



Profile of Maternal and Infant Characteristics: Baltimore City 2006-2011

Bureau of Maternal and Child Health
Division of Health Promotion & Disease Prevention
Baltimore City Health Department

Objectives of the Profile

- To provide an updated summary of characteristics related to maternal and infant health in Baltimore City
- To illustrate characteristics that are associated with poor birth outcomes in Baltimore City

Linked Birth and Death Data

- Data from 2006-2010 birth certificates were linked with data from 2006-2011 death certificates
- 98% Linkage of Infant Deaths to Births among Baltimore City Residents

U.S. STANDARD
CERTIFICATE OF LIVE BIRTH

1. CHILD'S NAME (First, Middle, Last)
2. DATE OF BIRTH (Month, Day, Year)
3. TIME OF BIRTH
4. SEX
5. CITY, TOWN, OR LOCATION OF BIRTH
6. COUNTY OF BIRTH
7. PLACE OF BIRTH (If Hospital, give name of hospital; if other, give street and number)
8. FACILITY NAME (If not institution, give street and number)
9. CERTIFY that this child was born alive in the place and time and on the date stated.
10. DATE SIGNED (Month, Day, Year)
11. ATTENDANT'S NAME AND TITLE (If other than physician, give name and title)
12. CERTIFIER'S NAME AND TITLE (Physician)
13. ATTENDANT'S MAILING ADDRESS (Street and Number or Rural Route Number, City or Town, State, Zip Code)
14. SIGNATURE OF CERTIFIER
15. DATE FILED BY REGISTRAR (Month, Day, Year)
16. MOTHER'S NAME (First, Middle, Last)
17. DATE OF BIRTH (Month, Day, Year)
18. RESIDENCE - STATE
19. COUNTY
20. CITY, TOWN, OR LOCATION
21. STREET AND NUMBER
22. INSIDE CITY LIMITS (Yes or No)
23. MOTHER'S MAILING ADDRESS (Street and Number or Rural Route Number, City or Town, State, Zip Code)
24. FATHER'S NAME (First, Middle, Last)
25. DATE OF BIRTH (Month, Day, Year)
26. BIRTHPLACE (State or Foreign Country)
27. I certify that the personal information provided on this certificate is correct to the best of my knowledge and belief.
28. INFORMATION FOR MEDICAL AND HEALTH USE ONLY
29. OF HERMAGE (BREAST) Feeds? No or Yes - If Yes, specify (Chest, Breast, Nipple, Mouth, etc.)
30. BREAST-Feeding (Breast, Mouth, etc.)
31. PREVIOUSLY BREAST-Feeding (Breast, Mouth, etc.)
32. MOTHER MARRED? (No birth, conception, or any time between (Yes or No)
33. MONTH OF PREVIOUSLY PREVIOUSLY, CARE BEGAN-First, Second, Third, etc. (Specify)
34. PREVIOUSLY VISITS - Total Number (If none, or state)
35. CLINICAL EXAMINE OF GESTATION (Review)
36. PLURALITY - Single, Twin, Triplet, etc. (Specify)
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U.S. STANDARD
CERTIFICATE OF DEATH

1. DECEDENT'S NAME (First, Middle, Last)
2. SEX
3. DATE OF DEATH (Month, Day, Year)
4. SOCIAL SECURITY NUMBER
5. AGE - Last Birthday (Months, Days, Hours, Minutes)
6. DATE OF BIRTH (Month, Day, Year)
7. BIRTHPLACE (City and State or Foreign Country)
8. WAS DECEDENT EVER IN U.S. ARMED FORCES? (Yes or No)
9. PLACE OF DEATH (Specify only one; see instructions on other side)
10. FACILITY NAME (If not institution, give street and number)
11. CITY, TOWN, OR LOCATION OF DEATH
12. COUNTY OF DEATH
13. MARITAL STATUS (Married, Single, Widowed, Divorced, Separated)
14. SURVIVING SPOUSE (If wife, give maiden name)
15. DECEDENT'S USUAL OCCUPATION (Give kind of work done during most of working life; do not use retired)
16. KIND OF BUSINESS/INDUSTRY
17. RESIDENCE - STATE
18. COUNTY
19. CITY, TOWN, OR LOCATION
20. STREET AND NUMBER
21. INSIDE CITY LIMITS (Yes or No)
22. ZIP CODE
23. WAS DECEDENT OF HISPANIC ORIGIN? (Specify race or ethnicity; if Yes, specify Cuban, Mexican, Puerto Rican, etc.; if No, specify)
24. RACE - American Indian, Black, White, etc. (Specify)
25. DECEDENT'S EDUCATION (Specify only highest grade completed)
26. FATHER'S NAME (First, Middle, Last)
27. MOTHER'S NAME (First, Middle, Last)
28. METHOD OF DISPOSITION
29. PLACE OF DISPOSITION (Name of cemetery, crematory, or other place)
30. LOCATION - City or Town, State
31. SIGNATURE OF FUNERAL SERVICE LICENSE OR PERSON ACTING AS SUCH
32. LICENSE NUMBER (Of Licensee)
33. NAME AND ADDRESS OF FACILITY
34. DATE OF DEATH
35. DATE PRONOUNCED DEAD (Month, Day, Year)
36. WAS CASE REFERRED TO MEDICAL EXAMINER/CORONER? (Yes or No)
37. PART I. Enter the disease, injury, or complication that caused the death. Do not enter the mode of dying, such as cardiac or respiratory arrest, shock, or heart failure. List only one cause on next line.
38. IMMEDIATE CAUSE (Final disease or condition resulting in death)
39. CAUSE OF DEATH (Final disease or condition resulting in death)
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Structure of the Profile

- Background of Maternal and Infant Health in Baltimore City
- Maternal Characteristics
- Pregnancy Characteristics
- Infant Characteristics
- Conclusions

Definitions

- **Infant Mortality:** Death occurring to an infant between birth and < 1 year of age (expressed as a rate per 1,000 live births)
- **Neonatal death:** Death occurring to an infant < 28 days of age
- **Post-Neonatal death:** Death occurring to an infant between 28 days and one year of age
- **Sleep-Related death:** Infant death due to Sudden Infant Death Syndrome (SIDS), Accidental Asphyxiation or suffocation in bed (ASSB), or Unknown cause, but associated with infant sleep

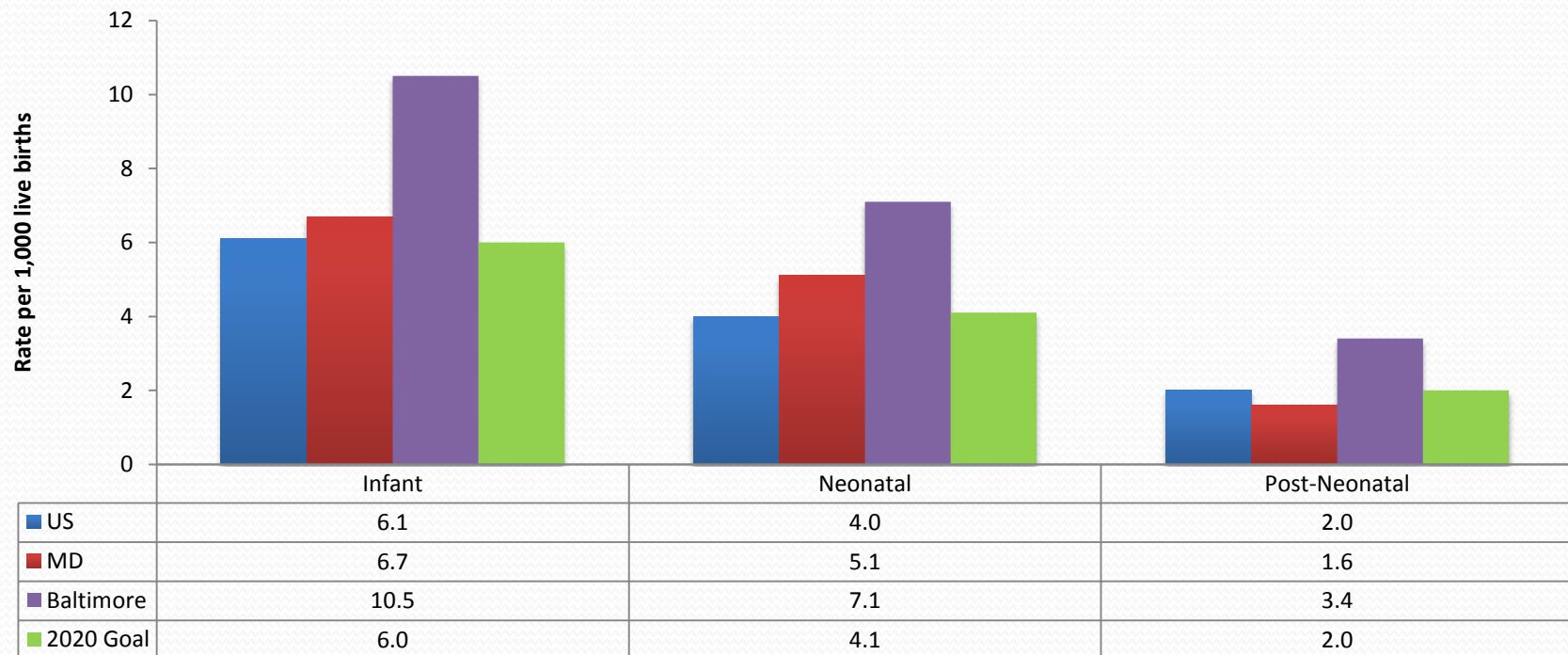


BACKGROUND

Property of Baltimore City Health Department. Data Source:
BCHD Analysis of DHMH Vital Statistics.

