

# Domestic Violence and Infant Mortality

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# Domestic Violence by a Current or Former Partner

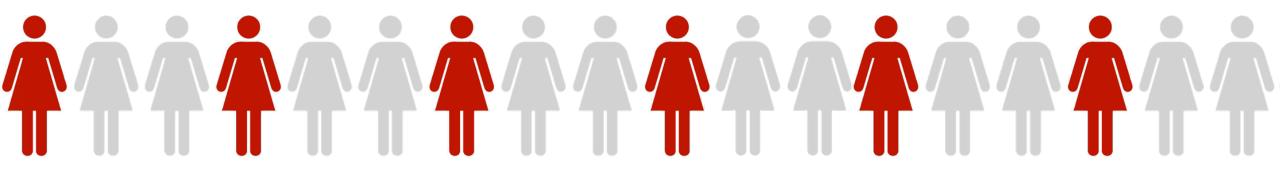
31% Physical Assault

36% Psychological Aggression

10% Stalking

18% Sexual Violence

# 43.6 MILLION Women in the US Experience Domestic Violence



# 1.55 MILLION Women in Ohio experience Domestic Violence

# \$160 BILLION

# Lifetime Costs of Domestic Violence in **Ohio**

\$ \$94.7 Billion in Medical Costs

\$58.4 Billion in Productivity Losses

\$3.2 Billion in Criminal Justice Activities

\$3.2 Billion in Other Costs (Property Damage)

