

# Life Course Indicator: Intimate Partner Violence, Injury, Physical or Sexual Abuse

## The Life Course Metrics Project

As MCH programs begin to develop new programming guided by a life course framework, measures are needed to determine the success of their approaches. In response to the need for standardized metrics for the life course approach, AMCHP launched a project designed to identify and promote a set of indicators that can be used to measure progress using the life course approach to improve maternal and child health. This project was funded with support from the [W.K. Kellogg Foundation](#).

Using an RFA process, AMCHP selected seven state teams, Florida, Iowa, Louisiana, Massachusetts, Michigan, Nebraska and North Carolina, to propose, screen, select and develop potential life course indicators across four domains: Capacity, Outcomes, Services, and Risk. The first round of indicators, proposed both by the teams and members of the public included 413 indicators for consideration. The teams distilled the 413 proposed indicators down to 104 indicators that were written up according to three data and five life course criteria for final selection.

In June of 2013, state teams selected 59 indicators for the final set. The indicators were put out for public comment in July 2013, and the final set was released in the Fall of 2013.

### Basic Indicator Information

**Name of indicator:** Intimate Partner Violence, Injury, Physical or Sexual Abuse (LC-31)

**Brief description:** Number of intimate partner victimizations per 1,000 persons age 18 and older

**Indicator category:** Family Well-being

**Indicator domain:** Risk/Outcome

**Numerator:** Number of persons aged 18 years or older who reported intimate partner violence

**Denominator:** Number of persons aged 18 and older per 1,000

**Potential modifiers:** Age, race/ethnicity, gender, household construct, socioeconomic status

**Data source:** Behavioral Risk Factor Surveillance System (BRFSS)

**Notes on calculation:** The Centers for Disease Control and Prevention (CDC) offers two optional modules to the BRFSS, an eight-question module on sexual violence and a seven-question module on intimate partner violence (IPV). The numerator can be calculated by including anyone who answered “yes” to any of the seven questions on the IPV module, or yes to any of the sexual violence questions if the answer to the question, “Think about the time of the most recent incident involving a person who had sex with you –or- attempted to have sex with you after you said or showed that you didn’t want to or without your consent? What was that person’s relationship to you?” was an intimate partner (answers options one through seven are intimate partners). These modules are optional, and no state has included the Intimate Partner Violence module since 2007; however, if this indicator is of interest, the modules could be added. Other data sources for IPV may have more timely data, but either do not include state-level estimates (National Crime Victimization Survey) or include state estimates that should be compared with extreme caution (National Intimate Partner and Sexual Violence Survey). Analysts who use the raw datasets should apply the appropriate survey

weights to generate the final estimates.

**Similar measures in other indicator sets:** Preconception Health Indicator H1; HP 2020 Focus area IVP-39

## Life Course Criteria

### **Introduction**

Intimate Partner Violence (IPV) is defined as the physical, sexual, or psychological harm by a current or former partner or spouse. This harm can take numerous forms, and has historically been defined through four different types: 1) physical violence, 2) sexual violence, 3) threats of physical or sexual violence and 4) psychological/emotional violence caused by acts, threats of acts, or coercive tactics, including stalking [21]. The occurrence of IPV is complex, multifaceted, and increasingly gaining public attention. It is inclusive of rape, domestic violence, sexual assault, and reproductive coercion, and has deep relevance for programs serving the maternal and child health population, including but not limited to home visiting, family planning, injury and mortality surveillance, and direct services, as well as law enforcement and schools, colleges, and universities. Programs addressing IPV must focus not only on the primary prevention of violent acts, injury, and death, but also assessment and intervention, including the removal from danger, and mediation of the lifelong consequences of exposure to IPV. These lifelong consequences relate not just to the victim but also the victim's family, including children that may have directly or indirectly witnessed the IPV.

In the United States, the estimated annual rate of IPV of persons aged 12 and older has declined by 64 percent from 1994 to 2010, 9.8 to 3.6 victimizations per 1,000 persons respectively. However, this decline has slowed in recent years from 3.8 per 1,000 in 2005 to 3.6 per 1,000 in 2010 [10], and recent reports indicate that every minute, 20 individuals become victims of physical violence by an intimate partner. The complexity of reducing the prevalence of IPV originates in part from the abuse being hidden from public view, its consequences silent within its victims, and its 'syndemic' association with other public health challenges, including depression and psychological disorders, substance abuse, and sexually transmitted infections. However this interrelatedness also points to multiple touch-points with community members, teachers and professors, health professionals, and public servants, who can interrupt the cycle.