How Does Baltimore Compare?

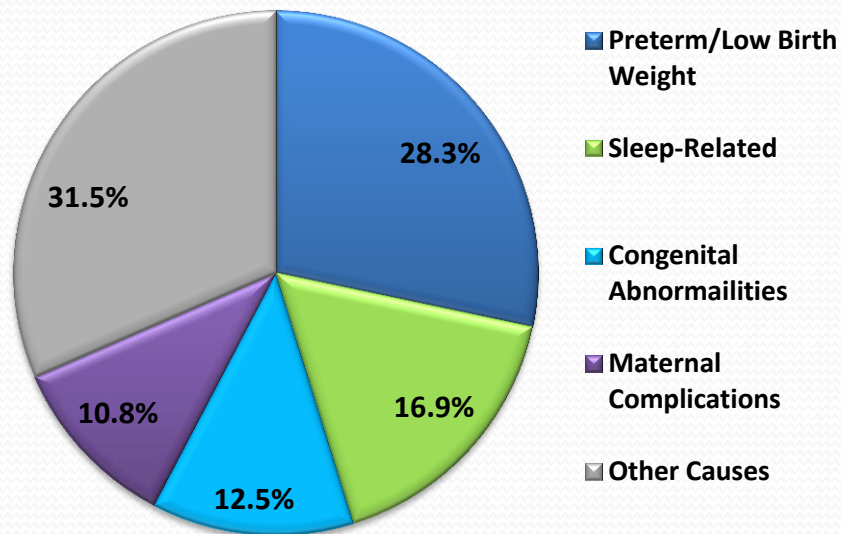
Infant Mortality Rates: Baltimore, Maryland, US 2011



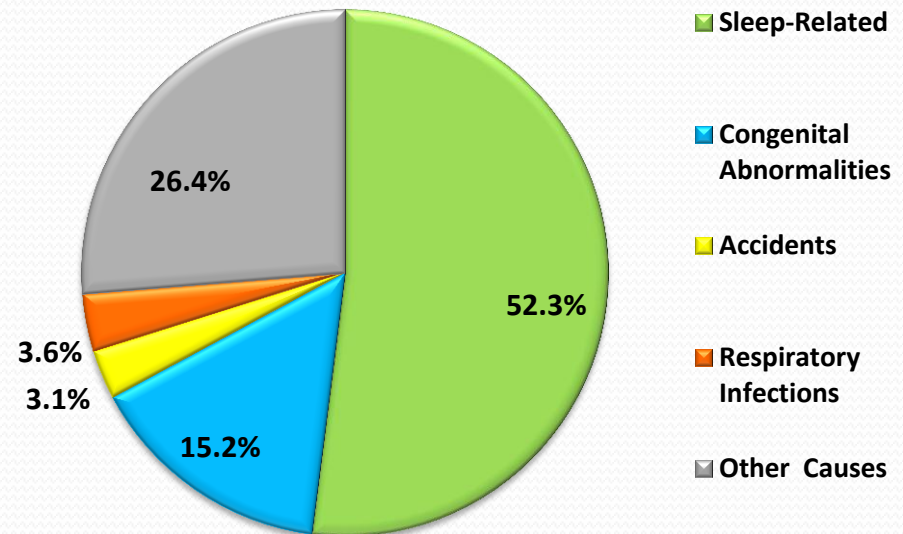
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BCHD Analysis of DHMH Vital Statistics.

Leading Causes of Infant Mortality: Baltimore City

**Leading Causes of Infant Death
2006-2011**

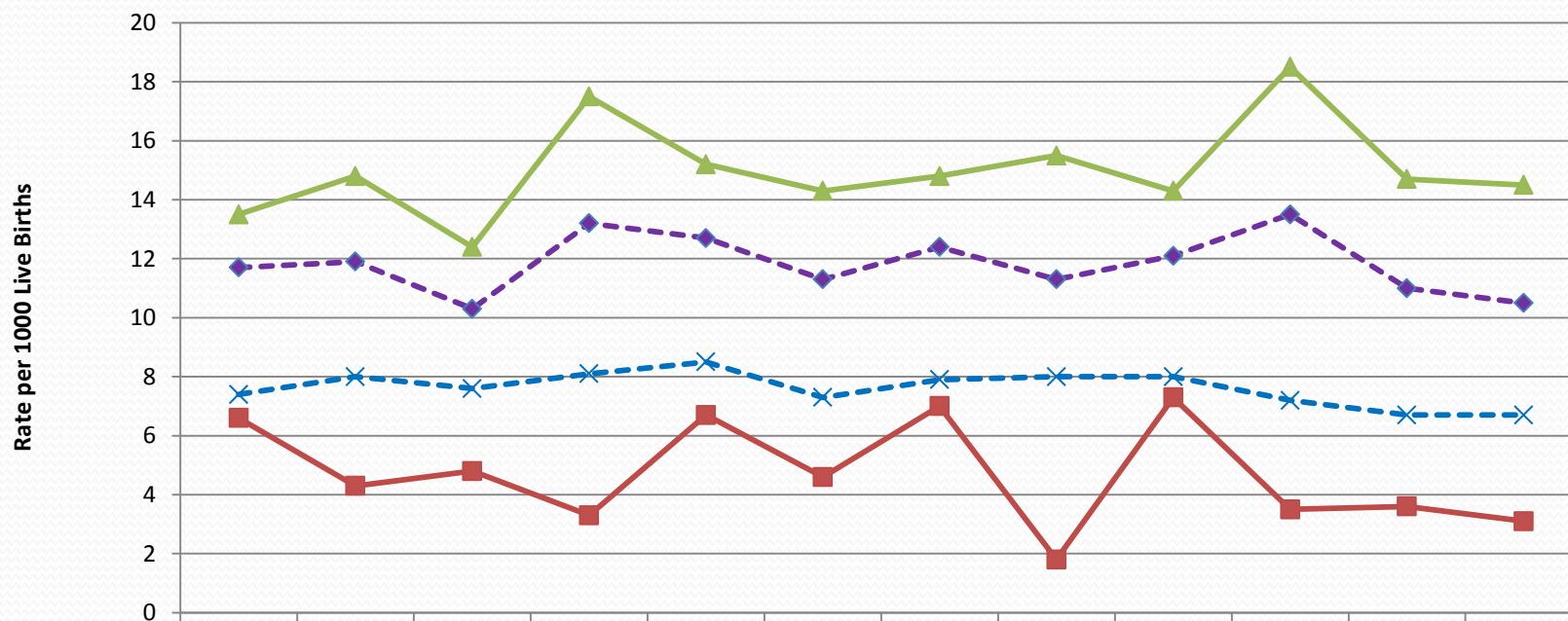


**Leading Causes of Post-Neonatal Death
2006-2011**



Infant Mortality Rates Over Time

Infant Mortality Baltimore City by Race and Maryland 2000-2011



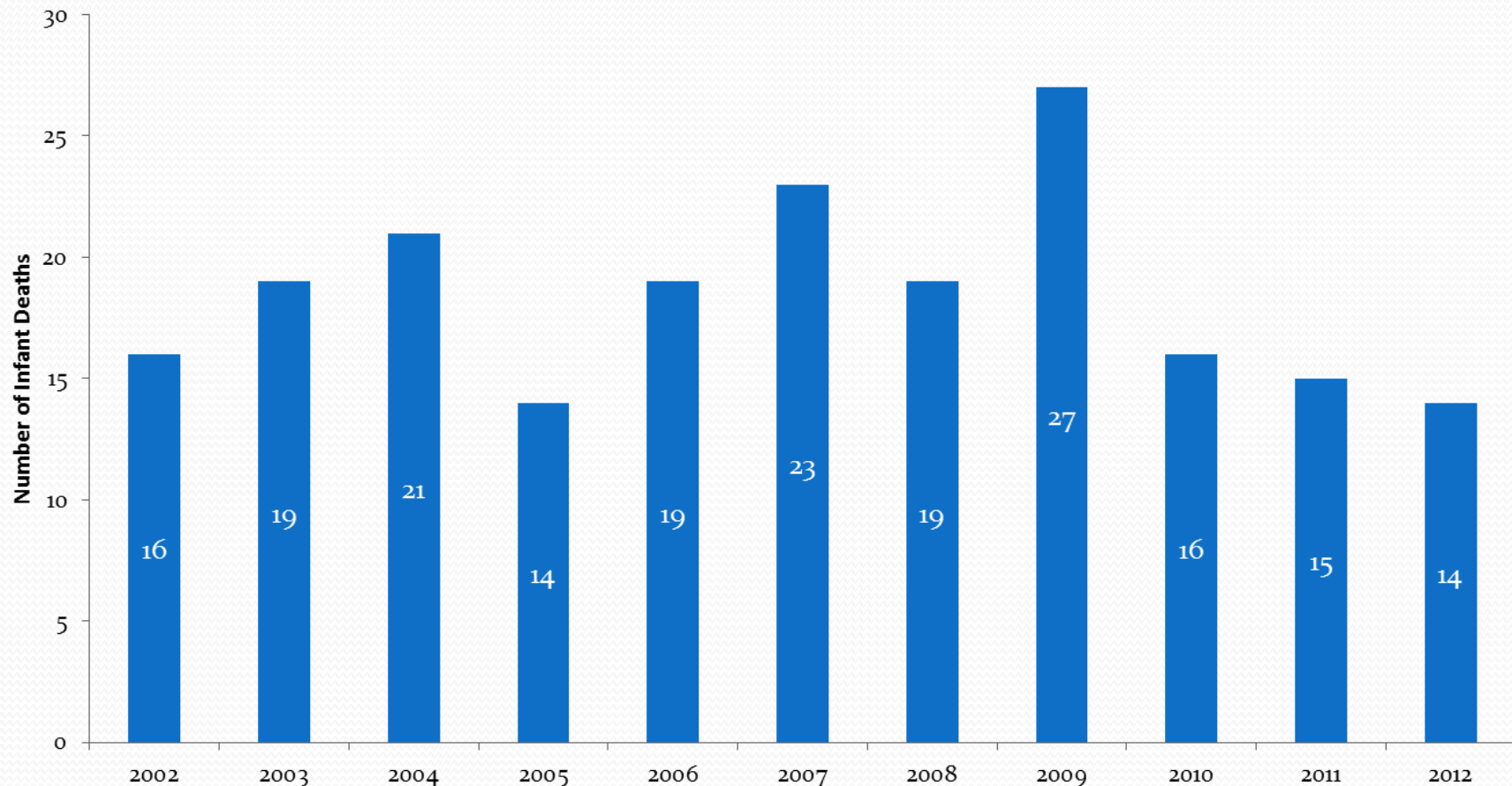
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
◆ Baltimore City	11.7	11.9	10.3	13.2	12.7	11.3	12.4	11.3	12.1	13.5	11	10.5
■ White	6.6	4.3	4.8	3.3	6.7	4.6	7	1.8	7.3	3.5	3.6	3.1
▲ Black	13.5	14.8	12.4	17.5	15.2	14.3	14.8	15.5	14.3	18.5	14.7	14.5
× Maryland	7.4	8	7.6	8.1	8.5	7.3	7.9	8	8	7.2	6.7	6.7

