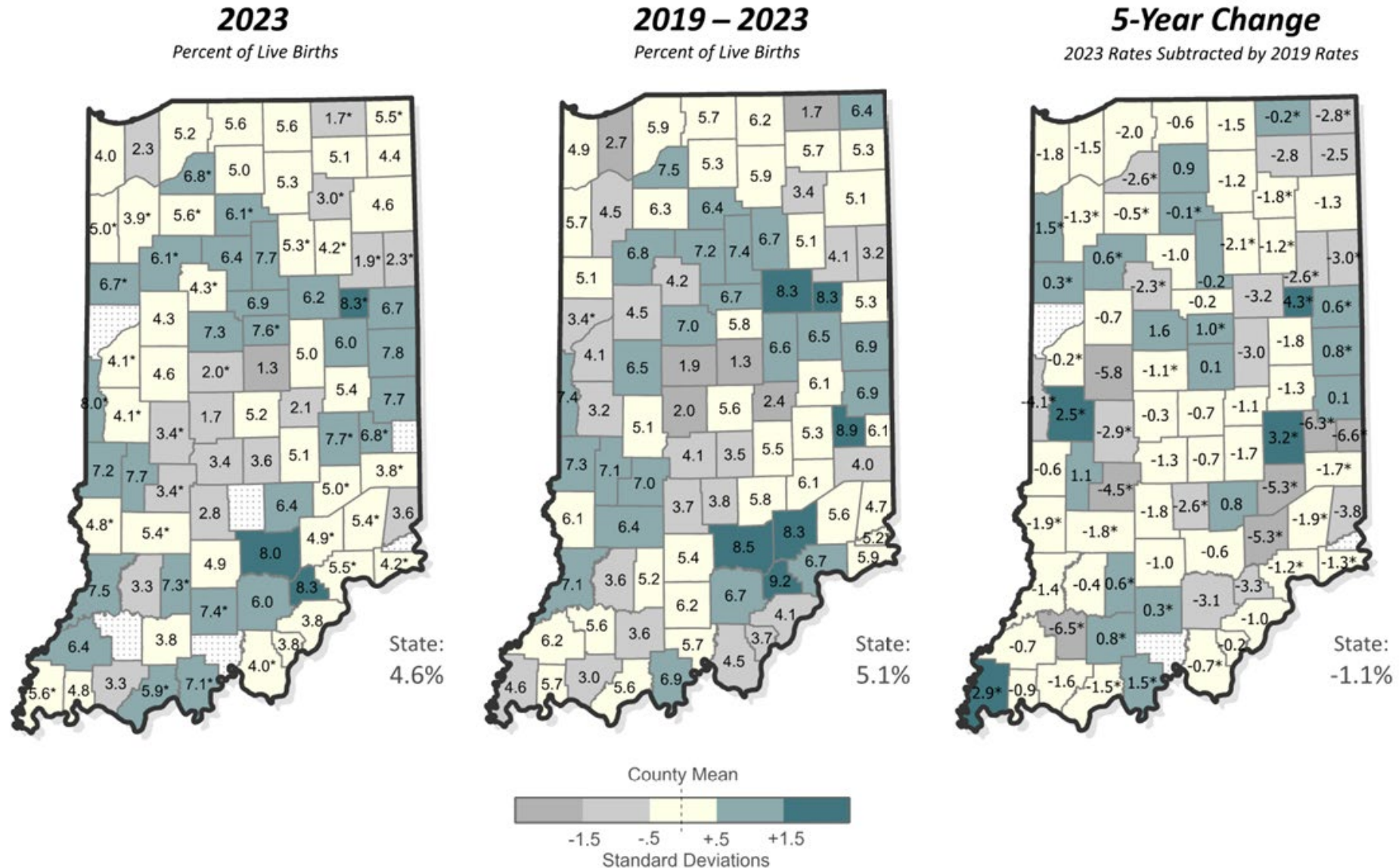
Age-specific birth rates for teens, Indiana and U.S., 2014-2023



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Source: Indiana Department of Health, Family Health Data and Fatality Prevention Division [March 7, 2025]
Original Source: Indiana Department of Health, Vital Records, ODA, Data Analysis Team

Births to Teens Ages 15 to 19



***Denotes unstable rate (<20 events). Counties with less than 5 events are suppressed.**

Data Source: IDOH MCH, ODA DAT, VR | Map Author: IDOH ODA PHG, April 2025

Birth outcomes



Indiana birth outcomes

Measure	2021	2022	2023
Preterm (< 37 weeks gestation)	10.9% ↑	10.9%	11.0% ↑
Low birthweight (< 2500 g)	8.4% ↑	8.7% ↑	8.6% ↓
Very low birthweight (< 1500 g)	1.3% ↓	1.4% ↑	1.4%
Early prenatal care (first trimester)	71.7% ↑	70.9% ↓	73.4% ↑
Teen pregnancy	4.9% ↓	4.7% ↓	4.6% ↓
Breastfeeding (at discharge)	81.4% ↓	83.9% ↑	84.1% ↑

↑ Increase from previous year, negative change
↑ Increase from previous year, positive change

↓ Decrease from previous year, negative change
↓ Decrease from previous year, positive change

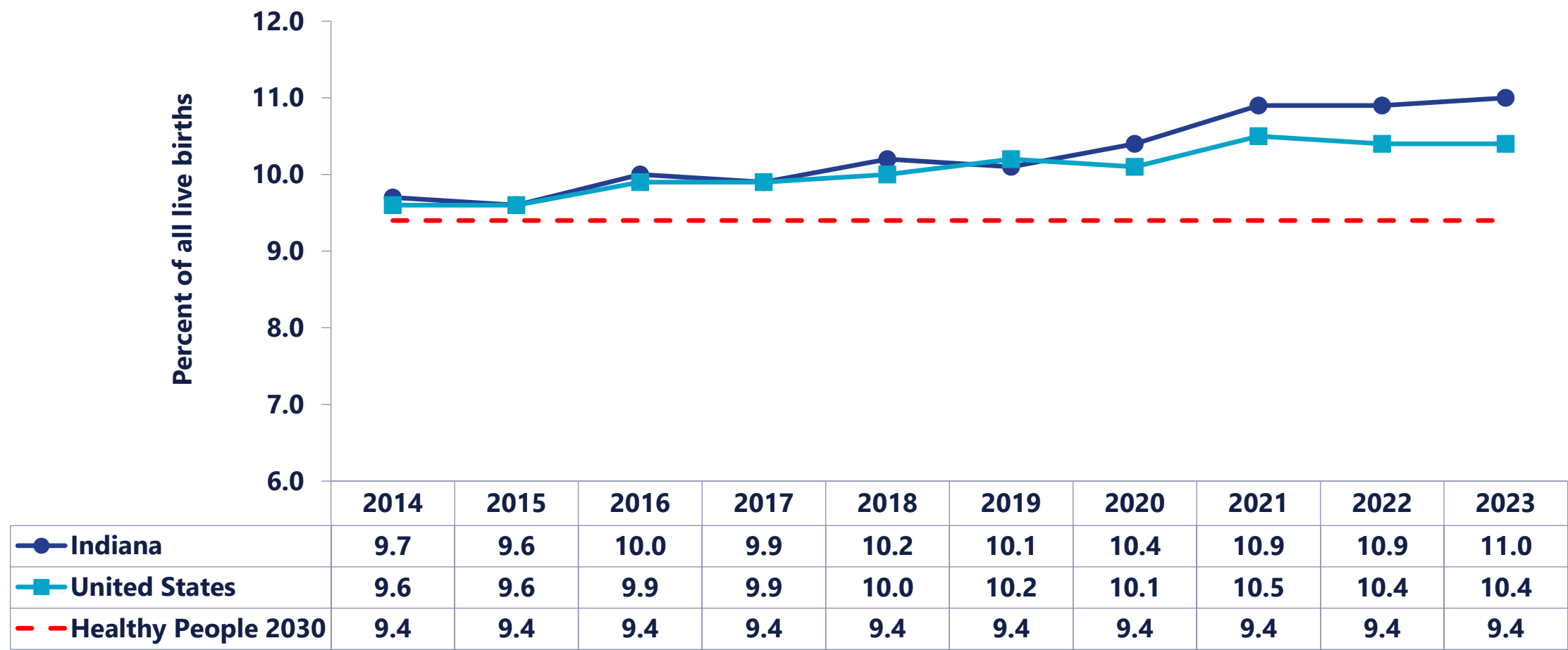
2023 Indiana birth outcomes by race and ethnicity

Measure	Indiana	NH Black	NH White	Hispanic	Additional/ Unknown
Preterm (< 37 weeks gestation)	11.0% ↑	14.8% ↓	10.5% ↑	10.1% ↓	11.5% ↑
Low birthweight (< 2500 g)	8.6% ↓	14.4% ↓	7.4% ↓	8.4% ↑	10.3% ↑
Very low birthweight (< 1500 g)	1.4%	3.0%	1.1%	1.2% ↓	1.6% ↑
Early prenatal care (first trimester)	73.4% ↑	58.3% ↑	79.4% ↑	59.1% ↑	69.8% ↑
Teen pregnancy	4.6% ↓	6.2% ↓	3.7% ↓	7.8% ↓	5.1% ↓
Breastfeeding (at discharge)	84.1% ↑	79.8% ↑	84.4% ↓	86.3% ↑	84.8% ↓

↑ Increase from previous year, negative change
 ↓ Increase from previous year, positive change

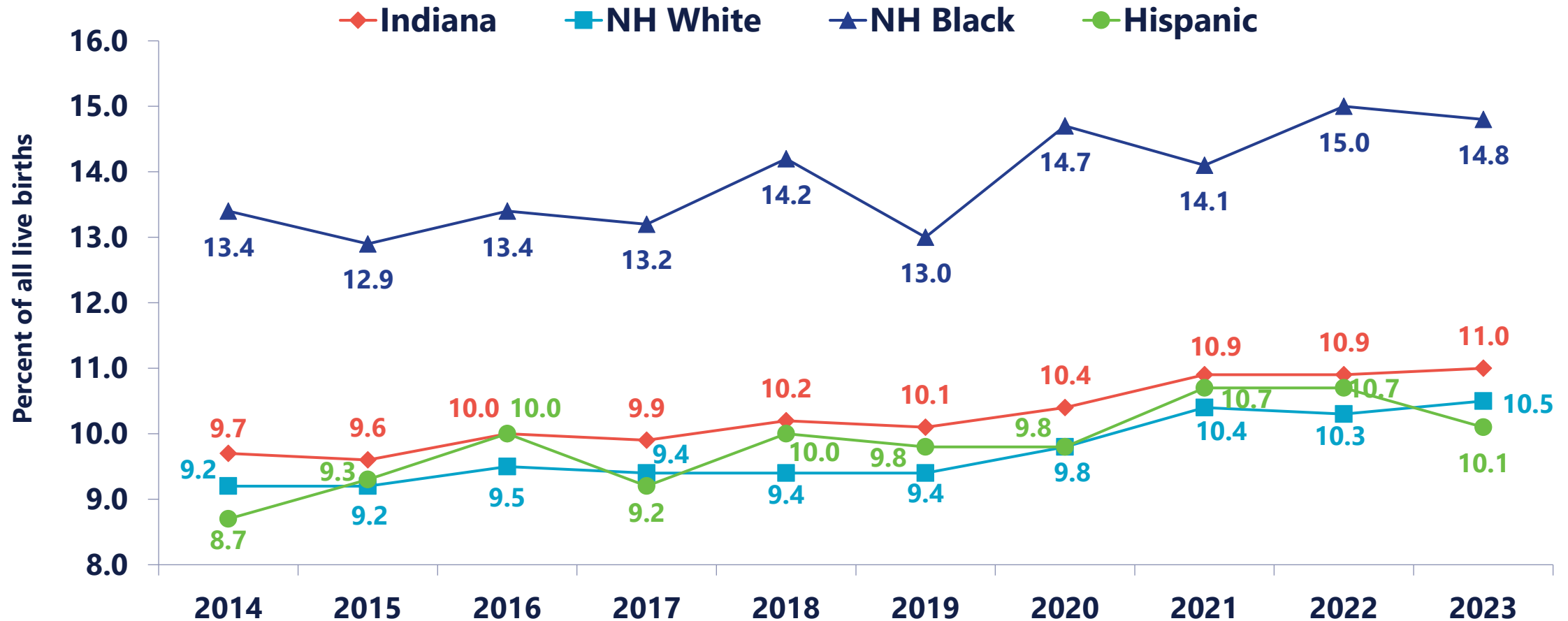
↓ Decrease from previous year, negative change
 ↑ Decrease from previous year, positive change

