

REVIEW ARTICLE

Allan H. Ropper, M.D., *Editor*

Intimate Partner Violence

Elizabeth Miller, M.D., Ph.D., and Brigid McCaw, M.D., M.P.H.

From Adolescent and Young Adult Medicine, UPMC, Children's Hospital of Pittsburgh, and the University of Pittsburgh School of Medicine, Pittsburgh (E.M.); and the Family Violence Prevention Program, Kaiser Permanente, Oakland, CA (B.M.). Address reprint requests to Dr. Miller at 120 Lytton Ave., 302-2, Pittsburgh, PA 15213, or at elizabeth.miller@chp.edu.

N Engl J Med 2019;380:850-7.

DOI: 10.1056/NEJMra1807166

Copyright © 2019 Massachusetts Medical Society.

INTIMATE PARTNER VIOLENCE IS COMMON, COSTLY, AND ASSOCIATED WITH increased morbidity and mortality. Research over a period of several decades has revealed the short- and long-term effects of violence on the physical and mental health and social well-being of affected persons and their children. The health care system plays a central role in education about and prevention of intimate partner violence, as well as in identification of affected persons, intervention, and recovery. The system also has contributed to the crafting of social and legislative policies related to intimate partner violence. Such violence is more prevalent during a woman's lifetime than conditions such as diabetes, depression, or breast cancer, yet it often remains unrecognized by health professionals. This review focuses on women as the victims of partner violence because the prevalence of serious consequences of violence is higher among women than among men, serious injury is more likely for women, and research has shown both the health consequences of violence by a partner and the value of interventions, particularly among women of reproductive age.¹

DEFINITION AND PREVALENCE

The Centers for Disease Control and Prevention (CDC) defines intimate partner violence as physical violence, sexual violence, stalking, or psychological aggression (including coercive acts) by a current or former intimate partner, whether or not the partner is a spouse.² Authoritative estimates of the prevalence of partner violence in the United States are derived from the National Intimate Partner and Sexual Violence Survey (NISVS), a population-based, random-digit-dial telephone survey, which began in 2010 and is ongoing.³ Recent information from this survey shows that approximately a third of women (37.3%) and men (30.9%) have experienced sexual violence, physical violence, or stalking by an intimate partner in their lifetime and that 23.2% of women and 13.9% of men have experienced severe physical violence by an intimate partner.⁴ The survey also assessed the frequency of the following consequences of violence: injury, need for medical care, or post-traumatic stress symptoms. One in 4 women and 1 in 10 men stated that they had at least one of these consequences of violence. These prevalence estimates have remained essentially unchanged since 2010, underscoring an opportunity for prevention of this serious public health issue.

Although intimate partner violence occurs across all social strata, locations, and cultural backgrounds, estimates of prevalence vary according to demographic characteristics. Prevalence is highest among young adults (18 to 24 years of age), as compared with other age cohorts. There is a higher prevalence of victimization among persons who identify themselves as sexual and gender minorities,⁵ among certain racial and ethnic minority groups (including Native Americans, those who identify themselves as multiracial, and non-Hispanic black women⁴), and among

people with mental and physical disabilities,⁶ suggesting that there are interactions between intimate partner violence and certain forms of societal marginalization.⁷ An overlap between intimate partner violence and human trafficking has also been identified; traffickers may initially act as if they are caring, romantic partners and then use coercive and controlling tactics that are similar to those used by perpetrators of intimate partner violence.⁸

In the 2015 Youth Risk Behavior Survey of high-school students in the United States, 21.4% of female students and 9.6% of male students reported experiencing physical or sexual violence by a partner in the previous year.⁹ Abusive behavior in adolescent dating relationships is associated with a risk of intimate partner violence later in adulthood.¹⁰ Among adolescents especially, abuse through online technology and social media is common, with tactics that include sexual and nonsexual harassment and monitoring.¹¹