Property of Baltimore City Health Department. Data Source:
BCHD Analysis of DHMH Vital Statistics.



Sleep-Related Infant Deaths

Baltimore City Sleep-Related Deaths 2002-2012



Property of Baltimore City Health Department. Data Source:
BCHD Analysis of DHMH Vital Statistics.

Baltimore City

- In 2011, a total of 93 infants died, resulting in an infant mortality rate of 10.5 per 1,000 live births
- In 2011, black infants were about 5 times more likely to die than white infants
- In 2011, Baltimore City's infant mortality rate was 1.6 times greater than Maryland's rate, resulting in 33.5 excess infant deaths*

* The # of infant deaths in Baltimore City that is in excess of what would be expected if Baltimore City had the same infant mortality rate as Maryland

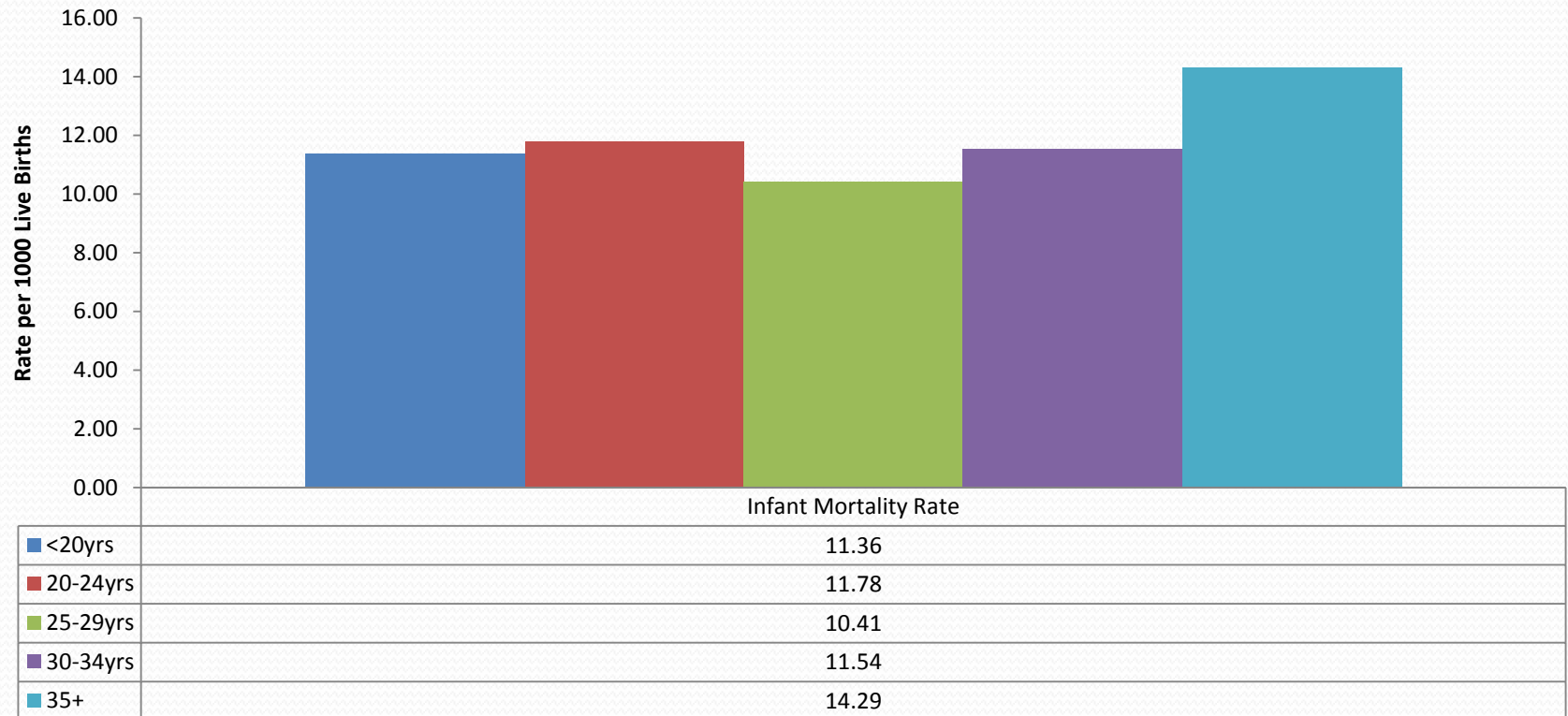


MATERNAL CHARACTERISTICS

Property of Baltimore City Health Department.
Data Source: BCHD Analysis of DHMH Vital
Statistics.

Maternal Age

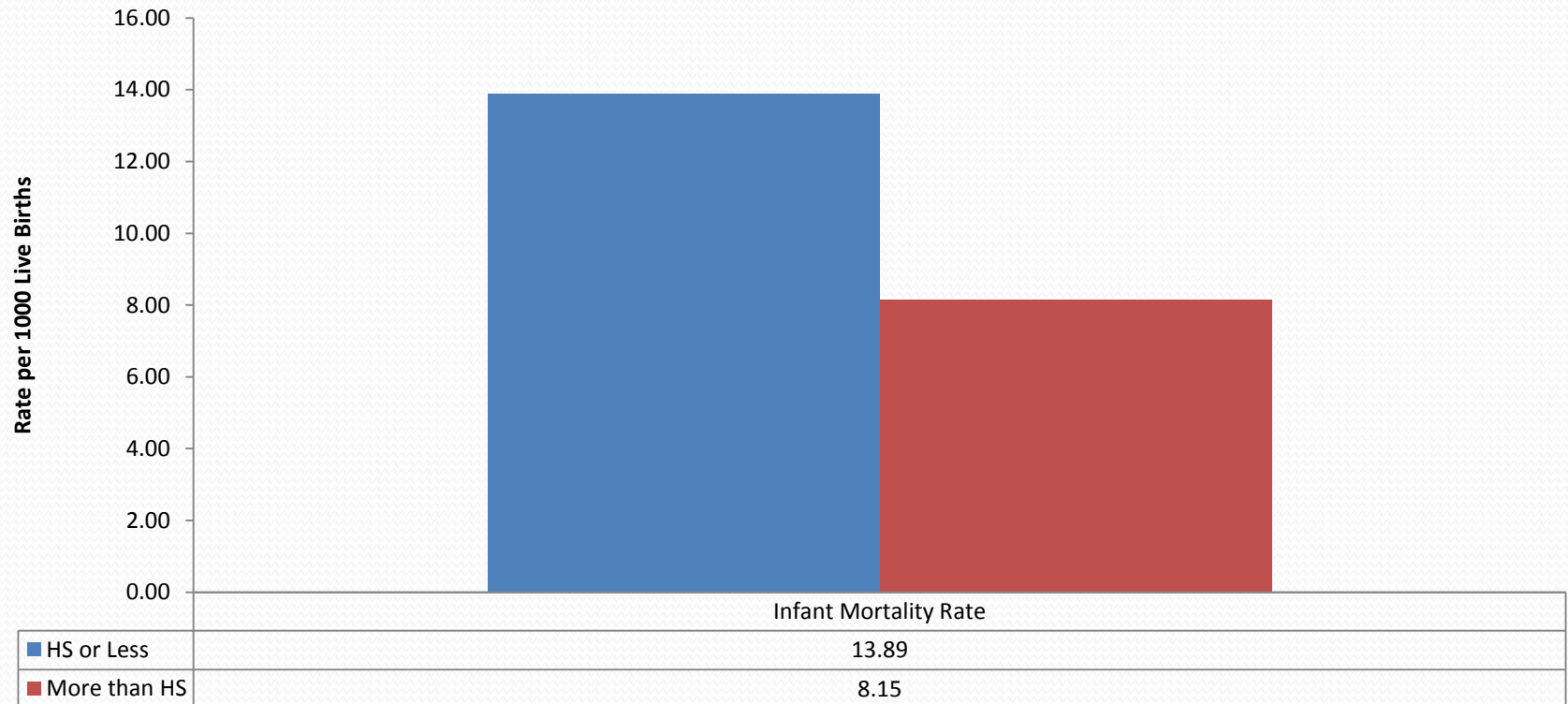
Mortality Rates by Maternal Age
Births 2006-2010, Infant Deaths 2006-2011



Property of Baltimore City Health Department. Data
Source: BCHD Analysis of DHMH Vital Statistics.