The prevalence of IPV among the U.S. population differs based both on the measurement or surveillance system used and the type of IPV (physical, sexual, threats, or psychological/emotional violence). To provide the most recent data possible, this narrative utilizes data from the National Crime Victimization Survey and recent results from the National Intimate Partner and Sexual Violence Survey (NISVS).

### **Implications for equity**

Experiences of IPV and sexual violence vary by gender, race/ethnicity, and socioeconomic status. Nearly one in 10 women in the United States has been raped by an intimate partner in her lifetime. A comparable statistic is not available for men, due to too few men reporting rape by an intimate partner to produce a reliable estimate. Women are more than two times more likely to have experienced sexual violence other than rape by an intimate partner as compared to men (16.9 percent versus 8.0 percent) and have a lifetime prevalence of stalking by an intimate partner more than five times greater than men (10.7 percent versus 2.1 percent). Women also have a significantly higher prevalence of other experiences of IPV, including severe physical violence by an intimate partner. However, certain types of IPV do affect men as much or more than women. Nearly half of both men and women have experienced at least one psychologically aggressive behavior by an intimate partner during their lifetime, and of individuals that report IPV, men are more likely than women (92.1 percent versus 56.8 percent) to experience physical violence only. All of these data must be considered within the context of disclosure of victimization, however: it is estimated that 84.2 percent of female victims, compared to 60.9 percent of male victims, disclose their own experiences with IPV. However, the high prevalence of experiences of IPV among women above that of men underscore the significance of IPV as not just a public health issue, but a gender justice issue as well.

Variations in experiences of IPV by race/ethnicity and socioeconomic status point to other important inequities. Black, non-Hispanic women (43.7 percent) and multiracial non-Hispanic women (53.8 percent) have a higher lifetime prevalence of rape, physical violence, or stalking by an intimate partner compared to White non-Hispanic women (34.6 percent) and Asian or Pacific-Islander non-Hispanic women (19.6 percent). Similar disparities exist among men, however, American

Indian or Alaska Native non-Hispanic men have the highest lifetime prevalence (45.3 percent). With regard to poverty and socioeconomic status, while there is a significantly higher prevalence of IPV among men and women who experienced food insecurity in the past 12 months, the difference is most pronounced among women and men who experience housing insecurity: Women who experienced housing insecurity in the past twelve months were more than four times more likely to experience rape, physical violence, or stalking by an intimate partner, and for men, they are more than two times more likely to experience these episodes of violence [25].

The relationship between socioeconomic factors and IPV is complex. The CDC and World Health Organization (WHO) list low income, economic stress, and poverty as risk factors for IPV [6,7]. It has also been found that as socioeconomic status increases, the risk for IPV decreases by as much as 72 percent [12]. There also is evidence to suggest that as parental educational level increases, the risk for IPV decreases [11]. IPV has proven to vary based on household composition [11, 10], with females living in households comprised of one female adult raising multiple children experiencing IPV at a rate of ten times that of their peers living in a household with two married adults and multiple children [10]. Some research models suggest that the association between socioeconomic status and IPV is in part due to the stressors associated with poverty but also power, including maternal economic dependency and gender beliefs. A recent study by Golden and colleagues found that women were at higher risk for one or more types of IPV when these risk factors were present [26]. For example, the odds of a woman experiencing emotional abuse or coercion who did not have control over household finances were more than two times greater than women who did have control over the finances, and traditional gender beliefs were associated with a seven-fold increased risk for physical assault.

### **Public health impact**

According to the National Intimate Partner and Sexual Violence Survey implemented in 2010 [25], millions of Americans are victims of IPV, sexual violence, and stalking every year. In fact, every minute, 20 individuals become victims of physical violence by an intimate partner. The most comprehensive resource available on the societal costs of IPV is a CDC study from 2003 [27]. In the report, the team details how the millions of injuries, both seen and unseen, from IPV result in a loss of nearly eight million days of paid work, or the equivalent of 32,000 full-time jobs, and nearly 5.6 million days of household productivity. Using cost estimates from 1995, the research team estimated the cost of IPV, in 1995, to exceed \$5.8 billion, which included \$4.1 billion for direct medical and mental health care services, \$0.9 billion for lost productive from paid work and household chores, and \$0.9 billion in lifetime earnings lost by victims. When updated to 2003 dollars, this value exceeded \$8.3 billion. Brown and colleagues more recently attempted to measure the health care costs attributable to IPV, and identified a medical cost burden within the first 12 months after victimization ranging from \$2.3-7.0 billion alone [29]. These numbers most likely underestimate the true cost of IPV. For example, victims of IPV often need services outside of the medical field such as the need for housing, victim advocacy, and legal services, which can be costly [13].