Psychological aggression, such as threats, demeaning comments, humiliation, and efforts to monitor or control an intimate partner, is a common factor in partner abuse and has health consequences for the victim. More than a third of women surveyed in the NISVS reported experiencing psychological aggression in their lifetime.⁴ Intimate partners who are violent may use alcohol, medications, or illicit drugs to subdue and control their partners or may use a partner's mental health diagnosis (e.g., calling the partner crazy and unstable and isolating the partner) as a control mechanism.¹² New types of monitoring or home technology may also be used to control partners. Subtle aspects of psychological aggression include interference with a person's attempts to seek medical care, keep appointments, obtain medications, adhere to treatment recommendations, or improve health behaviors, potentially making the person who is experiencing such controlling behavior appear to be medically non-adherent.¹³

Routine inquiry about partner violence in general medical settings can expose abusive behavior that has been directed toward the patient. The abuse may underlie deterioration in the health of the patient and impairs the management of chronic conditions. With this information, the clinician can implement adjustments in treatment, offer support and educational resources, and connect the patient to essential services, as

Case 1. A Woman with Poorly Controlled Asthma

A 40-year-old, nonsmoking woman with a history of asthma since childhood has had multiple emergency department visits over the past 2 years. She is able to show that she has good knowledge of inhalers and uses them. During routine screening by her primary care provider for intimate partner violence, the patient alludes to having difficulty filling her inhaler prescriptions because of "problems at home" and adds, "But he doesn't hit me." With reassurance that the visit is confidential and that in some relationships, the partner may make it difficult to manage health conditions, she discloses fear of her husband: he belittles her for needing to use inhalers, refuses to pay for "steroid" medications, and refuses to smoke outside the house. The primary care provider affirms that this behavior is worrisome and that help is available. Respecting the patient's autonomy, the physician informs the patient about available social services and safety and advocacy agencies for women experiencing intimate partner violence and offers to make referrals to these resources, which the patient readily accepts. The physician also works with the patient to devise a plan for obtaining medications from a pharmacy near her workplace and adjusts the treatment regimen so that she can administer her long-acting medications at work and at a friend's house on weekends. A follow-up appointment is made.

described in Case 1. Resources for obtaining these services, which are geared toward patients and clinicians, are listed in Table 1.

INTIMATE PARTNER VIOLENCE AND WOMEN'S AND CHILDREN'S HEALTH

Over the past two decades, research on intimate partner violence has documented the effect of overt physical abuse, in addition to the independent effect of emotional abuse, on women's physical and mental health.¹⁴ Women experiencing intimate partner violence have more medical, gynecologic, and stress-related symptoms than nonabused women¹⁵⁻¹⁸ (Fig. 1). Data from the Behavioral Risk Factor Surveillance System survey, which is conducted annually and is the largest nationally representative telephone survey of general health behaviors and conditions in the United States, highlight the increased risk of chronic conditions such as asthma, arthritis, stroke, and cardiovascular disease among persons who have experienced partner violence.¹⁸ It has been proposed that acute and chronic stress may activate neuroendocrine and immune system pathways, which may increase the risk of chronic conditions, including autoimmune disorders and cancer.¹⁹ Telomere shortening occurring in the context of chronic stress is another proposed mechanism for the link between intimate partner violence and poor health.²⁰ Chronic stress associated with partner violence also increases behavioral coping strategies, such as smoking and other substance use, that contribute to poor health.

Table 1. Resources for Addressing Intimate Partner Violence (IPV).***Resources for patients**

National Domestic Violence Hotline:
800-799-7233 or 800-799-SAFE
TTY: 800-787-3224
www.thehotline.org

National Dating Abuse Helpline:
866-331-9474
text "loveis" to 22522
www.loveisrespect.org

Smartphone app or website for safety decision support:
www.myplanapp.org

National Sexual Assault Hotline:
800-656-4673 or 800-656-HOPE
<https://rainn.org>

The Northwest Network (LGBT resources):
206-568-7777
www.nwnetwork.org

National Child Abuse Hotline:
800-422-4453 or 800-4-A-CHILD
www.childhelp.org

National Suicide Prevention Lifeline:
800-273-8255
<https://suicidepreventionlifeline.org>

Resources for clinicians

Futures without Violence: resource guide for health professionals and administrators in various health care settings
<http://ipvhealth.org/resources/>