Maternal Education

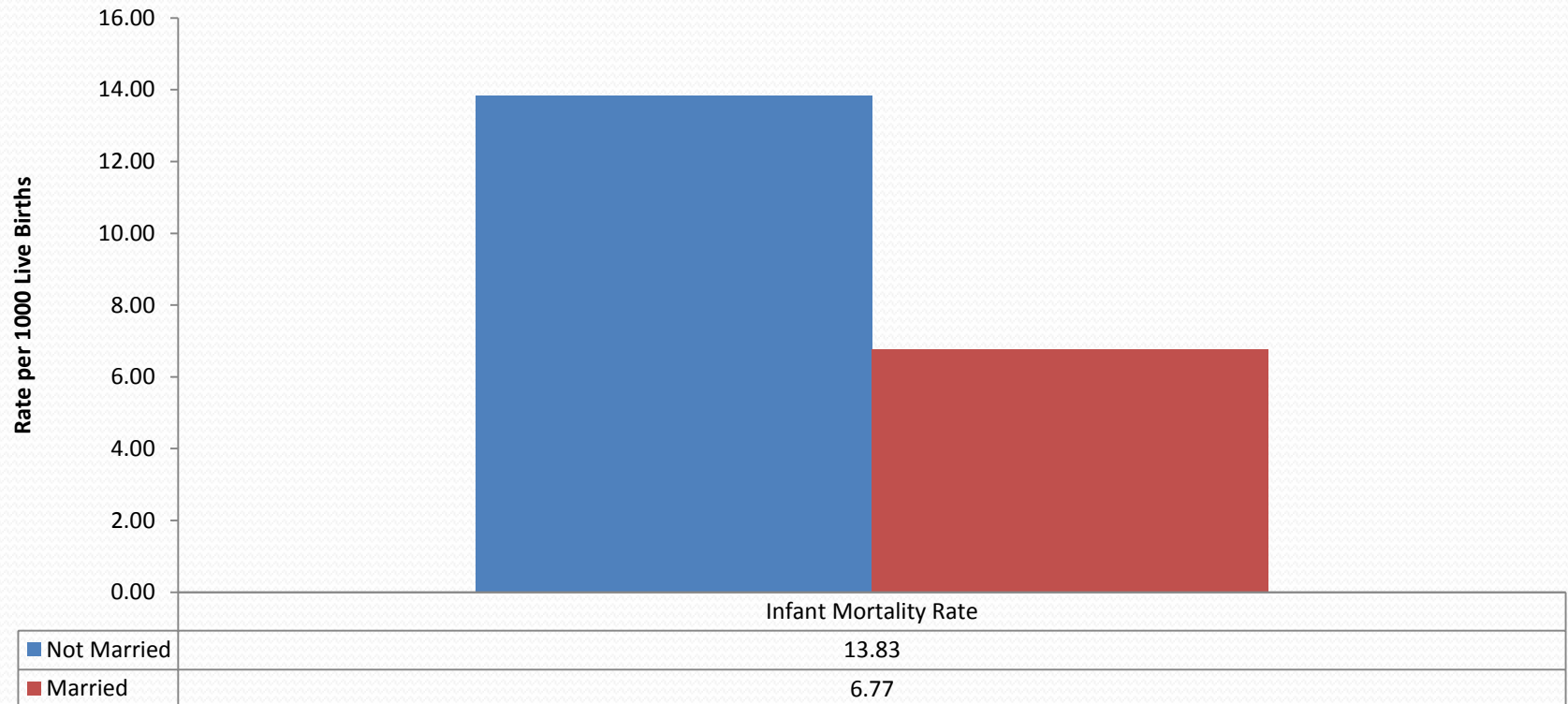
Infant Mortality Rates by Maternal Education Births 2006-2010, Infant Deaths 2006-2011



Property of Baltimore City Health Department. Data
Source: BCHD Analysis of DHMH Vital Statistics.

Maternal Marital Status

Infant Mortality Rates by Marital Status Births 2006-2010, Infant Deaths 2006-2011



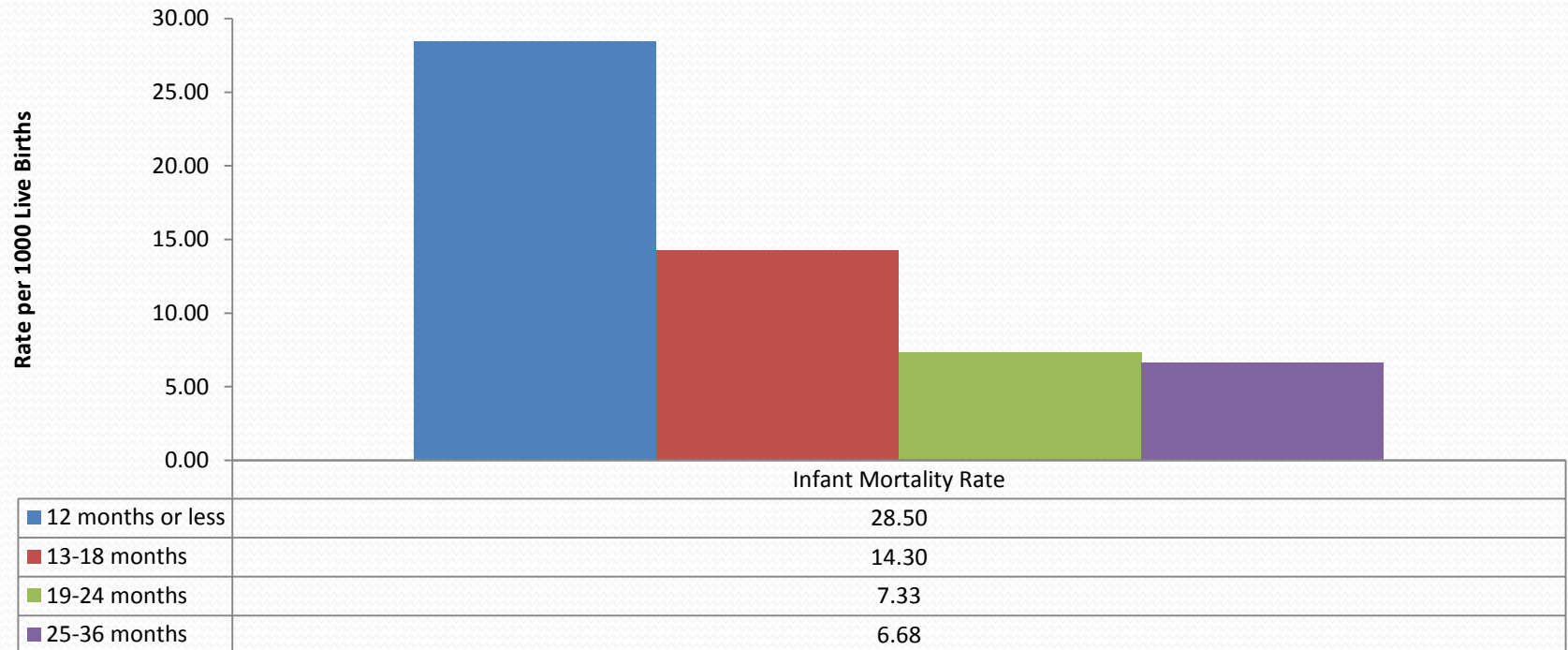
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BCHD Analysis of DHMH Vital Statistics.

PREGNANCY CHARACTERISTICS

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Data Source: BCHD Analysis of DHMH Vital
Statistics.