Percentage of preterm (obstetric estimate < 37 weeks) Indiana, U.S. and Healthy People Goals, 2014-2023

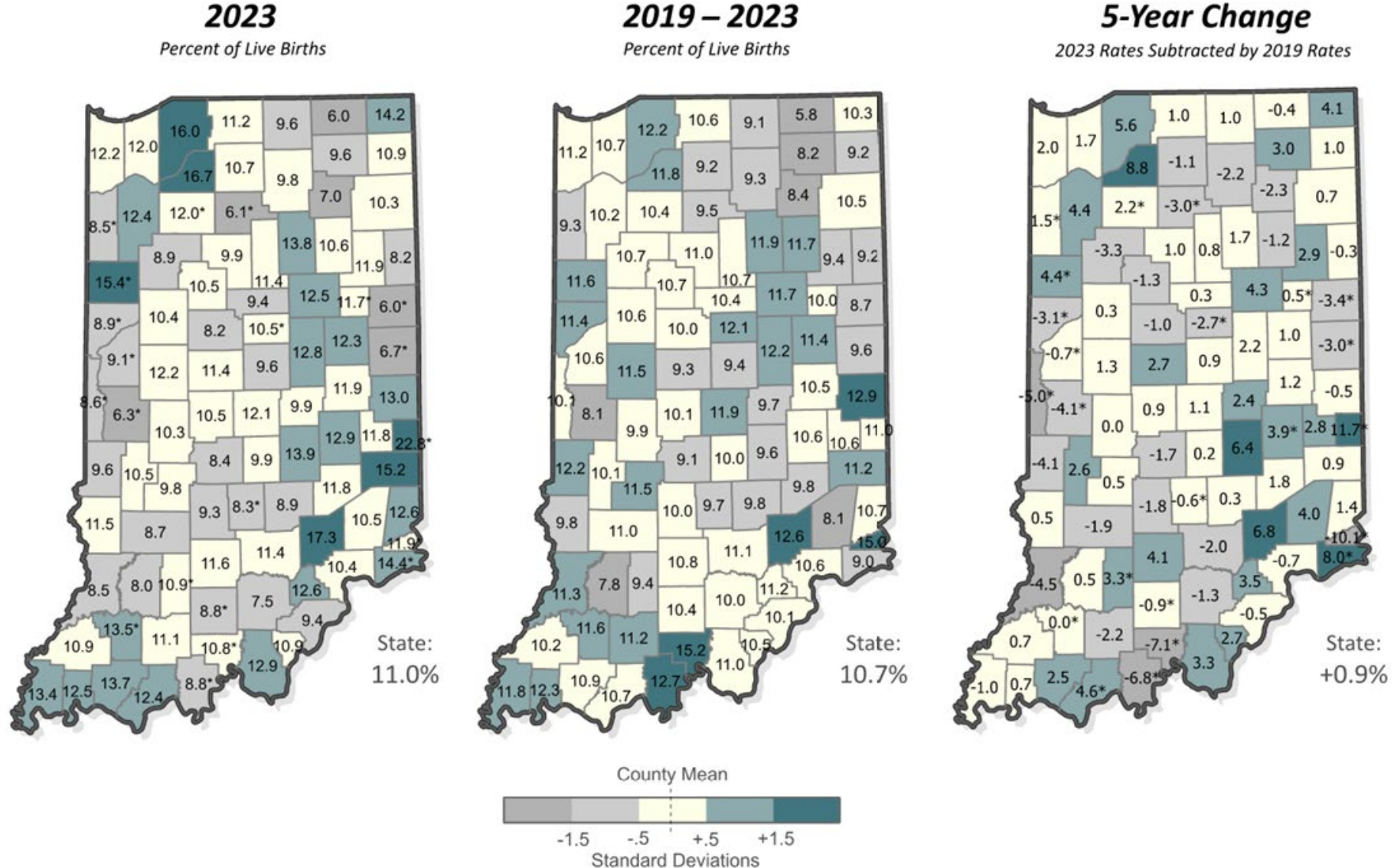


Source: Indiana Department of Health, Family Health Data and Fatality Prevention Division [March 7, 2025]
United States Original: Centers for Disease Control and Prevention National Center for Health Statistics
Indiana Original Source: Indiana Department of Health, Vital Records, ODA

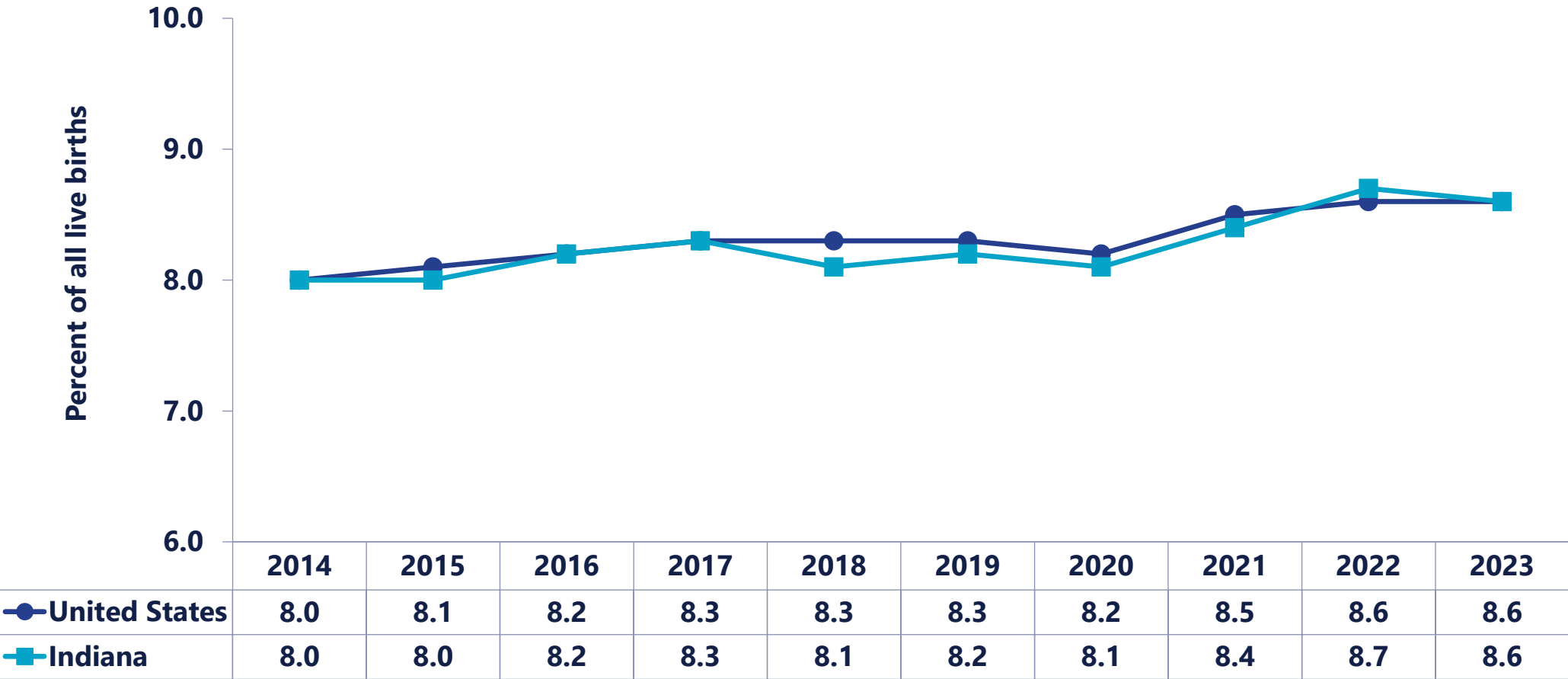
Percentage of preterm (obstetric estimate < 37 weeks) Indiana by race and ethnicity, 2014-2023



Preterm Births

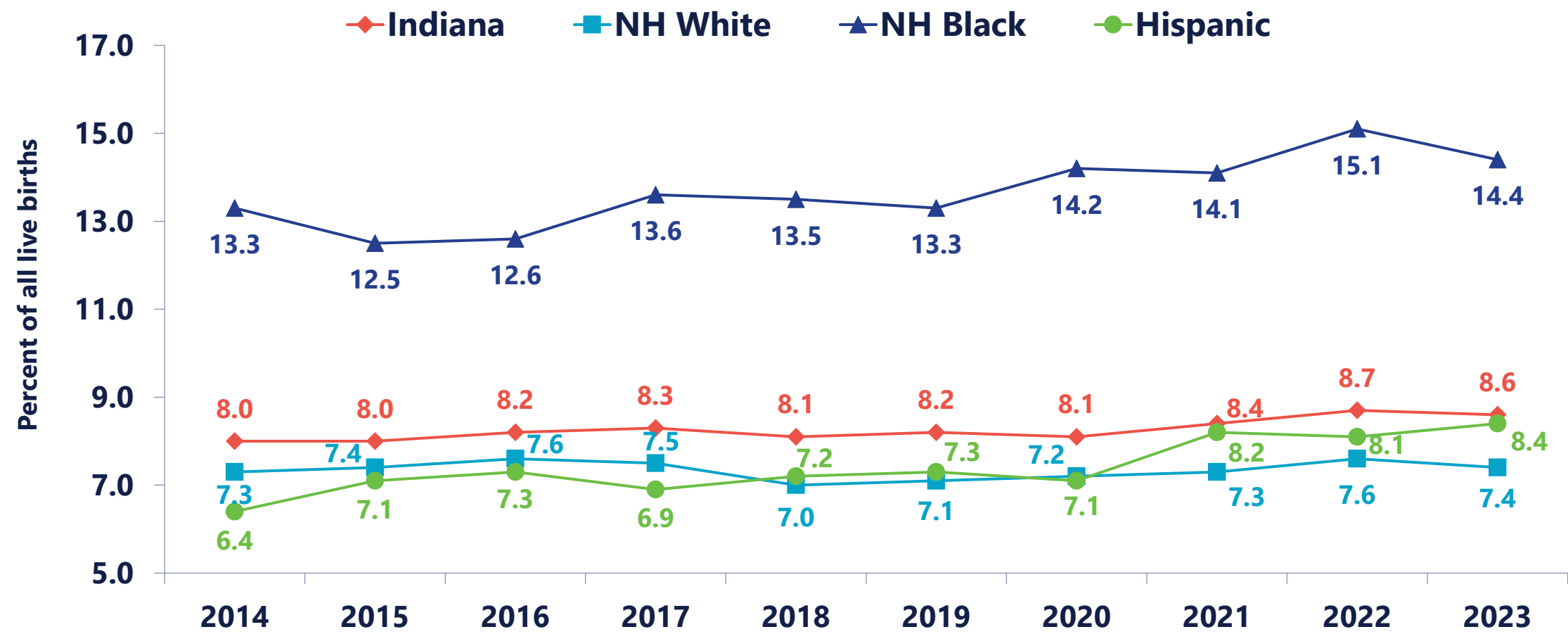


Percentage of low birthweight (< 2,500 grams) Indiana, US and Healthy People goal, 2014-2023