For the individual, the effects of experiences of IPV are far-reaching and difficult to quantify. For example, Fishman and colleagues found that women who experience IPV not only have higher health care costs, but these health care costs remain high for more than three years after the cessation of the violence [28]. As may be expected, health care costs and utilization are also higher for children of mothers who experienced IPV, both if the IPV occurred before the child was born and if the child was directly exposed to it [30].

### **Leverage or realign resources**

The violence prevention arm of the CDC has implemented funds from the *Violence Against Women Act* (VAWA) to help reduce societal costs associated with the victimization of women, sexual assault, rape and IPV. Given the significant public health impact of IPV, in 2013, Congress passed and President Obama signed VAWA into law, a renewal of the previous legislation passed in 1994. Areas of focus of the law include justice and safety specifically for Native American women and lesbian, gay, bisexual, and transgender (LGBT) survivors of violence, safe housing, protections for immigrants, justice on campuses, and the maintenance of previous VAWA grant programs.

Based on researchers cost benefit analysis, the net benefit of VAWA is estimated at \$16.4 billion [15]. Approximately \$14.8 billion in victimization costs are averted due to VAWA, which only costs \$1.6 billion to implement. At the individual level, VAWA is estimated to cost \$15.50 per woman, yet saves \$159 per U.S. women in averted victimization costs, suggesting VAWA to be a fiscally efficient program. Actions taken through VAWA have championed interventions that focus on IPV prevention in addition to treatment for victims.

The CDC Division of Violence Prevention has outlined objectives and prevention strategies that focus on preventing IPV before it occurs [16]. These include reducing factors that put people at risk for IPV perpetration as well increasing factors that protect against victimization. Strategies to achieve this include instruction on non-violent conflict resolution, effective communication skills, negotiation and adjustment to stress, and building healthy relationships through the belief in partner autonomy [16]. These priorities outlined by the CDC are synergistic with a number of maternal and child health efforts seeking to reduce IPV.

For example, the Affordable Care Act (ACA) authorized the creation of the Maternal, Infant, and Early Childhood Home Visiting Program (MIECHV) under a new section of Title V of the Social Security Act. It provides \$1.5 billion over five years to states, tribes, and territories to develop and implement one or more evidence based home visitation models. One of the six benchmark areas against which states are being measured is the reduction of crime, including domestic violence. Many of the evidence-based home visiting models include a domestic violence assessment, with the goal of connecting the family to needed supports. With services being delivered in the context of the home, home visitors are in a unique position to break the cycle of intergenerational violence, domestic violence, child maltreatment, and adverse childhood experiences. The Family Violence Prevention Fund published a guide for policymakers to this end, underscoring the importance of collaborating with state home visiting programs in the implementation of a unified approach to reduce IPV [31].

In addition to the implementation of MIECHV, state MCH programs can bring together diverse partnerships to impact IPV prevalence. Collaborations may include working with schools and universities on risk factors for violence and outreach and services for potential victims and survivors, implementation of prevention curricula with students, and appropriate responses to suspected or confirmed events; collaborating with and training first responders in their encounters with domestic violence; and developing community-based programs and social marketing strategies that address gender norms and healthy relationships, beginning at a young age.

In recent years, prevention interventions utilizing these strategies have grown in support and are beginning to develop an evidence base. For example the prevention program “Safe Dates” and others like it have gone through rigorous testing to prove their efficacy in preventing IPV [17,18].

### ***Predict an individual's health and wellness and/or that of their offspring***

The impact of IPV on an individual, family and community cannot be considered within a vacuum; multiple forms of violence co-occur in communities, and the impact of IPV on an individual is an amalgamation of the effects of this context [32]. The physical and mental impact of current and previous exposure to IPV is profound, with consequences of victimization leading to hospitalization, disability or death [4,8,14]. Victims of IPV can experience physical injuries such as cuts, bruises, broken bones and internal injuries [13]. The chronic stress brought on by IPV can also have a negative impact on the cardiovascular, gastrointestinal, endocrine and immune systems [14]. IPV victims are at an increased risk for contracting sexually transmitted infections (STIs), including HIV/AIDS [13]. Female victims of IPV can experience issues related to their reproductive health, including; gynecological disorders, unwanted pregnancy, and unsafe abortion [6].