Birth Spacing

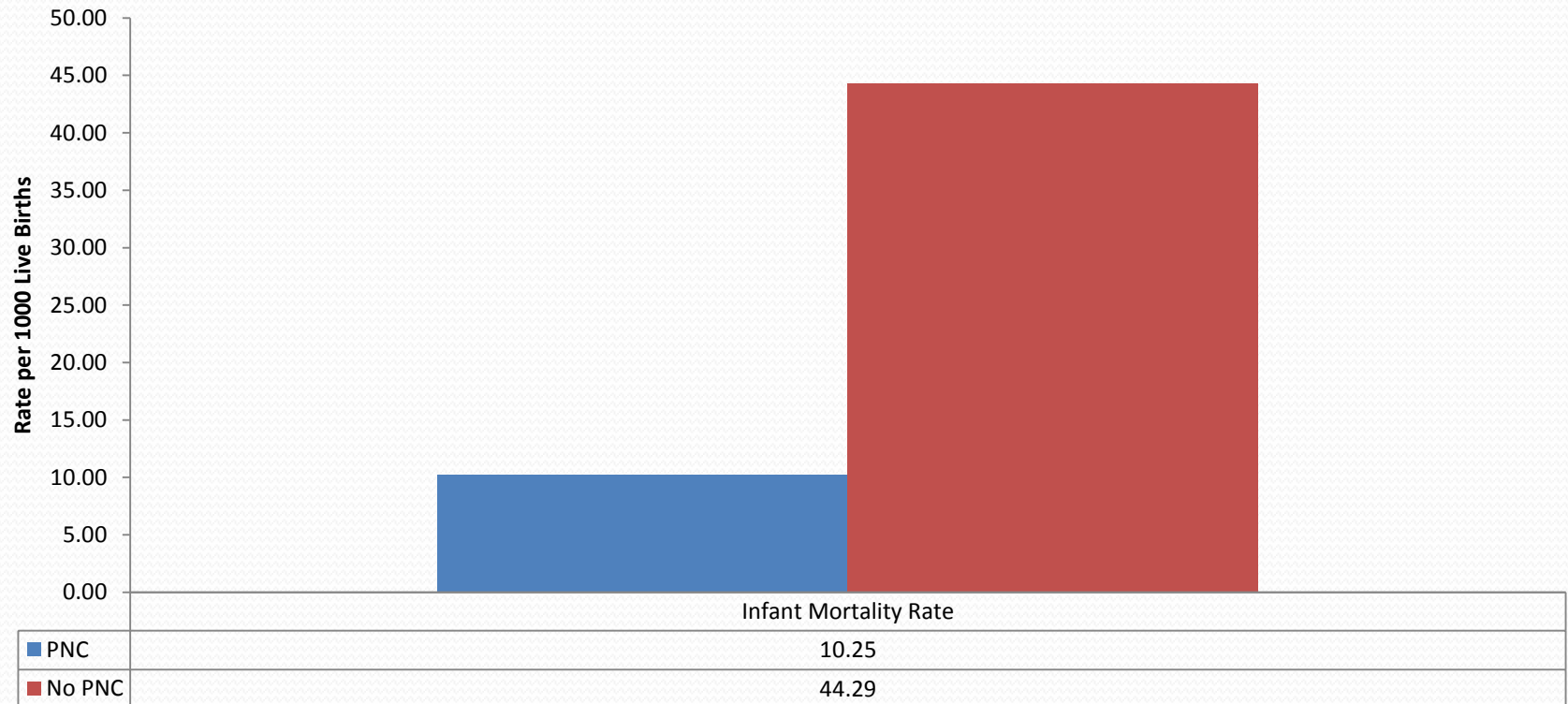
Infant Mortality Rates by Birth Space Category Up to 3yrs Post-Partum Births 2006-2010, Infant Deaths 2006-2011



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BCHD Analysis of DHMH Vital Statistics.

Prenatal Care

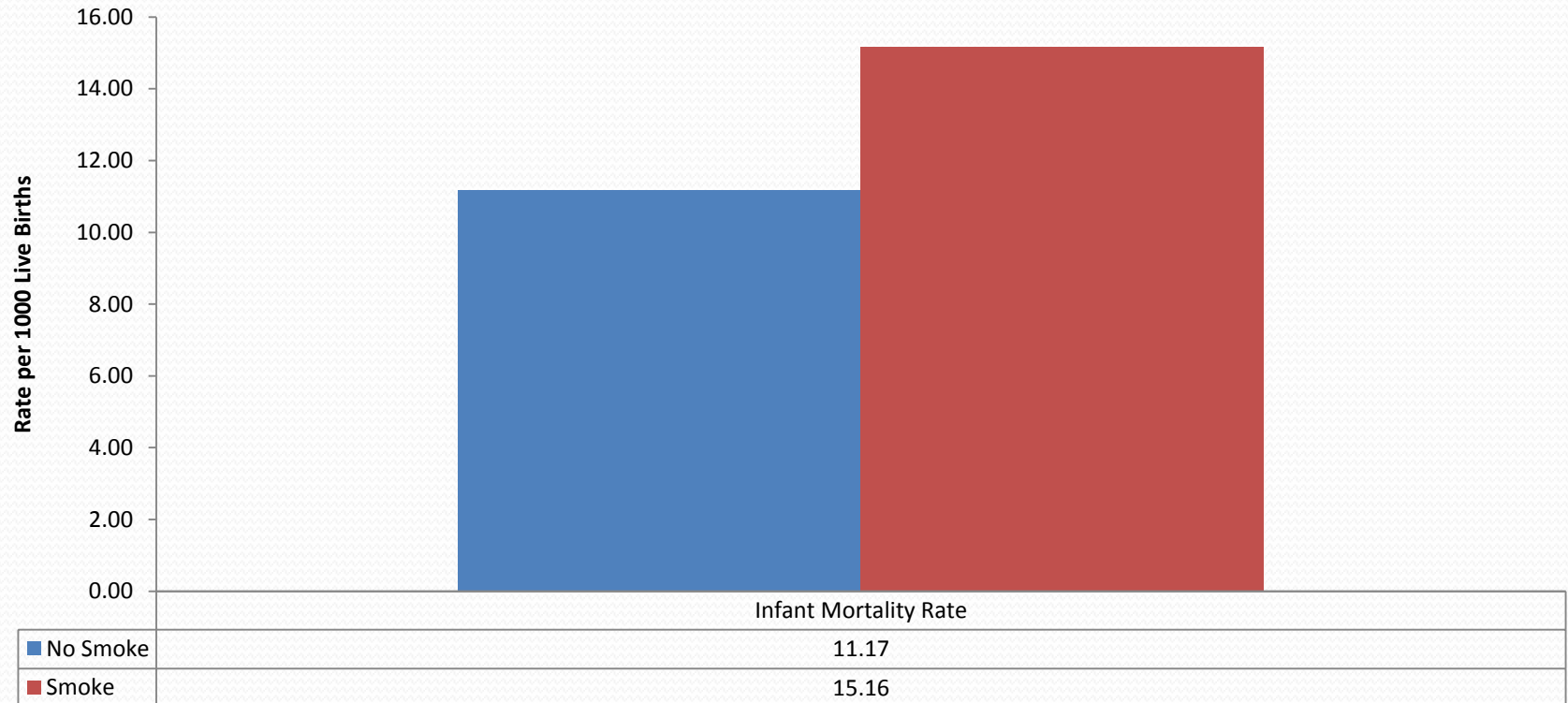
Infant Mortality Rates by Prenatal Care Births 2006-2010, Infant Deaths 2006-2011



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Smoking Status Reported at Birth

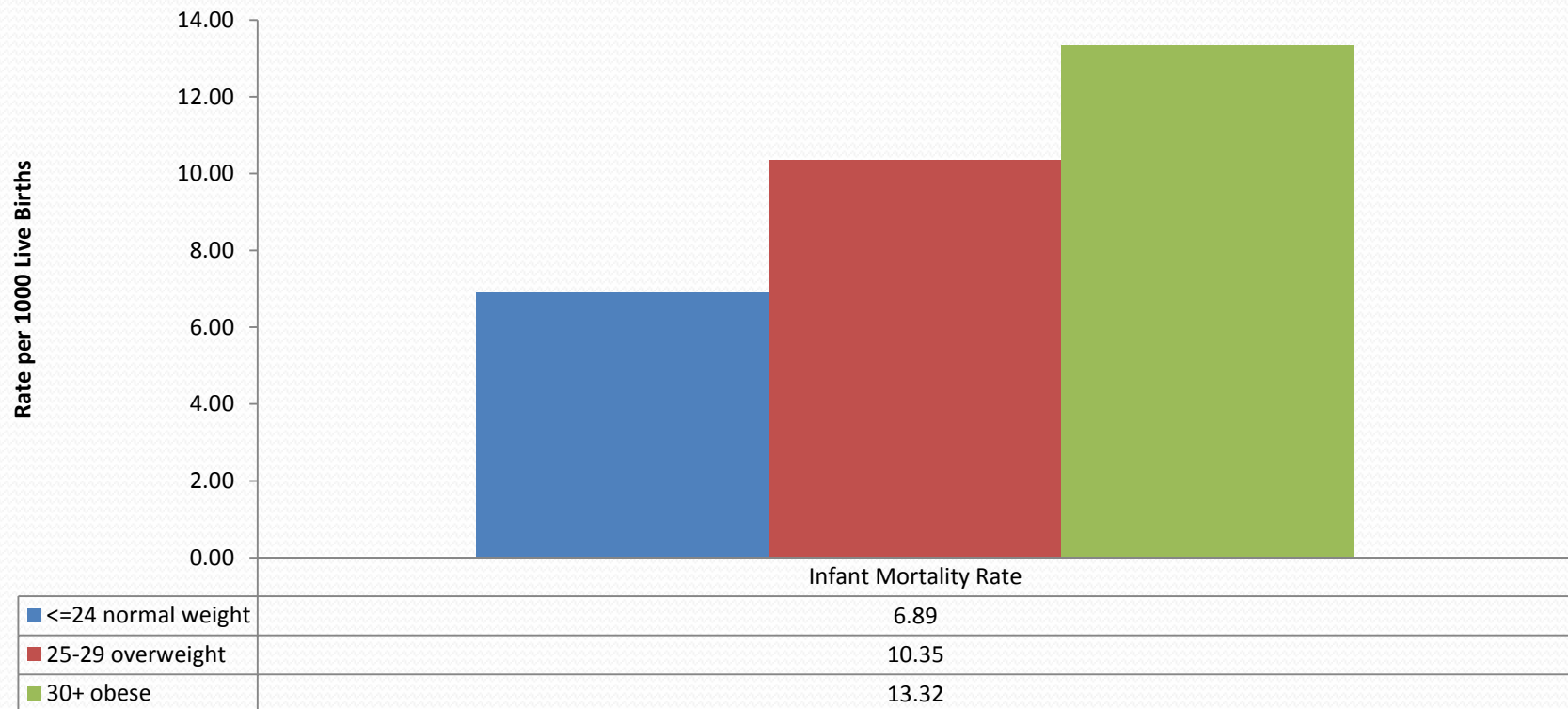
Infant Mortality Rates by Maternal Smoke Status Births 2006-2010, Infant Deaths 2006-2011



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BCHD Analysis of DHMH Vital Statistics.