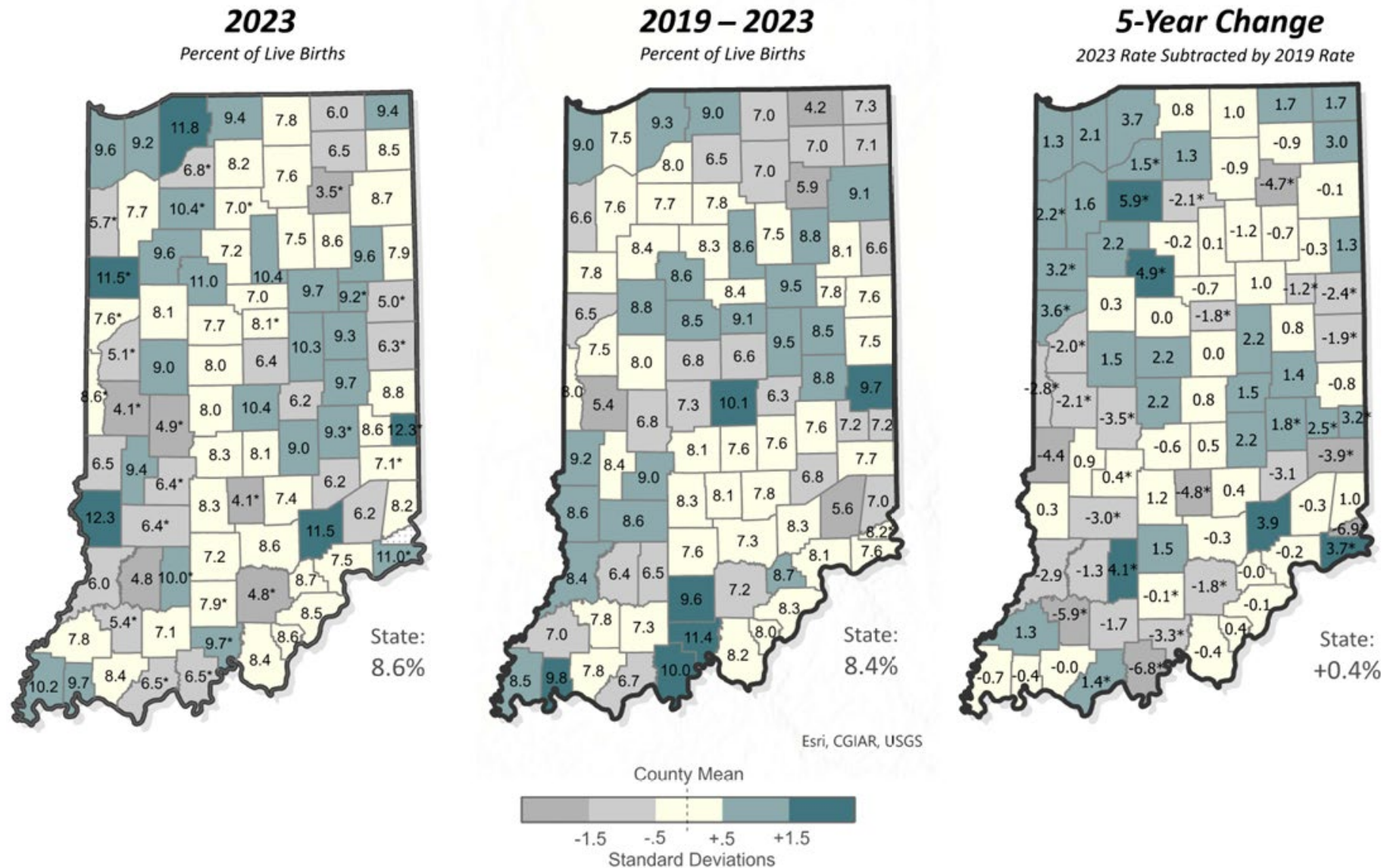


Percentage of low birthweight (< 2,500 grams)

Indiana by race and ethnicity, 2014-2023



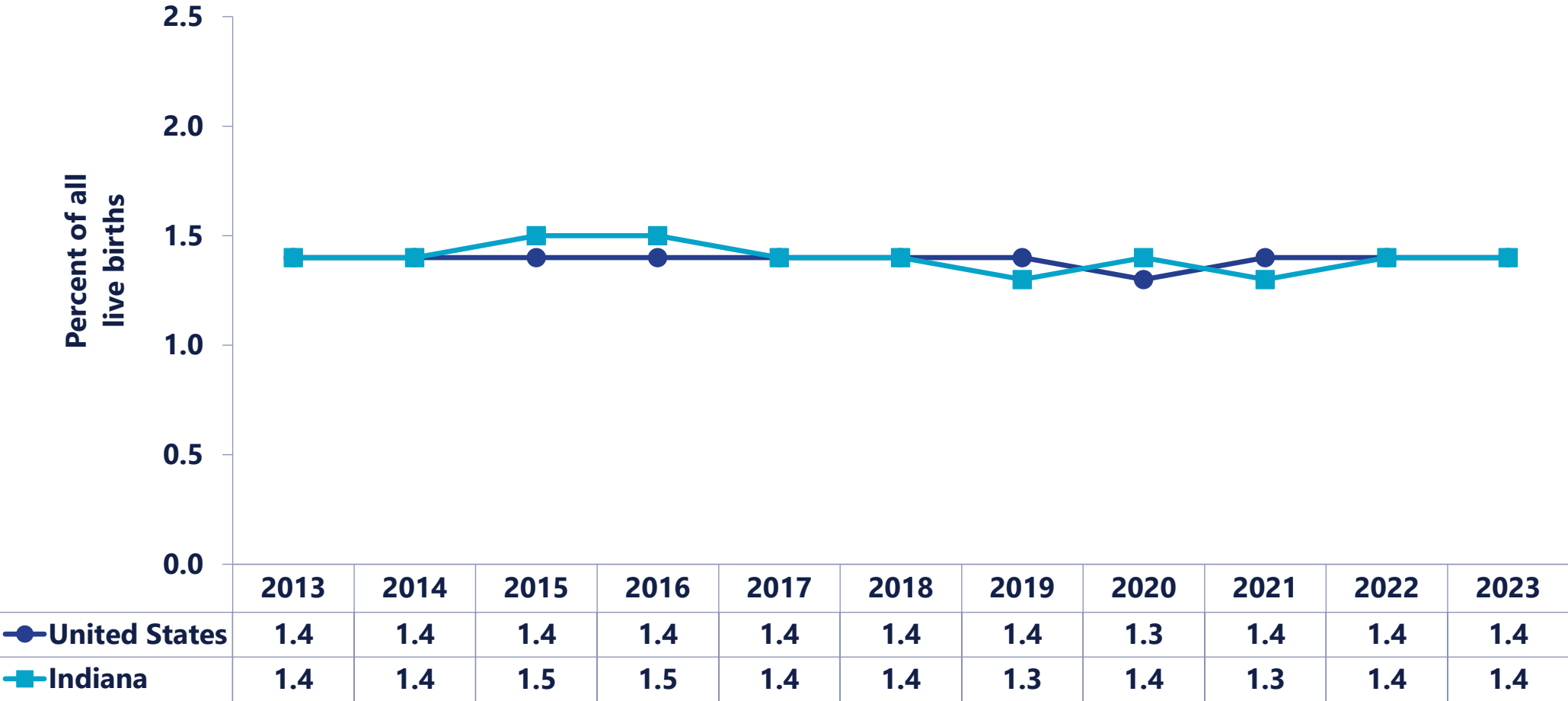
Low Birth Weight Births



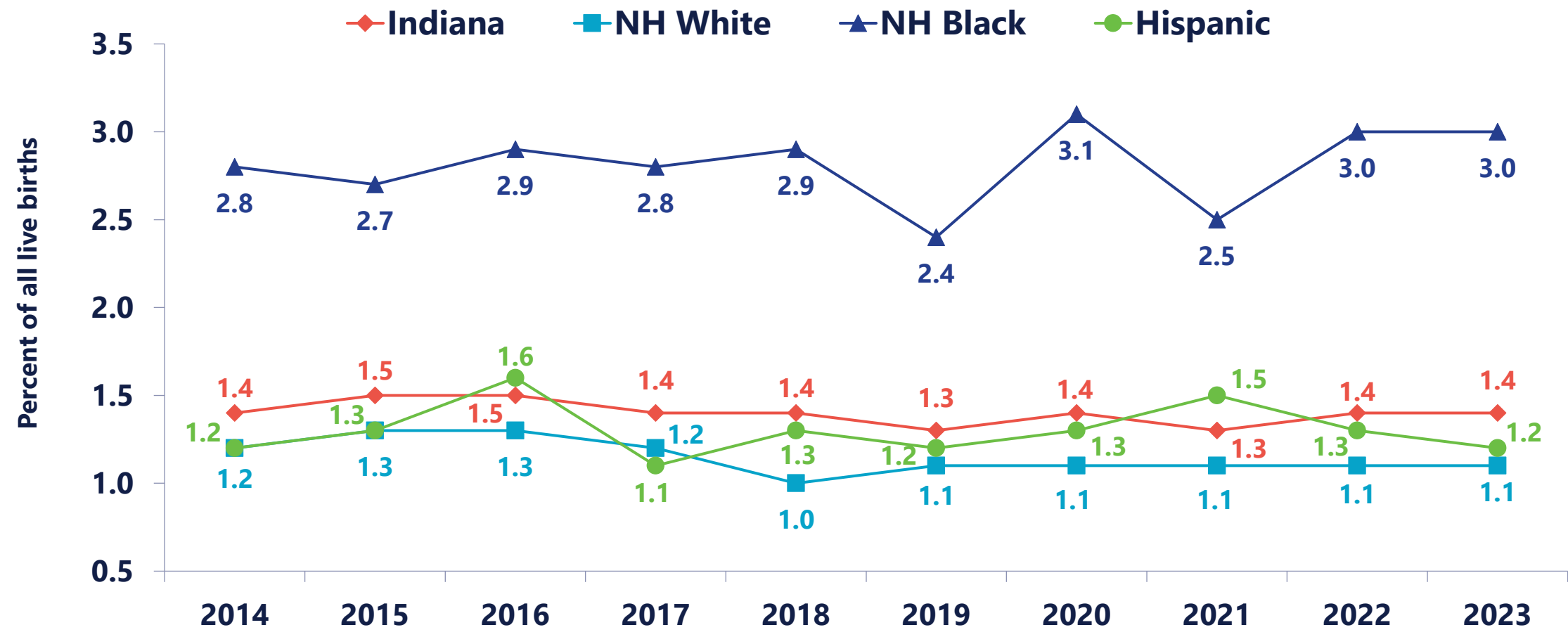
*Denotes unstable rate (<20 events). Counties with less than 5 events are suppressed.