Along with physical health, victims of IPV often suffer negative mental health consequences like depression, anxiety, low self-esteem, posttraumatic stress disorder (PTSD) symptoms, inability to trust, sleep disturbances, and suicidal thoughts or actions [14, 25]. Those who experience IPV are more likely to display behaviors that present further health risks compared to those who have not. These negative health behaviors include; engaging in high-risk sexual behavior like engaging in unprotected sex and choosing unhealthy sexual partners, using harmful substances like illicit drugs, as well as unhealthy dieting behaviors like fasting, vomiting and overeating [14]. Novel research approaches currently point to ‘syndemic’ or synergistic effects of health issues associated with IPV, where the negative impacts associated with IPV are intensified and co-occur frequently with other health issues, including HIV/AIDS and substance use [33]. Approximately 324,000 pregnant women experience some form of IPV each year in the United States [8], which can have negative effects on the pregnancy, and may result in premature labor and preterm birth. As previously described, children of a parent or caregiver that has experienced IPV are more likely to have higher health care costs, and by nature of living in the same home as the mother, be exposed to violence at a young age, having lifelong developmental impacts. Children who are witnesses to IPV amongst parents or caregivers are at-risk for physical and emotional trauma such as injury

related to trying to intervene, PTSD, and difficulties forming emotional attachment [20]. These experiences have the potential to adversely affect development and health over the life course, and an individual's own attitudes and perspective toward violence and healthy relationships.

## Data Criteria

### **Data availability**

The BRFSS is the world's largest, on-going telephone health survey system, tracking health conditions and risk behaviors in the United States annually since 1984. Currently, data are collected monthly in all 50 states, the District of Columbia, Puerto Rico, the U.S. Virgin Islands, and Guam for adults 18 years and older. CDC provides state and national level prevalence data on their website.

The CDC develops approximately 80 questions each year. Some of these are core questions asked each year, and some are rotating core questions asked every other year. There are also CDC supported modules that address specific topics that states can use. States may also develop additional questions to supplement the core questions. Modules used by states are noted on the CDC websites. BRFSS has not included the Intimate Partner Violence module since 2007; that year, three states utilized the module: Hawaii, Virginia and West Virginia. CDC offers two optional modules to the BRFSS associated with intimate partner violence: an eight-question module on sexual violence and a seven-question module on intimate partner violence.

In 2007, the last year the modules were available, the questions in the modules included the following [22]:

#### *Module 17: Sexual Violence*

1. In the past 12 months, has anyone touched sexual parts of your body after you said or showed that you didn't want them to, or without your consent (for example being groped or fondled)?
2. In the past 12 months, has anyone exposed you to unwanted sexual situations that did not involve physical touching? Examples include things like sexual harassment, someone exposing sexual parts of their body to you, being seen by a peeping Tom, or someone making you look at sexual photos or movies?
3. Has anyone EVER had sex with you after you said or showed that you didn't want them to or without your consent?
4. Has this happened in the past 12 months?
5. Has anyone EVER ATTEMPTED to have sex with you after you said or showed that you didn't want to or without your consent, BUT SEX DID NOT OCCUR?
6. Has this happened in the past 12 months?
7. Think about the time of the most recent incident involving a person who had sex with you –or- attempted to have sex with you after you said or showed that you didn't want to or without your consent. What was that person's relationship to you?
8. Was the person who did this male or female?

#### *Module 18: Intimate Partner Violence*

1. Has an intimate partner EVER THREATENED you with physical violence? This includes threatening to hit, slap, push, kick, or hurt you in any way.
2. Has an intimate partner EVER ATTEMPTED physical violence against you? This includes times when they tried to hit, slap, push, kick, or otherwise hurt you, BUT THEY WERE NOT ABLE TO.
3. Has an intimate partner EVER hit, slapped, pushed, kicked, or hurt you in any way?
4. Have you EVER experienced any unwanted sex by a current or former intimate partner?
5. In the past 12 months, have you experienced any physical violence or had unwanted sex with an intimate partner?
6. In the past 12 months, have you had any physical injuries, such as bruises, cuts, scrapes, black eyes, vaginal or anal tears, or broken bones, as a result of this physical violence or unwanted sex?
7. At the time of the most recent incident involving an intimate part who was physically violent – or – had unwanted sex with you, what was that person's relationship to you?