Government Sources pay 37% of Lifetime Costs

\$59 BILLION

# Significant Health Consequences Linked to Domestic Violence

2 Million 25% of women injured by an intimate partner require medical care

25%

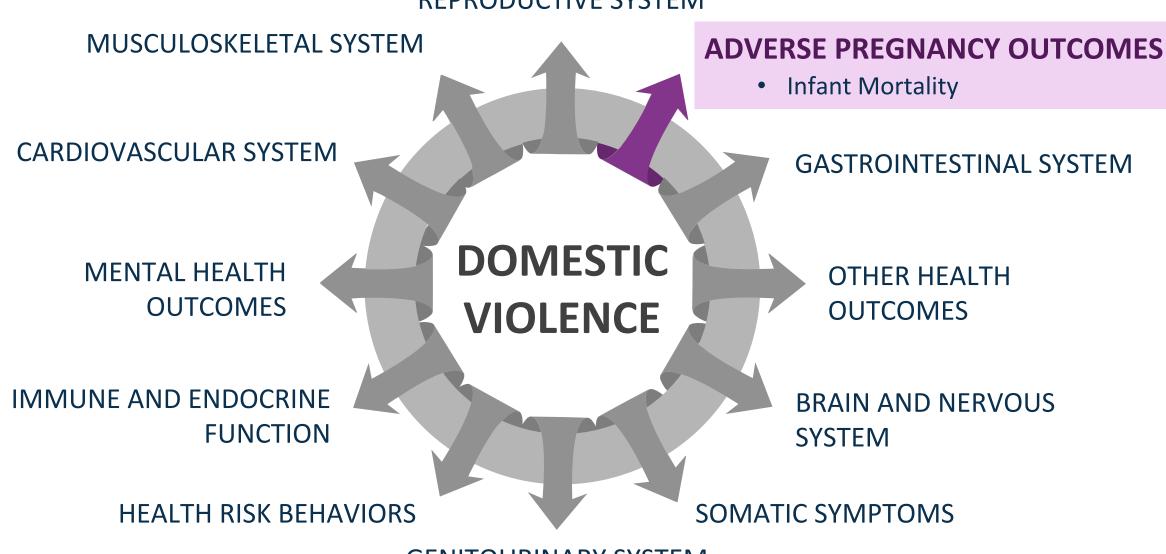
1,300

Domestic violence results in 2 million injuries each year

Domestic violence results in more than 1,300 female deaths each year

## Significant Health Consequences Linked to Domestic Violence

REPRODUCTIVE SYSTEM



**GENITOURINARY SYSTEM** 



Prevalence Rates of Domestic Violence Reported among Pregnant Women

11–28% of pregnant women reported experiencing PHYSICAL ASSAULT

by an intimate partner during pregnancy

36%

of pregnant women reported experiencing

# PSYCHOLOGICAL or VERBAL ABUSE

by an intimate partner during pregnancy

20%

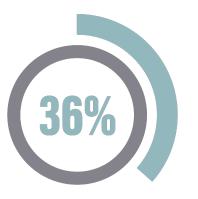
of pregnant women reported experiencing

## **SEXUAL VIOLENCE**

by an intimate partner during pregnancy





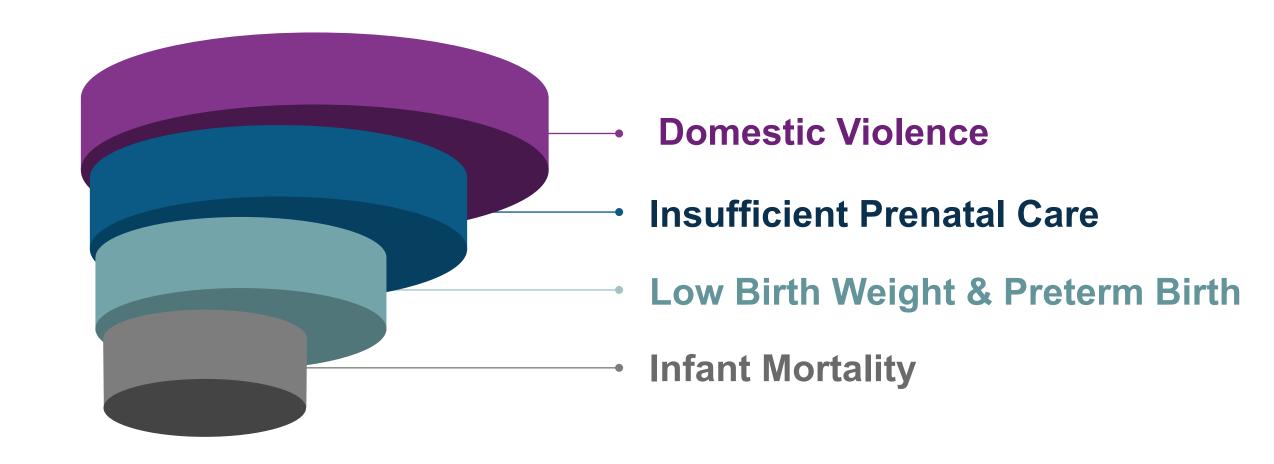






An estimated 38,000 pregnant women in Ohio

# **Domestic Violence Linked to Infant Mortality**



# **Domestic Violence Linked to Infant Mortality**

Increased Risk Domestic violence during pregnancy is significantly associated with an increased risk of perinatal death

8x Increased Risk

Women hospitalized during pregnancy after sustaining a domestic violence assault are at 8 times higher risk of fetal death

6x Increased Risk

Women hospitalized during pregnancy after sustaining a domestic violence assault are at 6 times higher risk of neonatal death

Increased Death Rate

Experiencing physical abuse during pregnancy is associated with an **increased** neonatal death rate of 1.5% versus 0.2%

# Domestic Violence Linked to Low Birth Weight & Preterm Birth

Low birth weight and preterm birth are among the leading causes of infant mortality.

Increased Risk Domestic violence during pregnancy is significantly associated with an increased risk of delivering a neonate classified as low birth weight

3x Increased Risk

Women who deliver an infant during an assault hospitalization are at **over 3 times higher risk to deliver a low birth weight neonate** as compared with unassaulted women

2x Increased Risk Women discharged after an assault, delivering at a subsequent hospitalization are at 1.8 times increased risk of abruption and 1.8 time increased risk of hemorrhage compared with unassaulted women

1.4x Increased Risk Women experiencing domestic violence during pregnancy are at a 1.4 times increased risk for preterm birth