Data Source: IDOH MCH, ODA DAT, VR | Map Author: IDOH ODA PHG, 4.4.2025

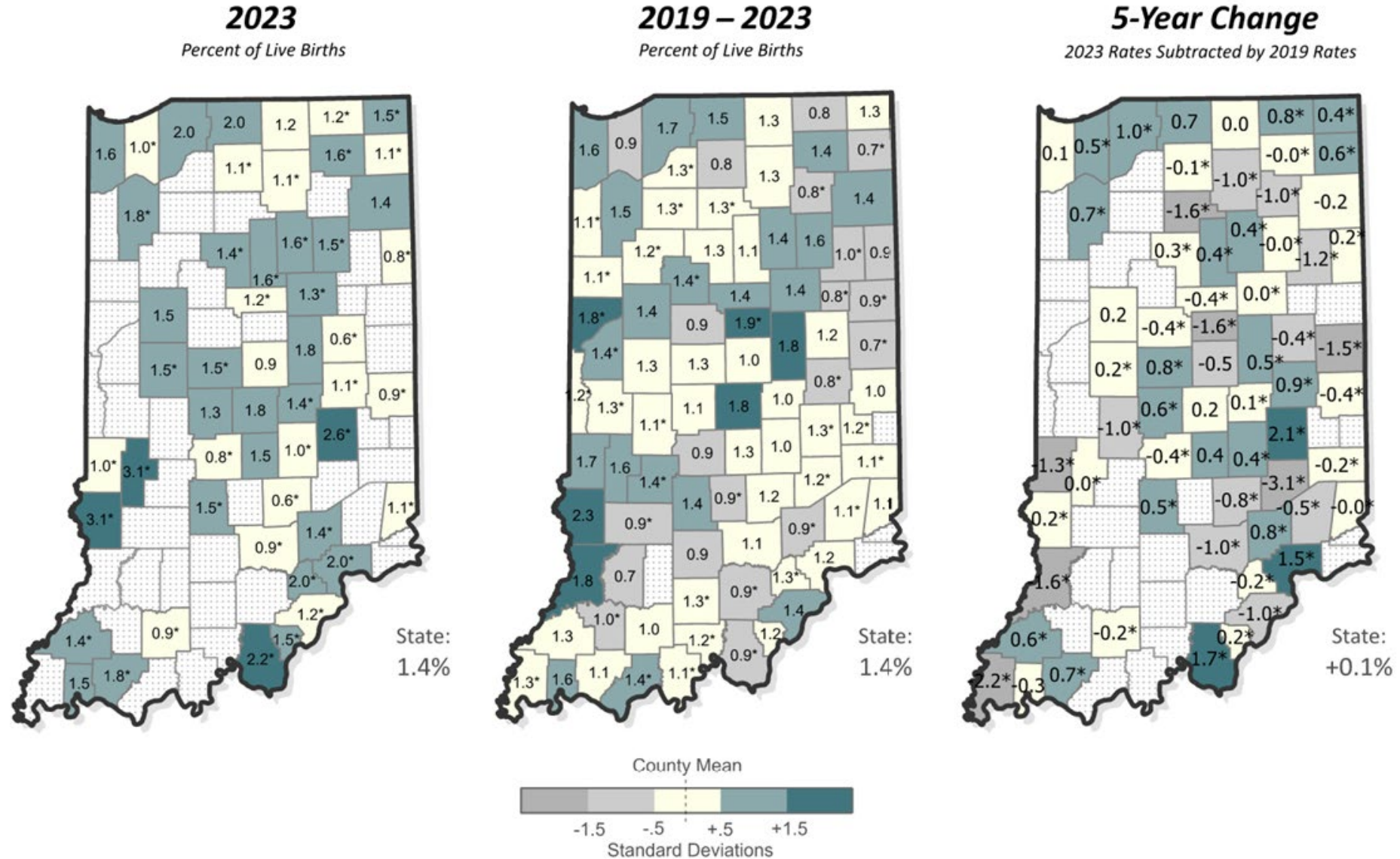
Percentage of very low birthweight (< 1,500 grams) Indiana, U.S. and Healthy People Goal, 2014-2023



Percentage of very low birthweight (< 1,500 grams) Indiana by race and ethnicity, 2014-2023

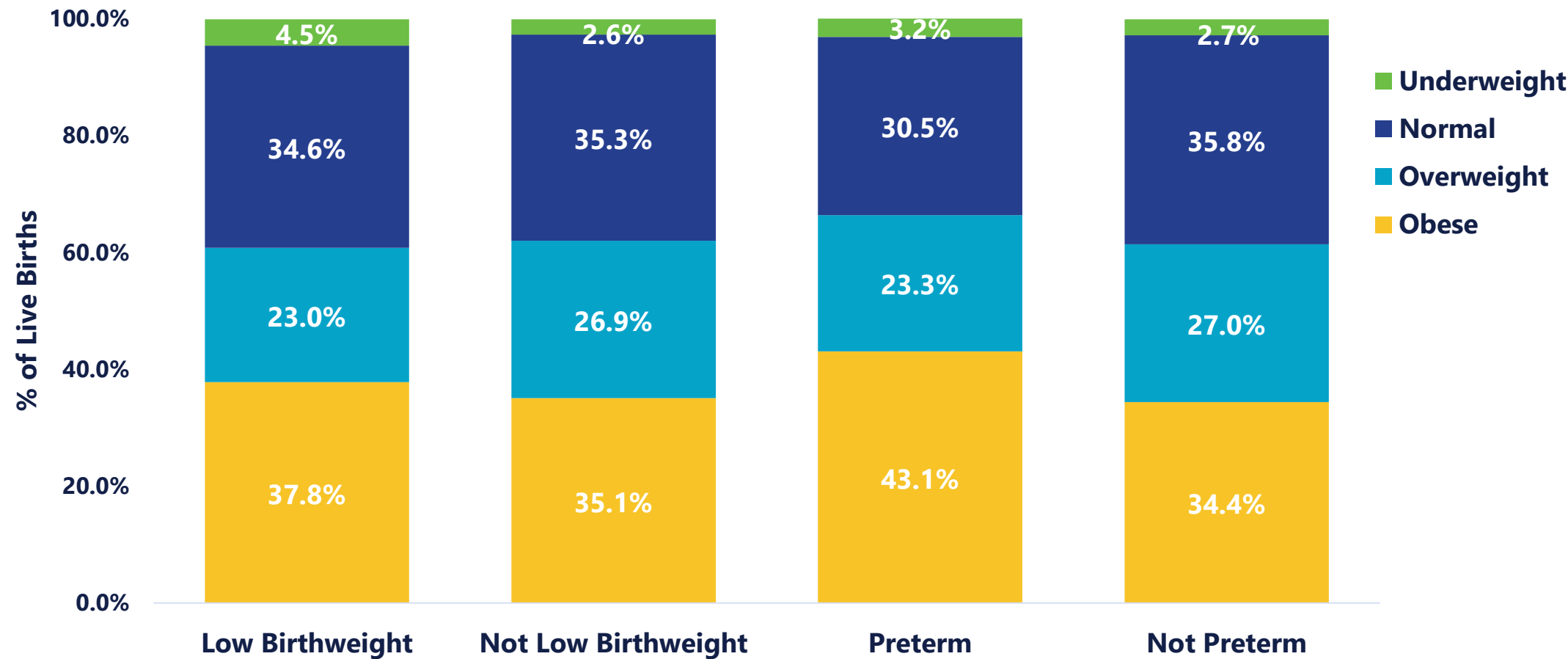


Very Low Birth Weight Births



***Denotes unstable rate (<20 events). Counties with less than 5 events are suppressed.**

Low birthweight and preterm by BMI, Indiana 2023



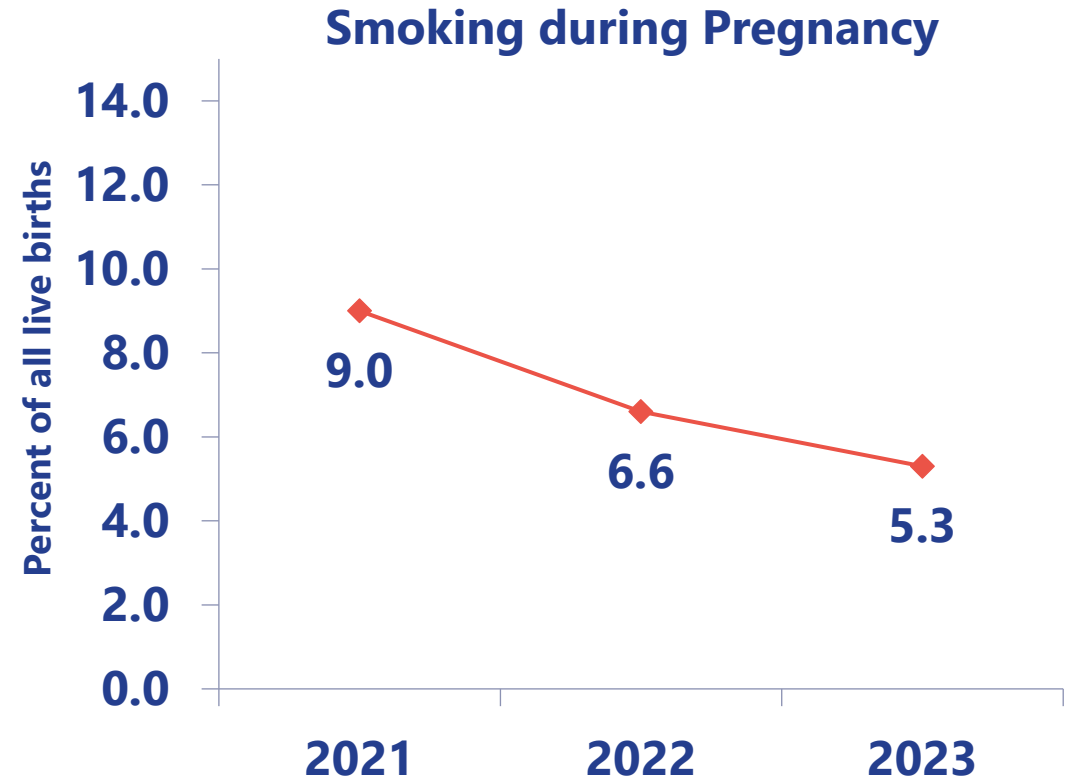
Low Birthweight = < 2,500 grams Preterm = Gestation < 37 weeks