Maternal Body Mass Index (BMI)

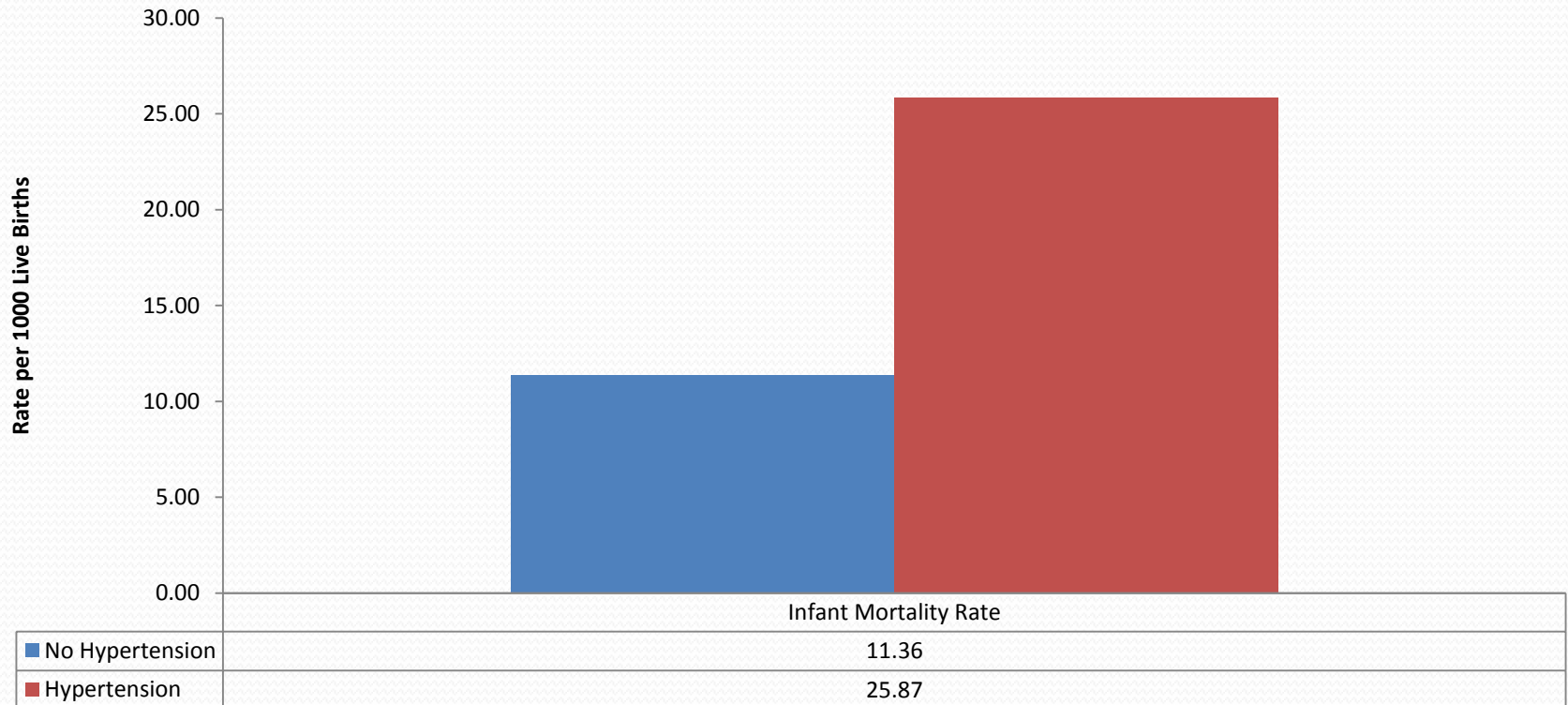
Infant Mortality Rates by Pre-Pregnancy BMI Births 2006-2010, Infant Deaths 2006-2011



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Analysis of DHMH Vital Statistics.

Maternal Chronic Hypertension

Infant Mortality Rates by Maternal Hypertension Births 2006-2010, Infant Deaths 2006-2011



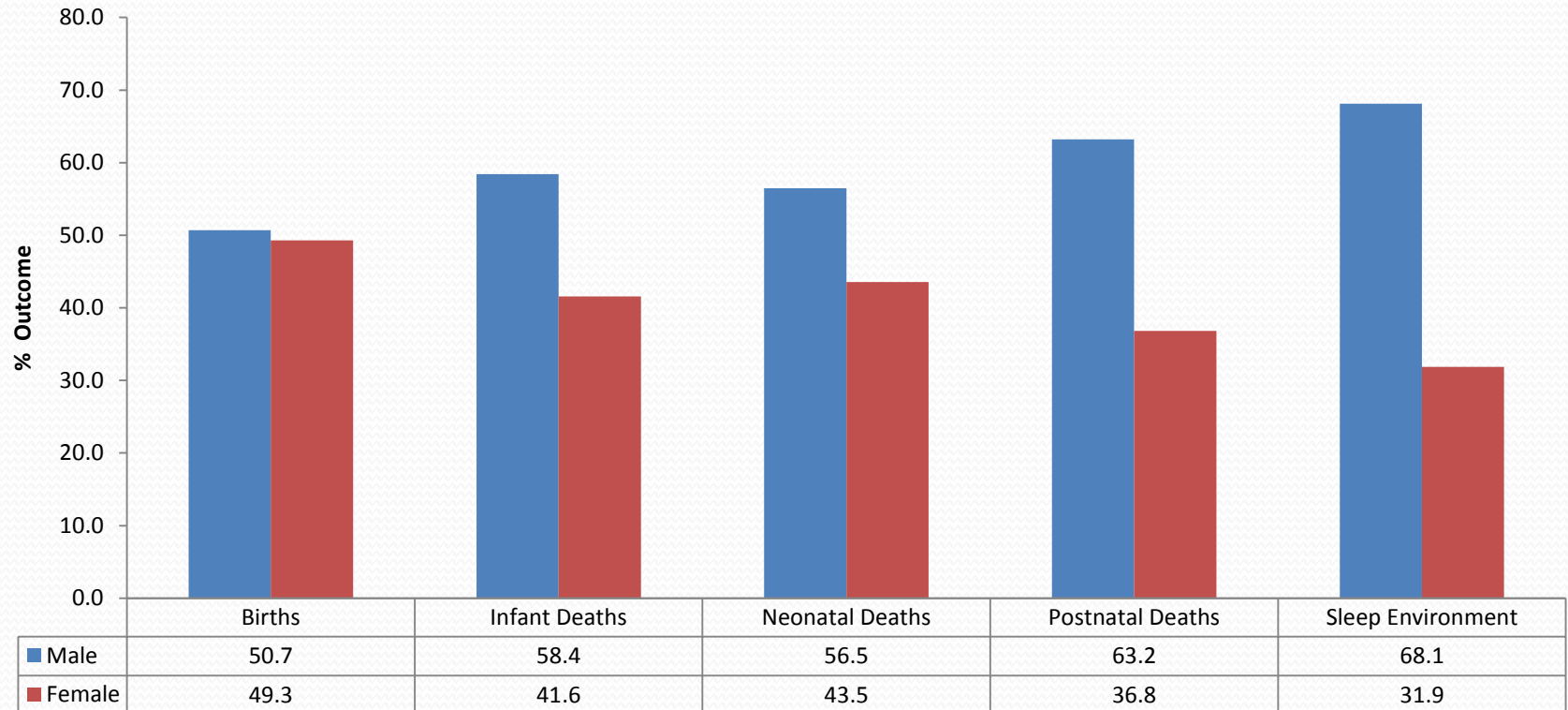
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BCHD Analysis of DHMH Vital Statistics.

Infant Characteristics

Property of Baltimore City Health Department.
Data Source: BCHD Analysis of DHMH Vital
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Gender of Infant