## **Domestic Violence Linked to Insufficient Prenatal Care**



Women experiencing domestic violence during pregnancy

2x More Likely

to miss prenatal care appointments compared to nonabused women

1.8x More Likely

to delay entry into prenatal care than nonabused women

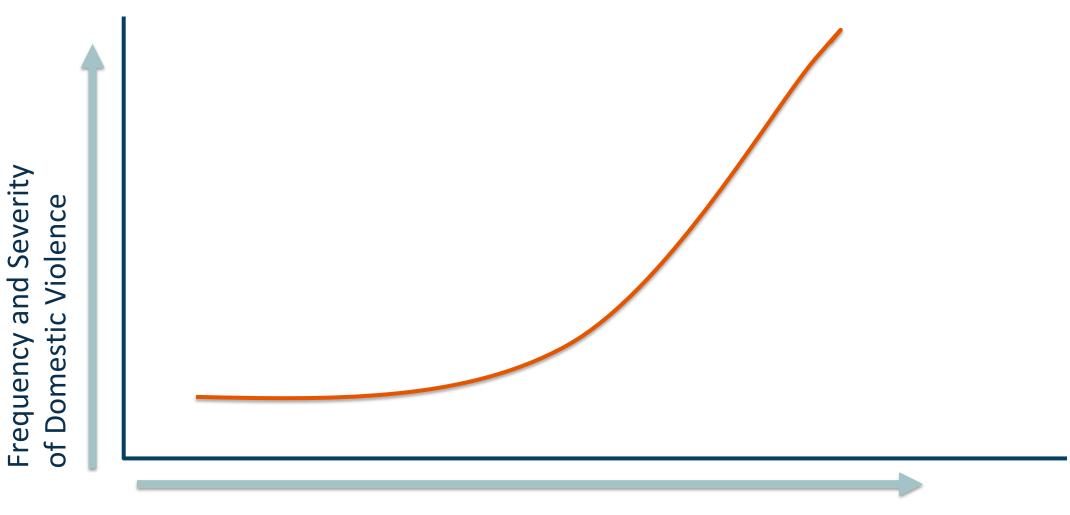
**2x**More Likely

to **not initiate prenatal care until the third trimester** than nonabused women

2.6x More Likely

to **never receive prenatal care** compared to nonabused women

# **Dose-Response Effect of Domestic Violence**



Severity of Health Consequences

If domestic violence were an infectious disease, we would have a domestic violence program in every neighborhood. There is a huge disconnect between the prevalence of domestic violence and the resources and programs available.





## References

#### Slide 2

Centers for Disease Control and Prevention. (2018). *Intimate partner violence: Definitions*. Retrieved from https://www.cdc.gov/violenceprevention/intimatepartnerviolence/definitions.html

Black, M. C., Basile, K. C., Breiding, M. J., Smith, S. G., Walters, M. L., Merrick, M. T., Chen, J., & Stevens, M. R. (2011). *The National Intimate Partner and Sexual Violence Survey (NISVS): 2010 summary report*. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention.

## Slide 3

Smith, S. G., Zhang, X., Basile, K. C., Merrick, M. T., Wang, J., Kresnow, M., & Chen, J. (2018). *National Intimate Partner and Sexual Violence Survey: 2015 data brief*. Atlanta, GA: National Center for Injury Prevention and Control Centers for Disease and Control and Prevention. Retrieved from https://www.cdc.gov/violenceprevention/pdf/2015data-brief508.pdf

## Slide 4

Smith, S. G., Zhang, X., Basile, K. C., Merrick, M. T., Wang, J., Kresnow, M., & Chen, J. (2018). *National Intimate Partner and Sexual Violence Survey: 2015 data brief*. Atlanta, GA: National Center for Injury Prevention and Control Centers for Disease and Control and Prevention. Retrieved from https://www.cdc.gov/violenceprevention/pdf/2015data-brief508.pdf

U.S. Census Bureau; American Community Survey, Source: U.S. Census Bureau, 2017 American Community Survey 1-Year Estimates, Ohio population by adult female; using American FactFinder; http://factfinder2.census.gov

### Slide 5

Peterson, C., Kearns, M. C., McIntosh, W. L., Estefan, L. F., Nicolaidis, C., McCollister, K. E., ... & Florence, C. (2018). Lifetime economic burden of intimate partner violence among US adults. *American journal of preventive medicine*, 55(4), 433-444.

#### Slide 6

National Center for Injury Prevention and Control. Costs of Intimate Partner Violence Against Women in the United States. Atlanta, GA: Centers for Disease Control and Prevention; 2003. http://www.cdc.gov/violenceprevention/pub/IPV\_cost. html.

Chrisler J, Ferguson S. Violence against women as a public health issue. *Ann N Y Acad Sci.* 2006;1087:235-249.

#### Slide 7

Black, M. C. (2011). Intimate partner violence and adverse health consequences: implications for clinicians. American journal of lifestyle medicine, 5(5), 428-439.

## Slide 8

Breiding, M. J., Basile, K.C., Smith, S. G., Black, M. C., & Mahendra, R. (2015). *Intimate partner violence surveillance uniform definitions and recommended data elements*. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention.

#### Slide 9

Bailey, B. A. (2010). Partner violence during pregnancy: Prevalence, effects, screening, and management. *International Journal of Women's Health, 2,* 183–197.