Local level estimates for BRFSS data can be obtained using the Selected Metropolitan/Micropolitan Area Risk Trends (SMART) data. Local areas are metropolitan or micropolitan statistical areas (MMSAs) as defined by the Office of

Management and Budget. SMART data is currently available for data going back to 2002 for MMSAs with 500 or more respondents.

It is important to note that the BRFSS modules do not contain questions specific to all four categories or types of IPV, specifically, psychological and emotional violence caused by acts, threats of acts, or coercive tactics, including stalking. States wishing to measure these variables on an ongoing basis should visit the following CDC online resource to identify additional data sources, including the recent (beginning in 2010) National Intimate Partner and Sexual Violence Survey developed in partnership between CDC, the National Institutes of Justice, and the Department of Defense:

[cdc.gov/violenceprevention/sexualviolence/datasources.html](http://cdc.gov/violenceprevention/sexualviolence/datasources.html)

### **Data quality**

Numerous studies have compared estimates of chronic conditions and behaviors obtained from BRFSS to other national surveys including the National Health Interview Survey and the National Health and Nutrition Examination Survey; while there are some differences, findings on overall health status and certain chronic conditions tended to be similar despite declining response rates for BRFSS.

Since some questions on the BRFSS address sensitive health conditions and behaviors, there is intermittent missing data throughout the dataset. However, refusal to answer generally accounts for a small proportion of responses for most data elements. The notable exception is income, where refusals accounted for over 23 percent of the data in one state in 2010; the median percent missing across BRFSS for income in 2010 was 14 percent.

Quality control computer programs are used to check the raw data for values out of range. CDC performs quality checks for core questions, and each state has its own protocol for checking state-specific questions. Interviewers are monitored during the annual questionnaire pilot period and intermittently during the data collection period to determine whether any interviewer bias exists and to correct any bias that might be found. On an ongoing basis, 10 percent of interview calls are verified.

Specifically regarding refusal to answer and sensitive health conditions, some researchers have sought to better characterize the data quality for responses to the IPV and sexual violence modules. In particular, before a surveyor asks the questions in each module to the participant, he or she asks the question, "Are you in a safe place to answer these questions?" Ranney et al. investigated correlations between responding "not safe" to the screener for the IPV module. These respondents were found to have lower income, lower education levels, and were older than other respondents, and when compared to respondents that responded with experiences of some form of IPV, those that answered "not safe" were more likely to be male. This initial screener for asking the IPV and sexual violence questionnaires points to both the validity of IPV and sexual violence estimates derived from BRFSS and the necessity to further explore validity, reliability and comprehensibility of the safety screener [23].

While not specific to IPV, Potter and Laflamme assessed state level sexual assault prevalence estimates, comparing three surveys: BRFSS, the National Violence Against Women Survey (NVAWS) extrapolations, and state replications of NVAWS. They found significant differences between the prevalence estimates for the three surveys. For example, states that conduct their own sexual violence studies, in general, report higher prevalence rates for both sexual and physical violence. The BRFSS measure was described as reliable since states use the same measure regularly and it produces consistent results. However, the authors cited concerns with the lower level of BRFSS specificity [24].

Prior to 2011, the sampling for BRFSS represented only adults living in a private residence with a landline telephone, but starting in 2011, the sample also included data from respondents living in cell phone-only households. Weighted response rates are presented by state. For 2011, the median weighted response rate for the combined cell phone and landline was 49.7 percent.

The survey adjusts for non-response to reduce the known differences between respondents and non-respondents. Although participants interviewed may not represent a state in terms of age, sex and race distribution, it is believed that weighting the data corrects for this potential bias. As with other health surveys, estimates are based on self-report data and they may over- or underestimate the actual prevalence of a particular risk factor in the population. Despite some

oversampling in states by geography, the annual sample size is too small to compute precise estimates at the county level.

### ***Simplicity of indicator***

Data weighting and adjustments are applied to the numerator. The level of complexity in calculating and explaining the indicator is simple to moderate. The numerator captures the number of self-reported instances of IPV as indicated by BRFSS per 1,000 individuals. Of importance, the BRFSS module measures behavioral components of IPV (the actions or acts associated with IPV) and does not rely on the respondent to interpret terminology associated with IPV. It also does not measure the impact of IPV (e.g. does the respondent feel in control of his or her own life). With growing national attention on intimate partner violence in the media, in politics (e.g. passage and maintenance of the *Violence Against Women Act of 1994*), and by national and international leaders, explaining intimate partner violence and its public health impact is not overly complex.