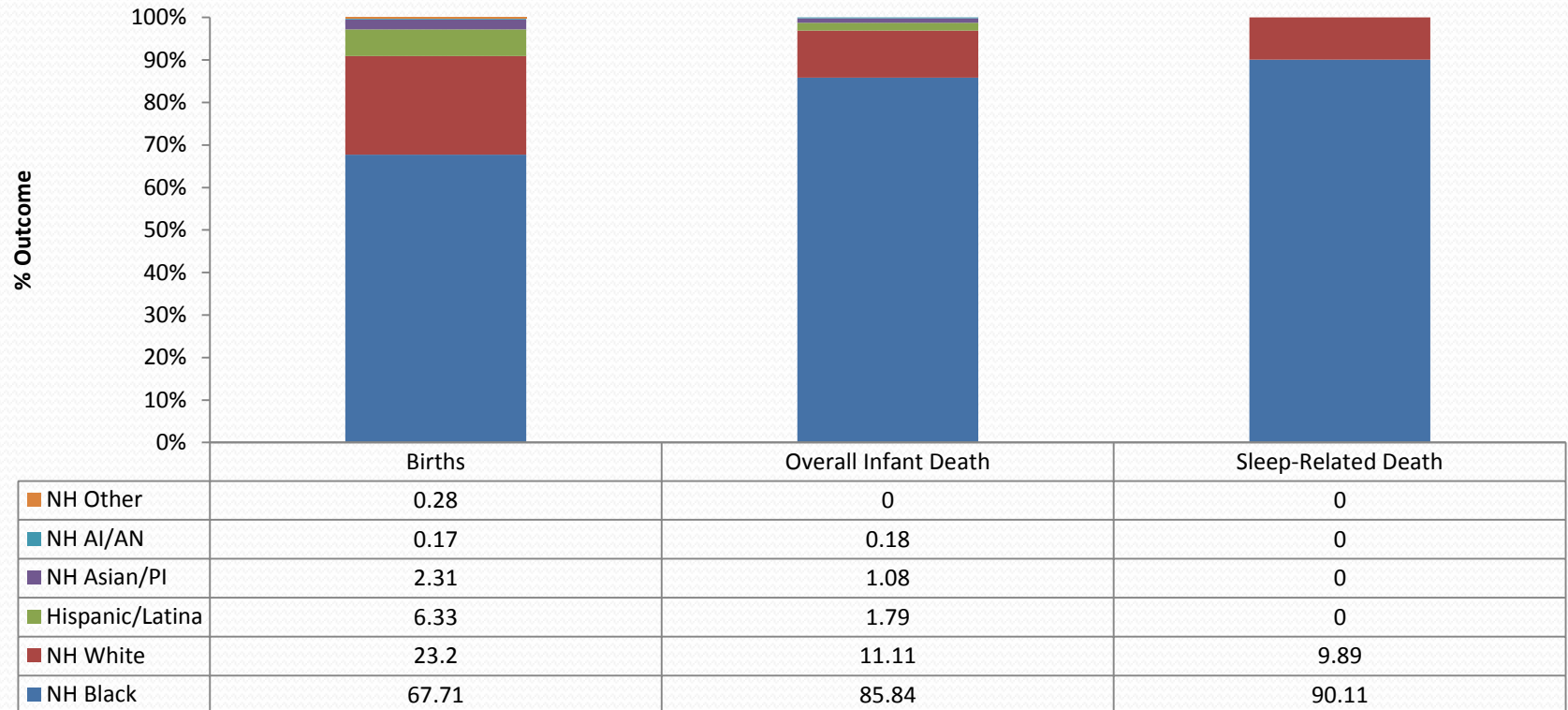
Gender of Infant Births 2006-2010, Infant Deaths 2006-2011



Property of Baltimore City Health Department. Data Source:
BCHD Analysis of DHMH Vital Statistics.

Race of Infant

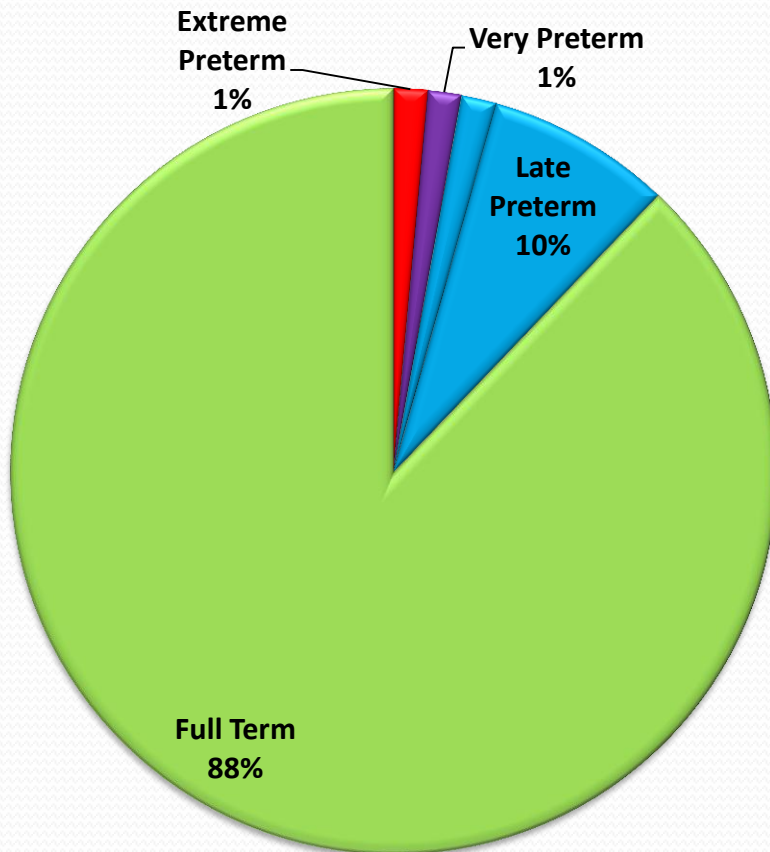
Race of Infants
Births 2006-2010, Infant Deaths 2006-2011



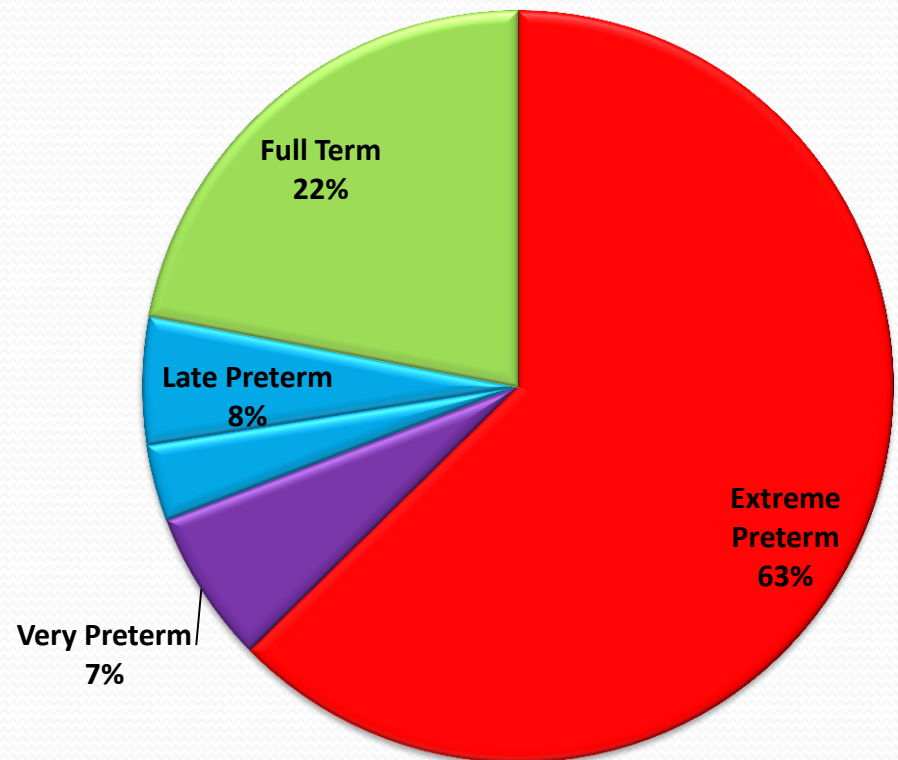
Property of Baltimore City Health Department. Data Source:
BCHD Analysis of DHMH Vital Statistics.

Percent of Live Births and Infant Deaths by Gestational Age (wks)

Live Births by Gestational Age, 2011

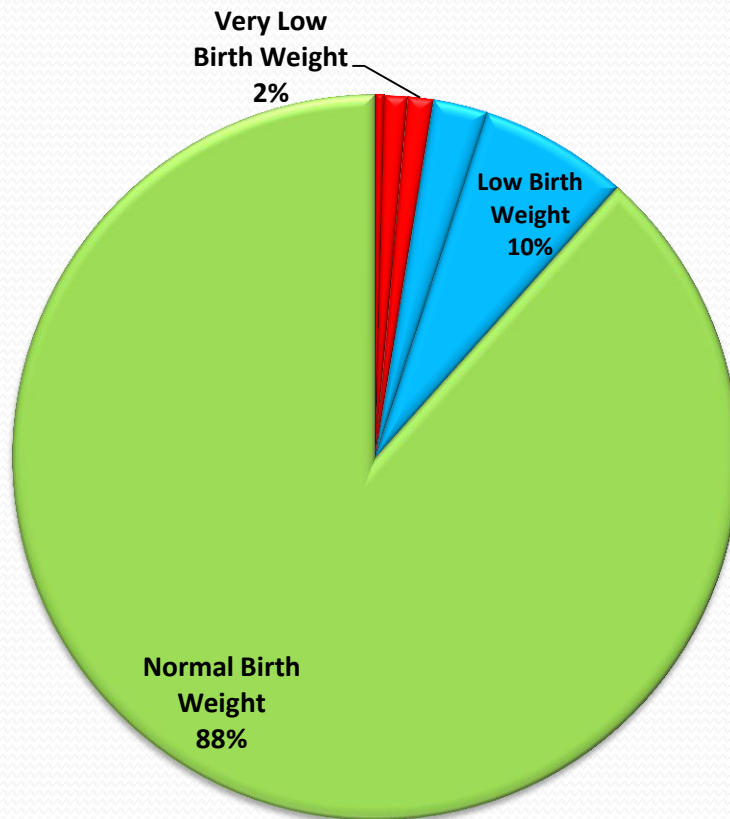


Infant Deaths by Gestational Age, 2011

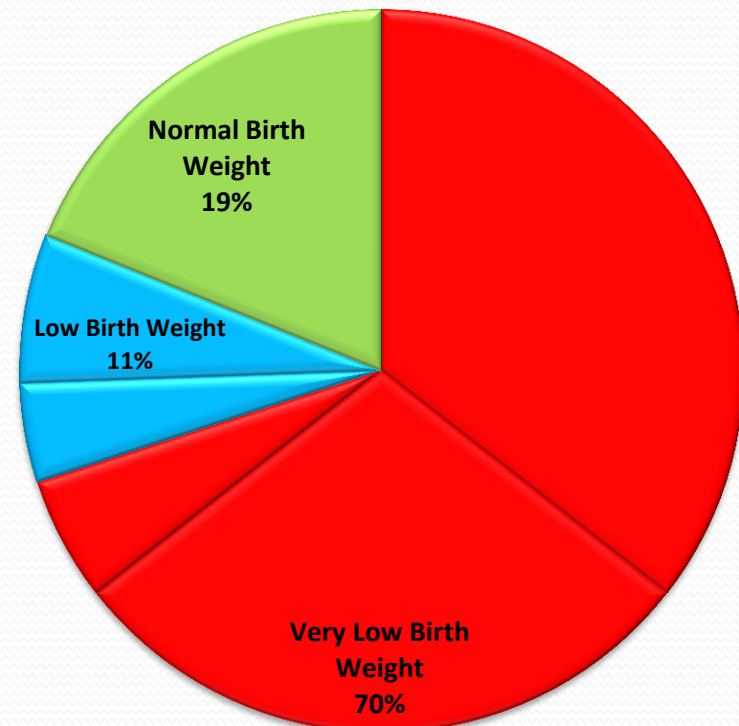


Percent of Live Births and Infant Deaths by Birth Weight (g)