Source: Indiana Department of Health, Family Health Data and Fatality Prevention Division [March 7, 2025]
Original Source: Indiana Department of Health, Vital Records, ODA

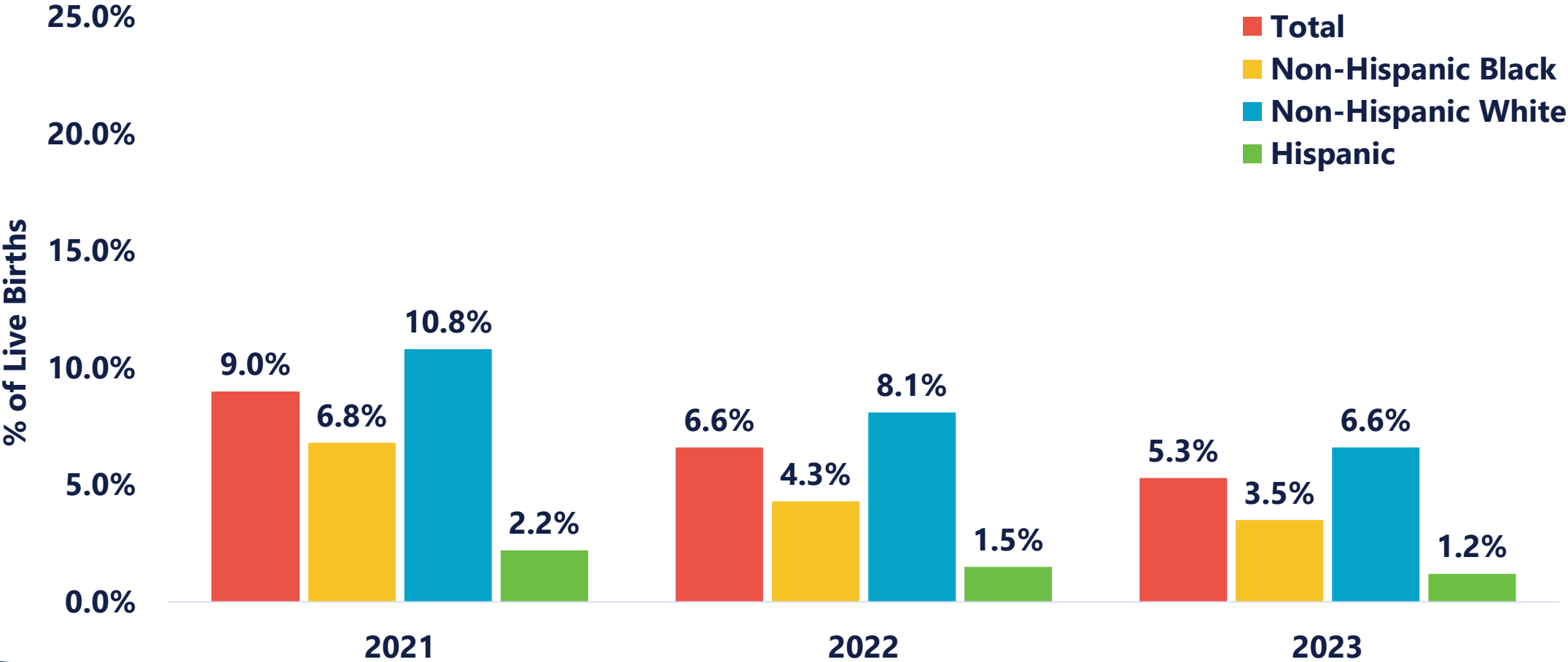
Smoking during pregnancy, Indiana 2021-2023

- The smoking variable has changed in the way that is collected, and as such these percentages should not be compared with previous years
- This means that smoking during pregnancy is calculated using variables for each trimester indicating whether the person had smoked during that trimester.
 - Due to the nature of this variable, it is possible that this percentage is an under representation of the true smoking during pregnancy percentage



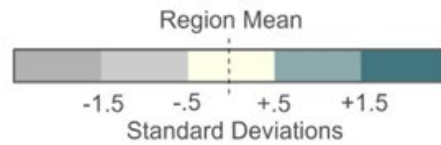
Smoking during pregnancy

Indiana by race and ethnicity, 2023



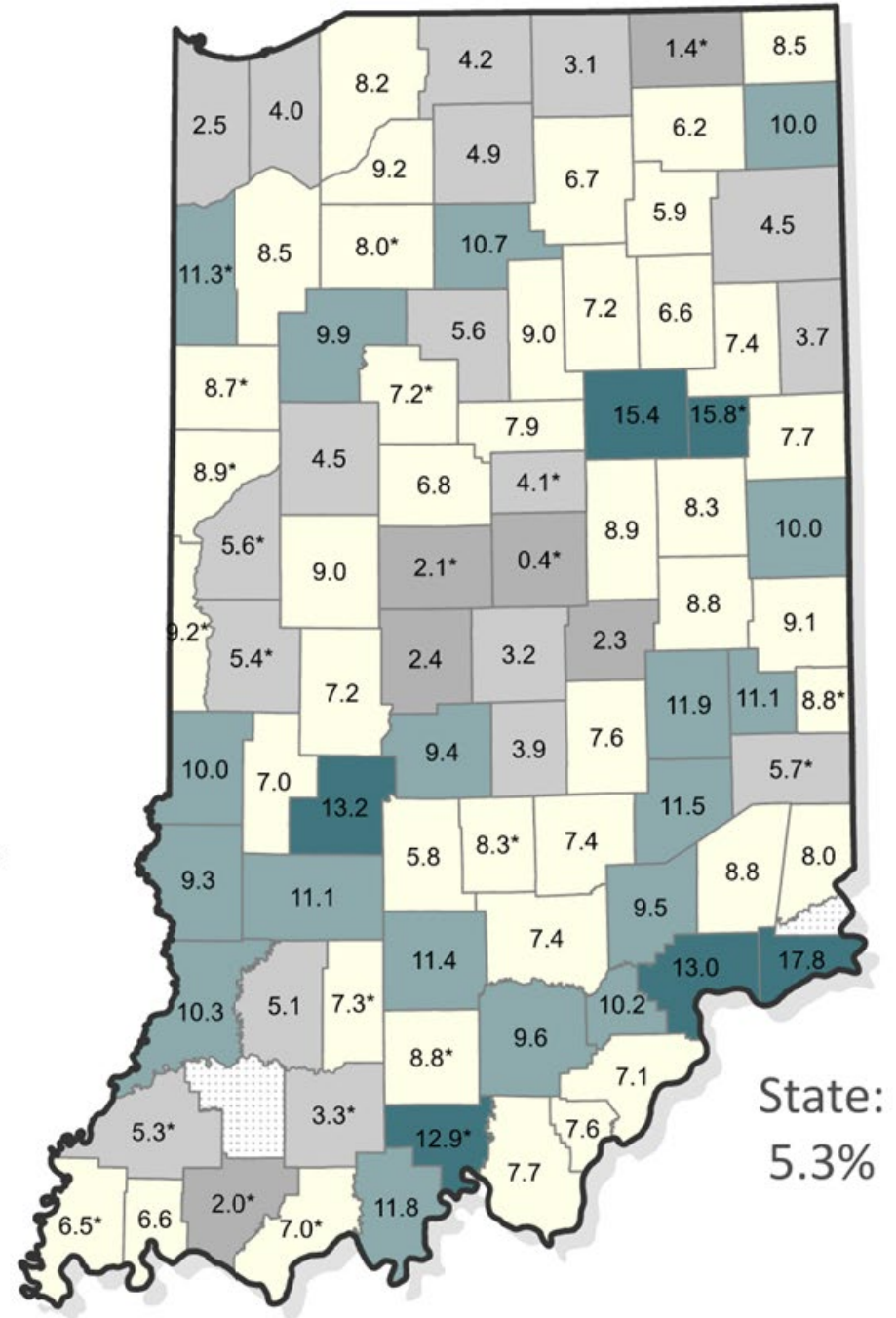
Smoking During Pregnancy Indiana, By County 2023

Percent of Live Births

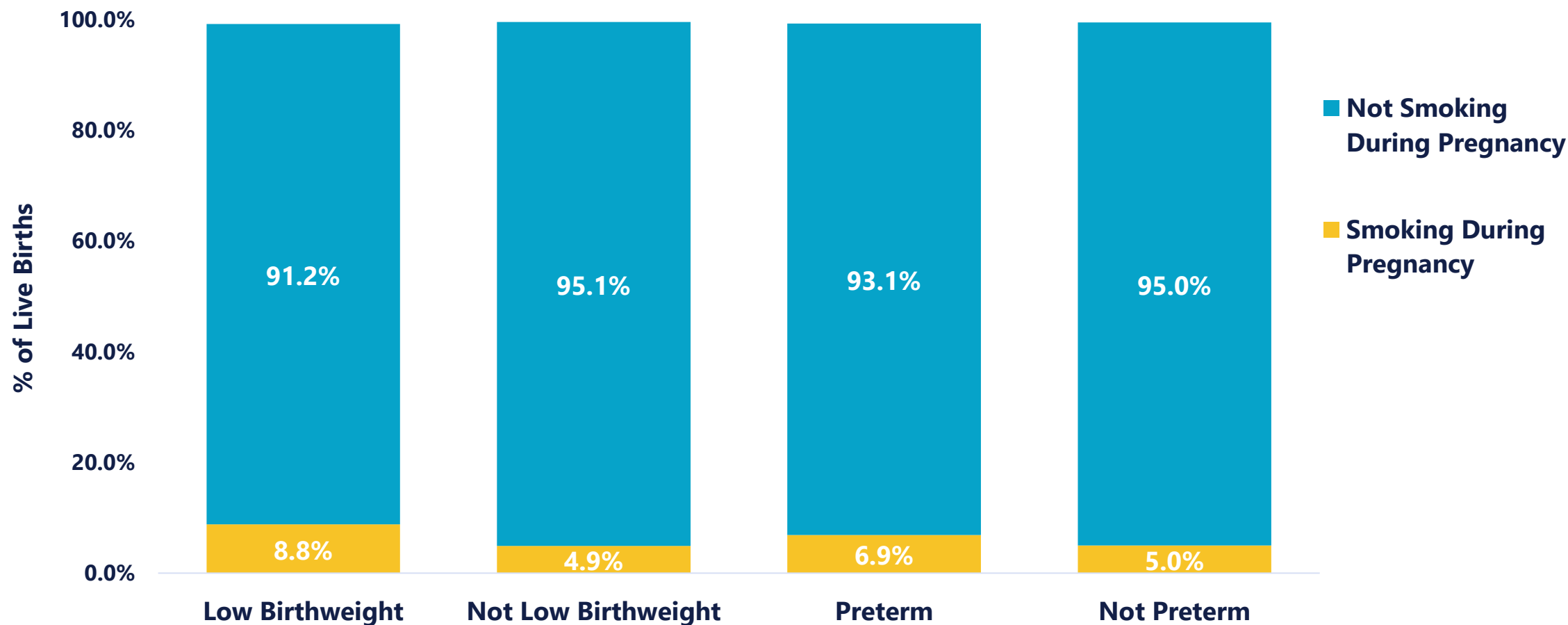


* Denotes unstable rate (<20 events)