U.S. Census Bureau; American Community Survey, Source: U.S. Census Bureau, 2017 American Community Survey 1-Year Estimates, Ohio population by adult female; using American FactFinder; http://factfinder2.census.gov

### Slide 11

Alhusen, J. L., Ray, E., Sharps, P., & Bullock, L. (2015). Intimate partner violence during pregnancy: maternal and neonatal outcomes. *Journal of women's health*, *24*(1), 100-106. Coker, A. L., Sanderson, M., & Dong, B. (2004). Partner violence during pregnancy and risk of adverse pregnancy outcomes. *Paediatric and Perinatal Epidemiology*, *18*(4), 260–269. El Kady, D., Gilbert, W. M., Xing, G., & Smith, L. H. (2005). Maternal and neonatal outcomes of assaults during pregnancy. *Obstetrics & Gynecology*, *105*(2), 357–363. Hill, A., Pallitto, C., McCleary-Sills, J., & Garcia-Moreno, C. (2016). A systematic review and meta-analysis of intimate partner violence during pregnancy and selected birth outcomes. *International Journal of Gynecology & Obstetrics*, *133*(3), 269-276.

Jamieson, B. (2018). Exposure to Interpersonal Violence During Pregnancy and Its Association With Women's Prenatal Care Utilization: A Meta-Analytic Review. *Trauma, Violence, & Abuse,* 1524838018806511.

Yost, N. P., Bloom, S. L., McIntire, D. D., & Leveno, K. J. (2005). A prospective observational study of domestic violence during pregnancy. Obstetrics and Gynecology, 106(1), 61–65.

### Slide 12

Alhusen, J. L., Ray, E., Sharps, P., & Bullock, L. (2015). Intimate partner violence during pregnancy: maternal and neonatal outcomes. *Journal of women's health*, *24*(1), 100-106. Bailey, B. A. (2010). Partner violence during pregnancy: Prevalence, effects, screening, and management. *International Journal of Women's Health*, *2*, 183–197. Campbell, J. C. (2002). Health consequences of intimate partner violence. *The Lancet*, *359*(9314), 1331–1336.

Hill, A., Pallitto, C., McCleary-Sills, J., & Garcia-Moreno, C. (2016). A systematic review and meta-analysis of intimate partner violence during pregnancy and selected birth outcomes. *International Journal of Gynecology & Obstetrics*, 133(3), 269-276.

Jamieson, B. (2018). Exposure to Interpersonal Violence During Pregnancy and Its Association With Women's Prenatal Care Utilization: A Meta-Analytic Review. *Trauma, Violence, & Abuse,* 1524838018806511.

Shah, P. S., & Shah, J. (2010). Maternal exposure to domestic violence and pregnancy and birth outcomes: A systematic review and meta- analyses. *Journal of Women's Health,* 19(11), 2017–2031.

#### Slide 13

- Alhusen, J. L., Ray, E., Sharps, P., & Bullock, L. (2015). Intimate partner violence during pregnancy: maternal and neonatal outcomes. *Journal of women's health*, 24(1), 100-106.
- Bailey, B. A. (2010). Partner violence during pregnancy: Prevalence, effects, screening, and management. International Journal of Women's Health, 2, 183–197.
- Chambliss, L. R. (2008). Intimate partner violence and its implication for pregnancy. *Clinical Obstetrics and Gynecology*, 51(2), 385–397.
- Cha, S., & Masho, S. W. (2014). Discussions about intimate partner violence during prenatal care in the United States: The role of race/ethnicity and insurance status. *Maternal and Child Health Journal*, 18(6), 1413–1422.
- Dunn, L. L., & Oths, K. S. (2004). Prenatal predictors of intimate partner abuse. *Journal of Obstetric, Gynecologic, & Neonatal Nursing, 33*(1), 54–63.
- Goodwin, M. M., Gazmararian, J. A., Johnson, C. H., Gilbert, B. C., Saltzman, L. E., & PRAMS Working Group. (2000). Pregnancy intendedness and physical abuse around the time of pregnancy: Findings from the pregnancy risk assessment monitoring system, 1996–1997. *Maternal and Child Health Journal*, 4(2), 85–92.
- Hill, A., Pallitto, C., McCleary-Sills, J., & Garcia-Moreno, C. (2016). A systematic review and meta-analysis of intimate partner violence during pregnancy and selected birth outcomes. *International Journal of Gynecology & Obstetrics*, 133(3), 269-276.
- Jamieson, B. (2018). Exposure to Interpersonal Violence During Pregnancy and Its Association With Women's Prenatal Care Utilization: A Meta-Analytic Review. *Trauma, Violence, & Abuse,* 1524838018806511.
- Subramanian, S., Katz, K. S., Rodan, M., Gantz, M. G., El-Khorazaty, N. M., Johnson, A., & Joseph, J. (2012). An integrated randomized intervention to reduce behavioral and psychosocial risks: Pregnancy and neonatal outcomes. *Maternal and Child Health Journal*, 16(3), 545–554.