### **References**

- 1 Rand, M. (2006). The National Crime Victimization Survey: 34 Years of Measuring Crime in the United States. *Statistical Journal of the United Nations*, 23, 289-301.
- 2 Survey Methodology of the Criminal Victimization in the United States. (2012). Retrieved from: <http://bjs.ojp.usdoj.gov/index.cfm?ty=dcdetail&iid=245#Methodology>. On 3/8/13.
- 3 U.S. Department of Justice. (1989). Redesign of the National Crime Survey. Retrieved from <http://bjs.ojp.usdoj.gov/content/pub/pdf/rncs.pdf>. On 3/11/13.
- 4 Greenfield, L. (2002). Bureau of Justice Statistics: Data Quality Guidelines. Retrieved from <http://bjs.ojp.usdoj.gov/content/pub/pdf/dataquality.pdf>. On 3/11/13.
- 5 Center for Disease Control and Prevention. (2012). Injury Center: Violence Prevention: Intimate Partner Violence. Retrieved from: <http://www.cdc.gov/ViolencePrevention/intimatepartnerviolence/index.html>. On 3/11/13.
- 6 World Health Organization. (2002). Intimate Partner Violence, Fact Sheet.
- 7 Anstey, C., World Bank Managing Director. (March 6, 2013). Remarks for the Event: Intimate Partner Violence-Effective Intervention. Retrieved from: <http://www.worldbank.org/en/news/speech/2013/03/06/remarks-for-event-intimate-partner-violence-effective-interventions>. On 3/11/13.
- 8 The American College of Obstetricians and Gynecologists. (2012). Intimate Partner Violence. *Women's Health Care Physicians Committee Opinion*, 518.
- 9 Healthy People 2020. Healthy People 2020 Objective Topic Areas and Page Numbers. IVP-40. Retrieved from <http://www.healthypeople.gov/2020/topicsobjectives2020/pdfs/HP2020objectives.pdf>. On 3/12/13.
- 10 Catalano, S., U.S. Department of Justice Office of Justice Programs, Bureau of Justice Statistics. (November, 2012). Intimate Partner Violence, 1993-2010. Retrieved from: <http://bjs.ojp.usdoj.gov/index.cfm?ty=pbdetail&iid=4536>. On 3/8/13.
- 11 Halpern, C.T., Spriggs, A.L., Martin, S.L., Kupper, L.L. (2009). Patterns of Intimate Partner Violence Victimization for Adolescence to Young Adulthood in a Nationally Representative Sample. *Journal of Adolescent Health*, 45, 508-516.
- 12 Abramsky, T., Watts, C.H., Garcia-Moreno, C., Devries, K., Kiss, L., Ellsberg, M., Jansen, H., Heise, L. (2011). What Factors are Associated with Recent Intimate Partner Violence? Finding for the WHO Multi-County Study on Women's Health and Domestic Violence. *BMC Public Health*, 11(109).
- 13 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.
- 15 Clark, K.A., Biddle, A.K., Martin, S.L. (2002). A cost-benefit analysis of the Violence Against Women Act of 1994. *Violence Against Women*, 8(4), 417-428.
- 16 Center for Disease Control and Prevention. (2006). Promoting Respectful, Nonviolent Intimate Partner Relationships through Individual, Community, and Societal Change. Strategic Direction for Intimate Partner Violence, Retrieved from: [http://www.cdc.gov/violenceprevention/pdf/IPV\\_Strategic\\_Direction\\_Full-Doc-a.pdf](http://www.cdc.gov/violenceprevention/pdf/IPV_Strategic_Direction_Full-Doc-a.pdf). On 3/19/13.
- 17 Foshee, V.A., Bauman, K.E., Ennetr, S.T., Suchindran, C., Benefield, T., Linder, G.F. (2005). Assessing the Effects of Dating Violence Prevention Program "Safe Dates" Using Random Coefficient Regression Modeling. *Prevention Science*, 6(3), 245-258.
- 18 Langhinrichsen-Rohling, J., Turner, L.A. (2012). The Efficacy of an Intimate Partner Violence Prevention Program with High-Risk Adolescent Girls: A Preliminary Test. *Prevention Science*, 13(4), 384-394.