Data Source: IDOH MCH, ODA DAT, VR | Map Author: IDOH ODA PHG, April 2025

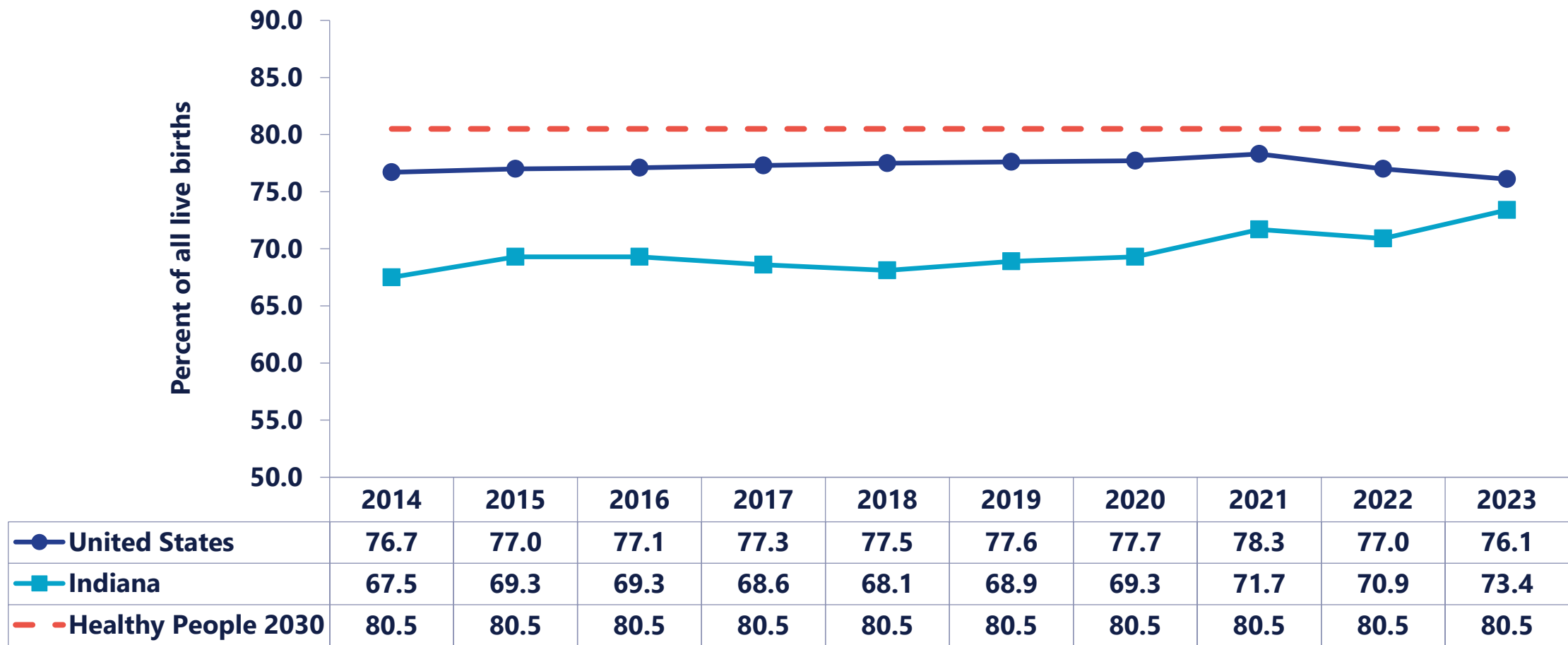


Low birthweight and preterm by smoking status, Indiana 2023



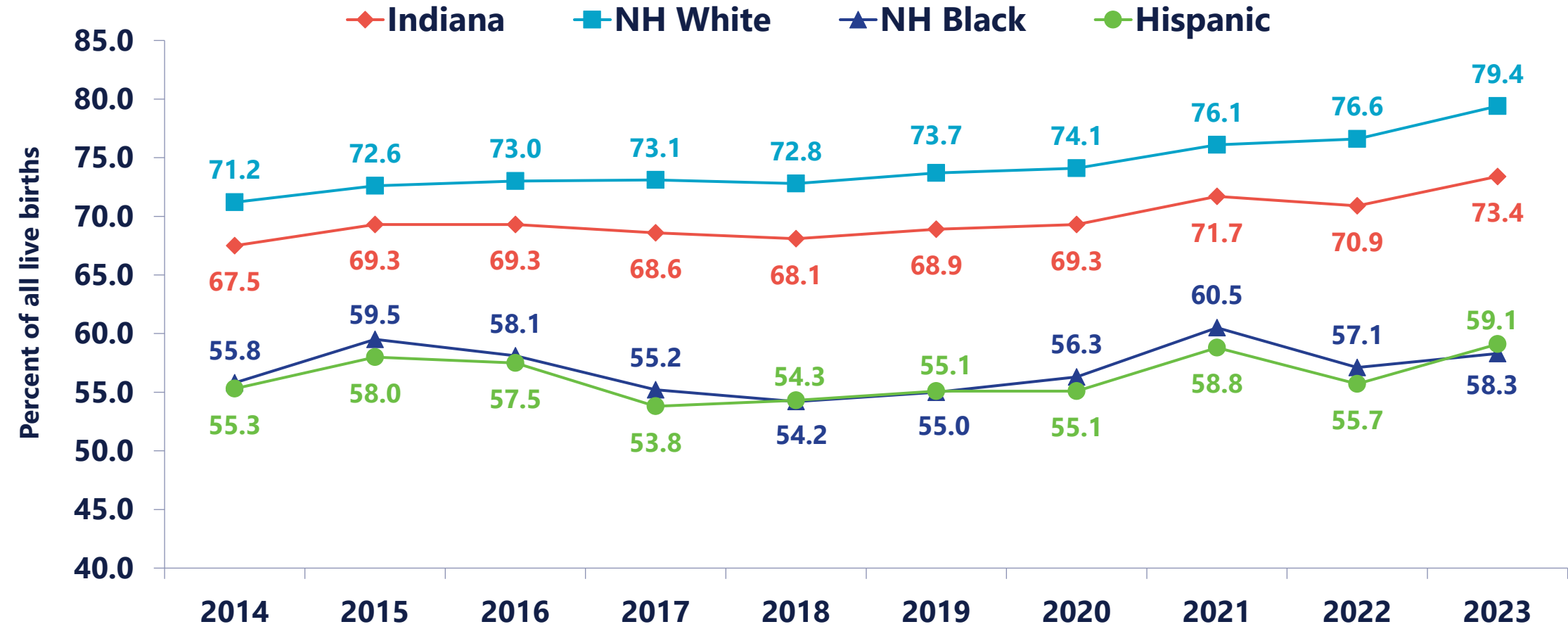
Percentage receiving PNC first trimester

Indiana, U.S. and Healthy People Goal, 2014-2023



Percentage receiving PNC first trimester

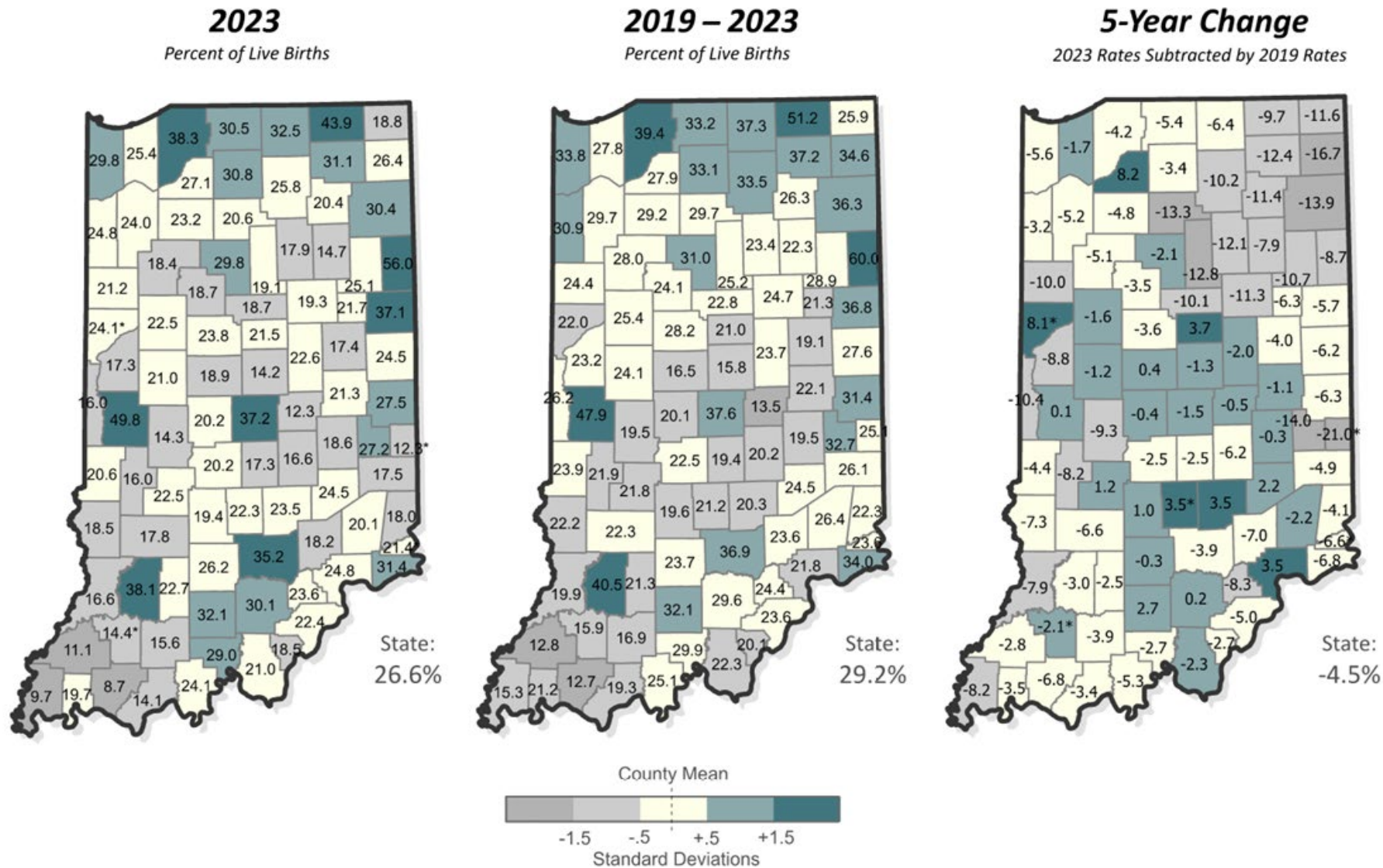
Indiana by race and ethnicity, 2014-2023