Live Births by Birthweight (g), 2011



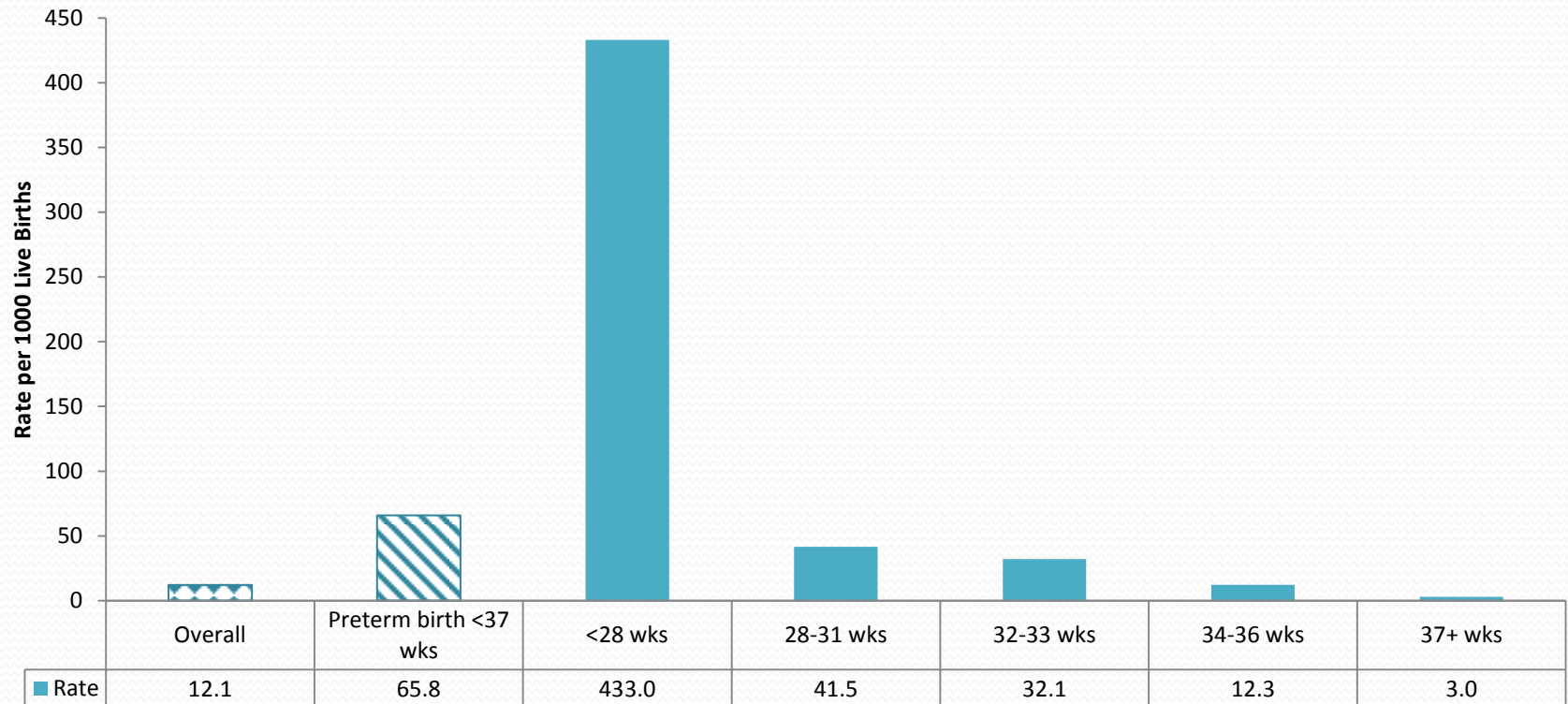
Infant Deaths by Birthweight (g), 2011



Property of Baltimore City Health Department. Data
Source: BCHD Analysis of DHMH Vital Statistics.

Gestational Age and Overall Infant Mortality

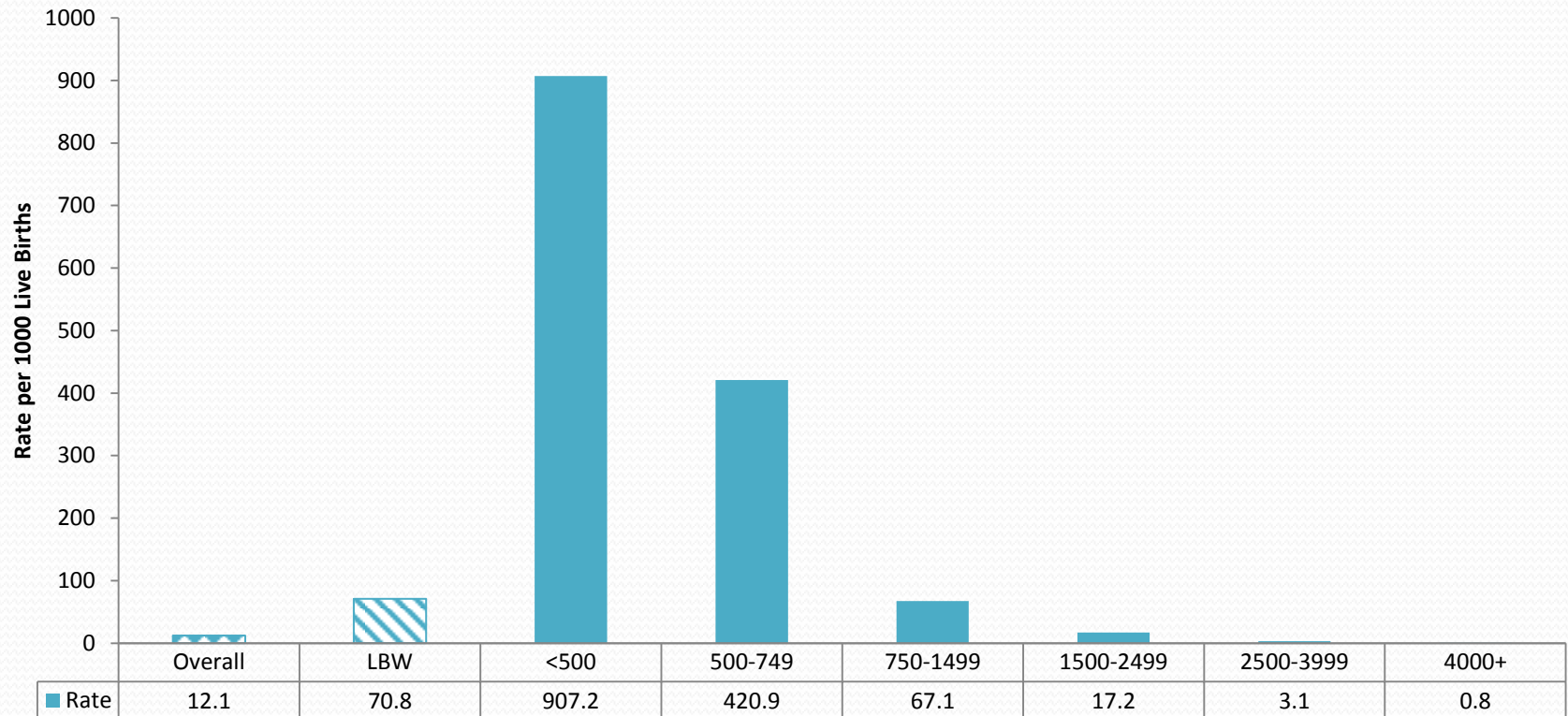
Gestational Age and Overall Infant Mortality Births 2006-2010, Infant Deaths 2006-2011



Property of Baltimore City Health Department. Data Source: BCHD
Analysis of DHMH Vital Statistics.

Birth Weight and Overall Infant Mortality

Birth Weight and Overall Infant Mortality Births 2006-2010, Infant Deaths 2006-2011



Property of Baltimore City Health Department. Data Source:
BCHD Analysis of DHMH Vital Statistics.

Conclusions

Maternal and pregnancy characteristics associated with infant death after preliminary analysis:

Maternal Characteristics

1. Increasing Maternal Age
2. Single status
3. Less education

Conclusions

Pregnancy Characteristics

1. Birth spacing 18 months or less between pregnancies
2. No prenatal care
3. Reported smoking during pregnancy
4. Elevated BMI, especially 30 or greater
5. Chronic Hypertension