- 19 Gerberding, J.L., Binder, S., Hammond, W.R., Arias, I. (2003). Costs of Intimate Partner Violence Against Women In the United States. National Center for Injury Prevention and Control. Retrieved from: <http://www.cdc.gov/violenceprevention/pdf/IPVBook-a.pdf>. On 3/19/13.
- 20 Honor, G. (2005). Domestic Violence and Children. *Journal of Pediatric Health Care*, 19(4), 206-212.
- 21 Saltzman, L.E., Fanslow, J.L., McMahon, P.M., Shelley, G.A.. (2002) Intimate partner violence surveillance: uniform definitions and recommended data elements, version 1.0. Atlanta (GA): Centers for Disease Control and Prevention, National Center for Injury Prevention and Control.
- 22 Centers for Disease Control and Prevention (2007). 2007 Behavioral Risk Factor Surveillance System Questionnaire, Atlanta (GA): Centers for Disease Control and Prevention, National Center for Injury Prevention and Control.
- 23 Ranney, M.L., Madsen, T., Gjelsvik, A. (2012). Predictors of Being Unsafe: Participation in the Behavioral Risk Factor Surveillance System 2006 Intimate Partner Violence Module. *Journal of Interpersonal Violence*, 27(1), 84-102.
- 24 Potter, S.J., Laflamme, D.J. (2011). An Assessment of State Level Sexual Assault Prevalence Estimates. *Maternal and Child Health Journal*. 15, 77-86.
- 25 Breiding, M.J., Chen J., Black, M.C. (2014). Intimate Partner Violence in the United States — 2010. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention.
- 26 Golden, S.D., Perreira, K.M., Piette Durance, C. (2013). Troubled Times, Troubled Relationships: How Economic Resources, Gender Beliefs, and Neighborhood Disadvantage Influence Intimate Partner Violence. *Journal of Interpersonal Violence*, 28(10), 2134-2155.
- 27 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.
- 28 Fishman, P.A., Bonomi, A.E., Anderson, M.L., Reid, R.J., Rivara, F.P. (2010). Changes in Health Care Costs Over Time Following the Cessation of Intimate Partner Violence. *Journal of General Internal Medicine*. 25(9), 920-5.
- 29 Brown, D.S., Finkelstein, E.A., Mercy, J.A. (2008). Methods for Estimating Medical Expenditures Attributable to Intimate Partner Violence. *Journal of Interpersonal Violence*, 23(12), 1747-66.
- 30 Rivara, F.P., Anderson, M.L., Fishman, P., Bonomi, A.E., Reid, R.J., Carrell, D., Thompson, R.S. (2007) Intimate Partner Violence and Health Care Costs and Utilization for Children Living in the Home. *Pediatrics*. 120(6), 1270-7.
- 31 Family Violence Prevention Fund (2010). Realizing the Promise of Home Visitation: Addressing Domestic Violence and Child Maltreatment, a Guide for Policy Makers. Retrieved from: [http://www.futureswithoutviolence.org/userfiles/file/Children\\_and\\_Families/Realizing%20the%20Promise%20of%20Home%20Visitation%202-10.pdf](http://www.futureswithoutviolence.org/userfiles/file/Children_and_Families/Realizing%20the%20Promise%20of%20Home%20Visitation%202-10.pdf)
- 32 Wilkins, N., Tsao, B., Hertz, M., Davis, R., Klevens, J. (2014). Connecting the Dots: An Overview of the Links Among Multiple Forms of Violence. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention Oakland, CA: Prevention Institute.
- 33 Illangasekare, S., Burke, J., Chander, G., Gielen, A. (2013). The Syndemic Effects of Intimate Partner Violence, HIV/AIDS, and Substance Abuse among Low-Income Urban Women. *Journal of Urban Health*. 90(5), 934-47.

*This publication was supported by a grant from the W.K. Kellogg Foundation. Its contents are solely the responsibility of the author and do not necessarily represent the official views of the W.K. Kellogg Foundation.*

To learn more, please contact Caroline Stampfel, Senior Epidemiologist at [cstampfel@amchp.org](mailto:cstampfel@amchp.org) or (202) 775-0436.

### **Association of Maternal & Child Health Programs**

2030 M Street, NW, Suite 350

Washington, DC 20036

(202) 775-0436 • [www.amchp.org](http://www.amchp.org)