PNC = Prenatal Care

Source: Indiana Department of Health, Family Health Data and Fatality Prevention Division [March 7, 2025]
Original Source: Indiana Department of Health, Vital Records, ODA, Data Analysis Team

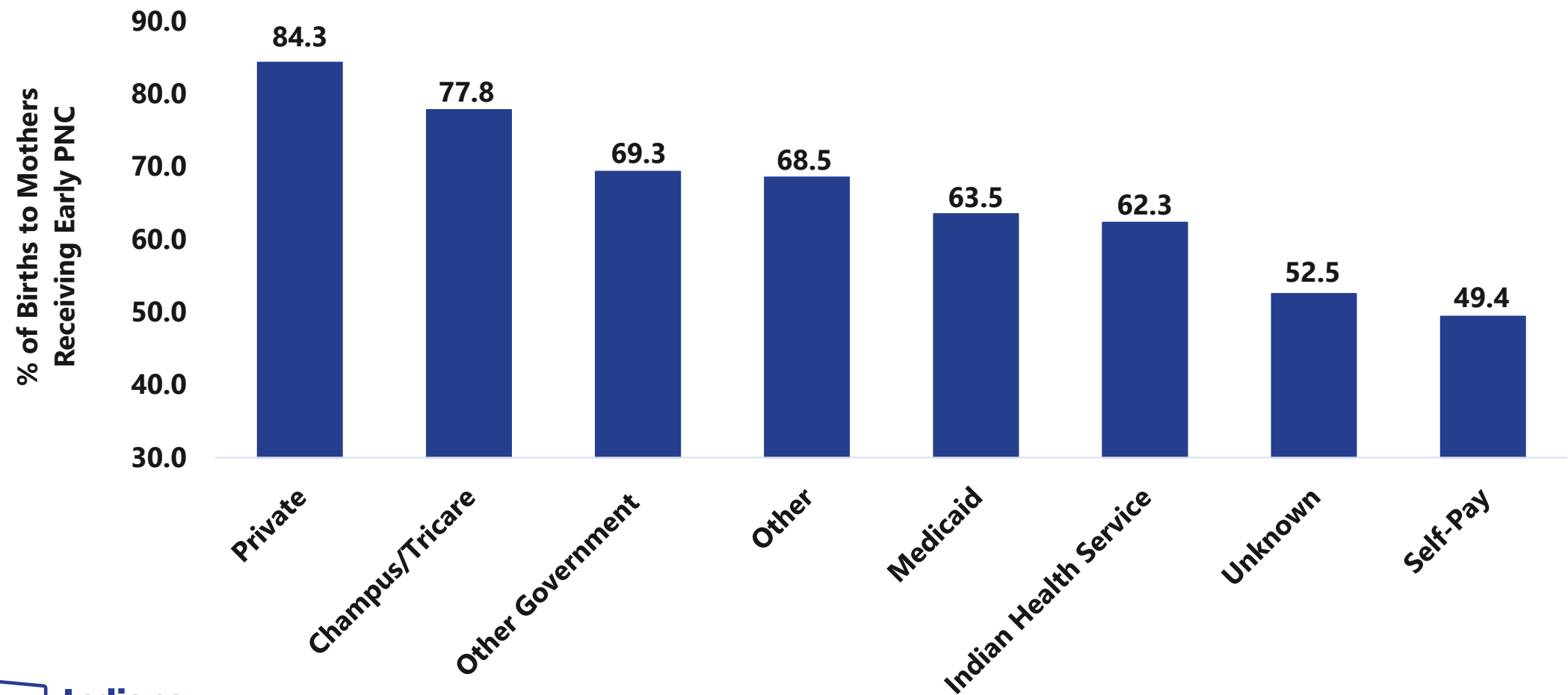
No Early Prenatal Care



*Denotes unstable rate (<20 events). Counties with less than 5 events are suppressed.

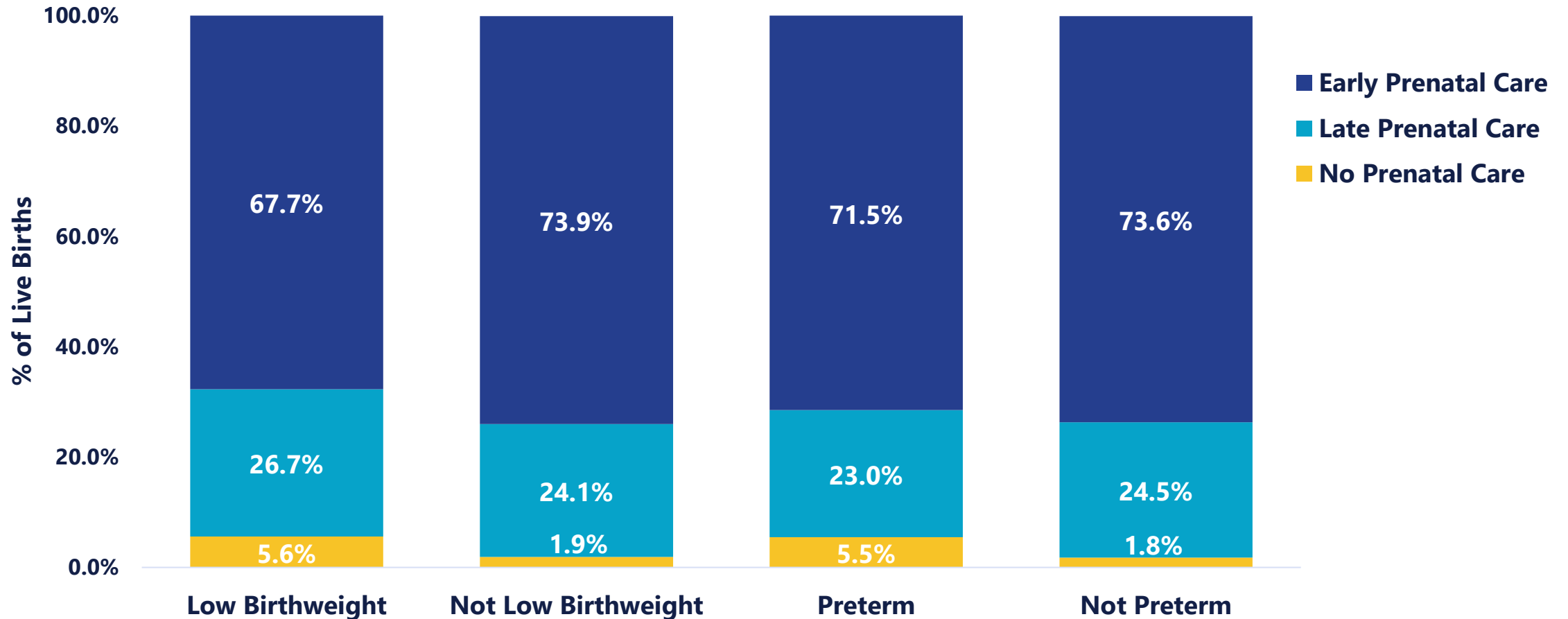
First trimester PNC by insurance type

Indiana 2023



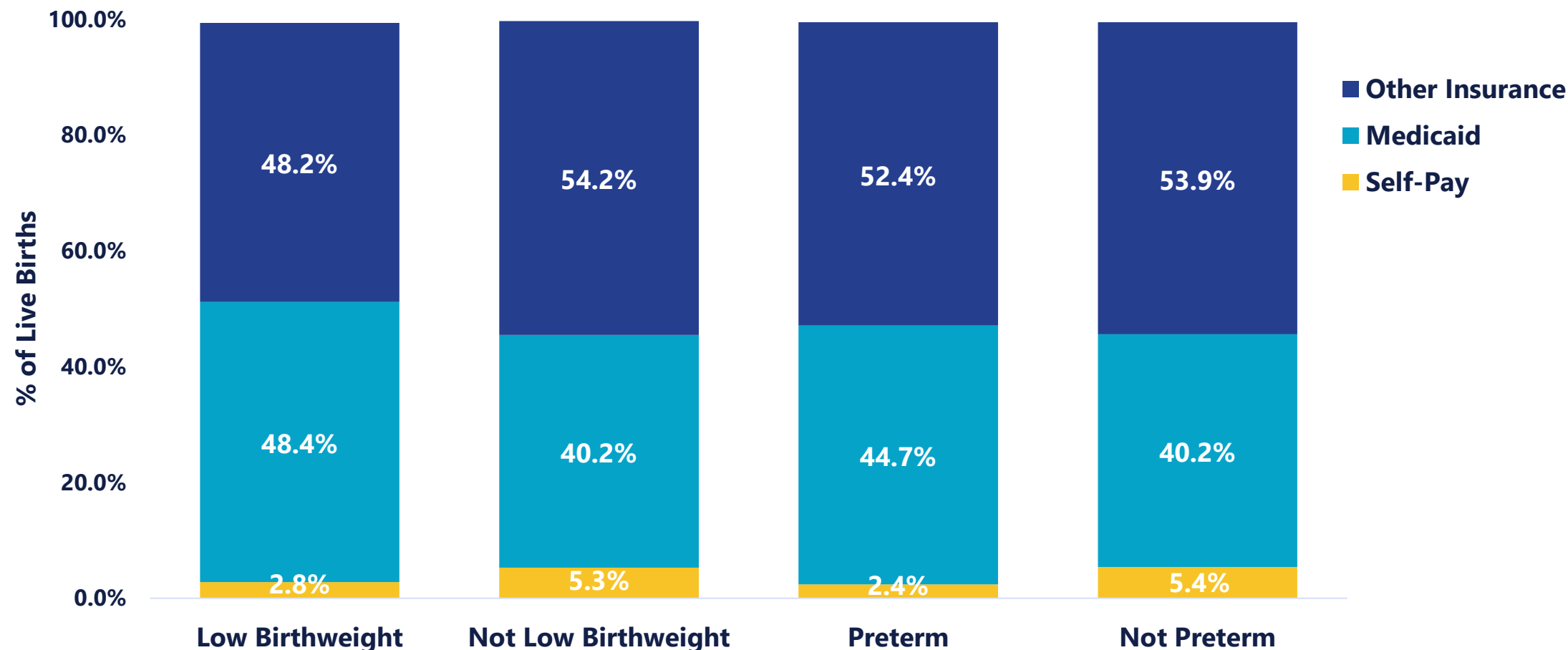
Low birthweight and preterm by prenatal care

Indiana 2023



Low birthweight and preterm by insurance

Indiana 2023



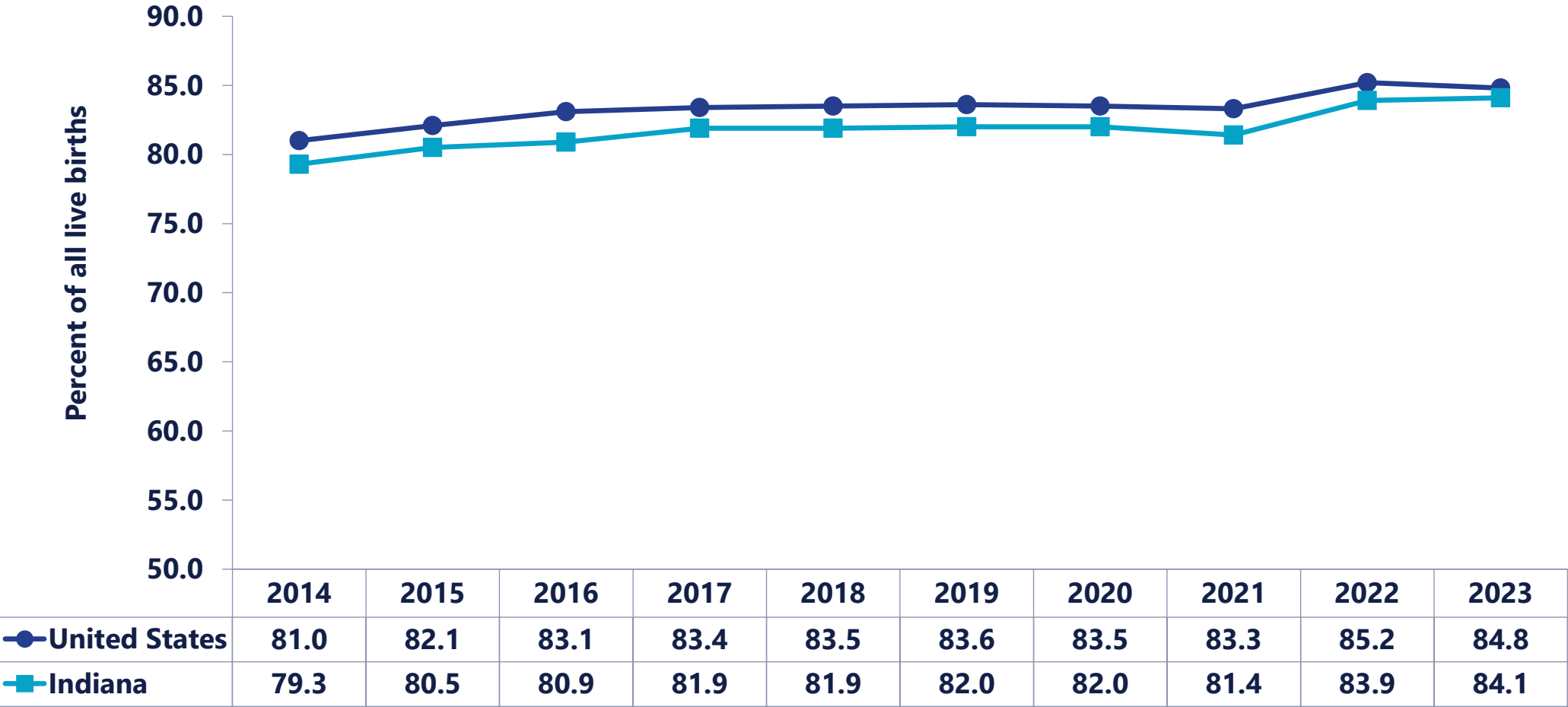
Low Birthweight = < 2,500 grams Preterm = Gestation < 37 weeks



Source: Indiana Department of Health, Family Health Data and Fatality Prevention Division [March 7, 2025]
Original Source: Indiana Department of Health, Vital Records, ODA

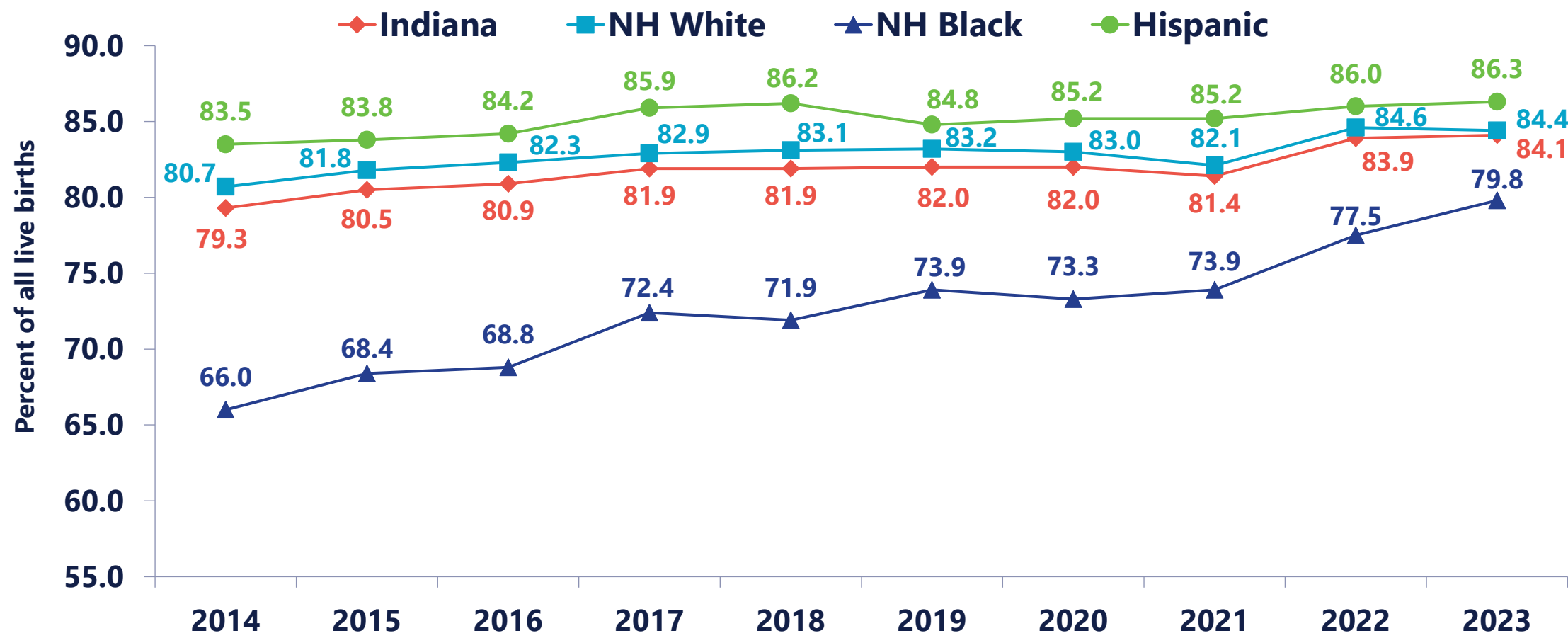
Percentage of infants breastfed at hospital discharge

Indiana, and U.S., 2014-2023

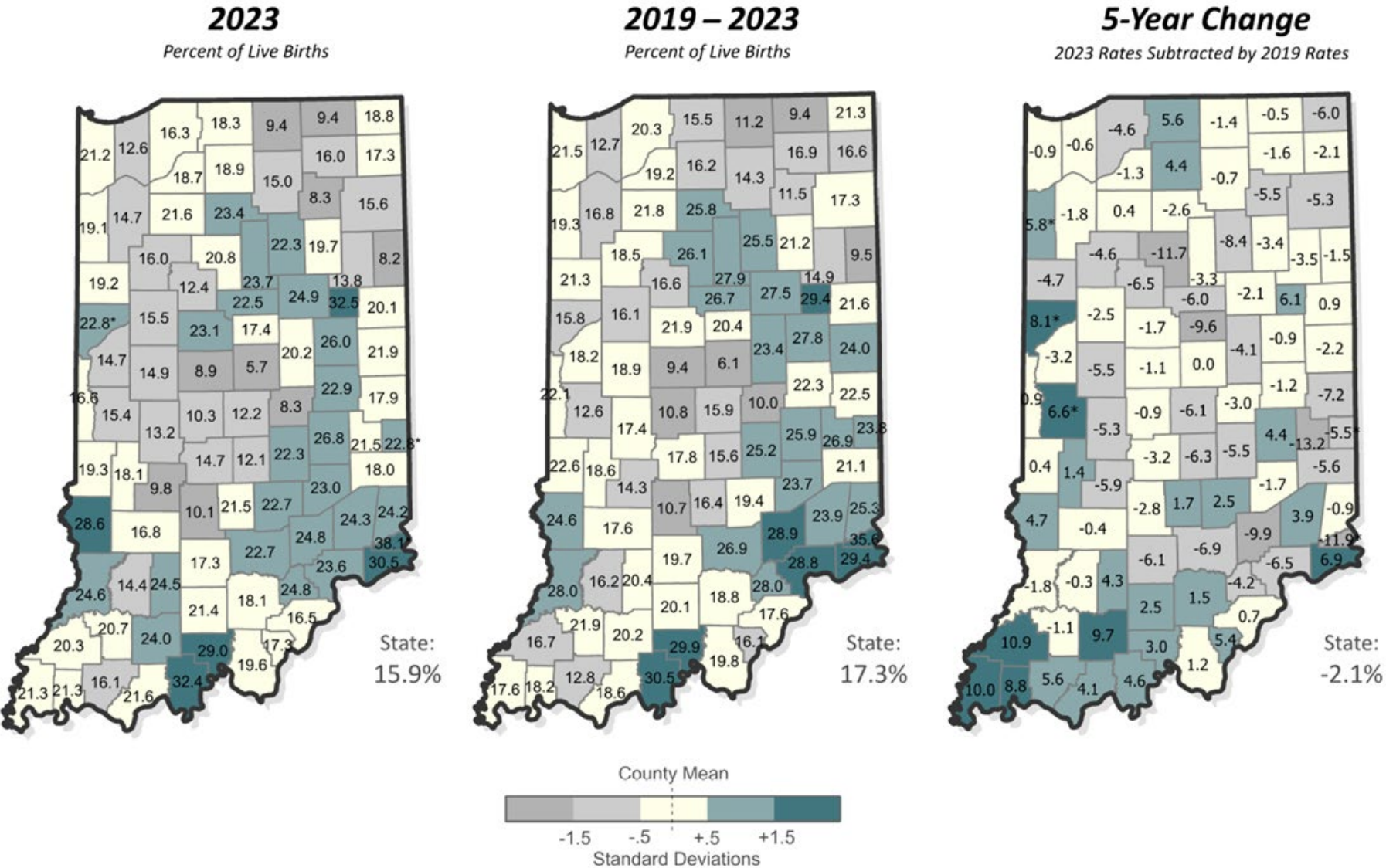


Percentage of infants breastfed at hospital discharge

Indiana by race and ethnicity, 2014-2023



Infants Not Breastfed at Hospital Discharge



***Denotes unstable rate (<20 events). Counties with less than 5 events are suppressed.**

2023 summary

- 524 infants in Indiana died before their first birthday.
- Perinatal risks are the primary cause of infant mortality in Indiana.
- More than 18% of infant deaths can be attributed to SUIDs and unsafe sleep.
- Preterm births have been increasing in recent years and there was a slight increase from 2022 to 2023.
- Lower percentages of early prenatal care when compared to the U.S., which varies by race and ethnicity and insurance coverage.
- Large disparities in all outcomes make prevention efforts complex.

Questions?

Family Health Data and Fatality Prevention Division

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