Futures without Violence: educational, palm-size safety cards for health care settings
<https://futureswithoutviolence.org/?s=safety+card#chev589>

CDC: violence prevention
www.cdc.gov/violenceprevention/intimatepartnerviolence

Futures without Violence and the ACOG: *Addressing Intimate Partner Violence Reproductive and Sexual Coercion: A Guide for Obstetric, Gynecologic, and Reproductive Health Care Settings*
<http://ipvhealth.org/wp-content/uploads/2017/02/FINAL-Reproductive-Health-Guidelines.pdf>

Futures without Violence: *Hanging Out or Hooking Up: Clinical Guidelines on Responding to Adolescent Relationship Abuse: An Integrated Approach to Prevention and Intervention*
www.futureswithoutviolence.org/hanging-out-or-hooking-up-clinical-guidelines-on-responding-to-adolescent-relationship-abuse-an-integrated-approach-to-prevention-and-intervention/

HRSA: *The HRSA Strategy to Address Intimate Partner Violence, 2017–2020*
www.hrsa.gov/sites/default/files/hrsa/HRSA-strategy-intimate-partner-violence.pdf

(For community health centers: <https://ipvhealthpartners.org>)

SAMHSA: trauma-informed care
www.samhsa.gov/trauma-violence/training-technical-assistance

tended pregnancy,²¹ sexually transmitted infections,²² and human immunodeficiency virus infection.²³ Factors underlying these poor outcomes include forced or coerced sex, a partner's refusal to use condoms, and other forms of reproductive coercion, such as pressuring a woman to become pregnant against her wishes and sabotaging contraception (e.g., breaking or removing condoms during sex).²⁴ These findings suggest that clinicians who provide reproductive health services are in a position to offer information about healthy relationships, recognize intimate partner violence and signs of reproductive coercion, and promote contraceptive methods that leave little opportunity for sabotage by abusive partners (e.g., long-acting, reversible contraception, including implants and intrauterine devices). Clinicians can also refer patients to advocacy services, as suggested in a committee opinion of the American College of Obstetricians and Gynecologists.²⁵

Intimate partner violence has been associated with increased risks of obstetrical and gynecologic complications, pregnancy-associated death, preterm birth, and low birth weight²⁶ and is a risk factor for peripartum depression and substance use, including tobacco.²⁷ If exposure to partner violence is known or suspected, it is appropriate to consider a pregnancy high risk and to coordinate interventions and support services and to ensure postpartum follow-up. Prenatal cognitive-behavioral interventions by trained therapists, consisting of education about abuse and safety behaviors, improve health outcomes for mother and infant and have the potential to interrupt intergenerational cycles of family violence.²⁸ Well-child visits also offer an opportunity for clinicians to identify intimate partner violence against a mother, especially in conjunction with an assessment for postpartum depression, which can occur in cases of partner abuse, and to provide support and connection to social services.²⁹

The health effects on children of exposure to parental domestic violence include physical and mental health disorders and an increased risk of being a victim of intimate partner violence or perpetrating violence in adolescence and adulthood.²⁹ Home-visitation programs in the child's first 2 years, including an assessment for intimate partner violence and counseling for the mother, have been shown to reduce the risk of

Among women of reproductive age, intimate partner violence has been associated with poor reproductive and sexual health, including unin-

* ACOG denotes American College of Obstetricians and Gynecologists, CDC Centers for Disease Control and Prevention, HRSA Health Resources and Services Administration, LGBT lesbian, gay, bisexual, and transgender, and SAMHSA Substance Abuse and Mental Health Services Administration.

Injury	Chronic Conditions	Mental Health Conditions and Substance Misuse	Urologic and Gynecologic Conditions	Pregnancy and Peripartum-Related Conditions	Other Conditions
Strains, contusions, lacerations Fractures Head, neck, and facial injuries Strangulation Traumatic brain injury Thoracic and abdominal injuries Sexual assault Homicide	Asthma Diabetes Cardiovascular conditions (HTN, lipid disorders) Stroke Joint disease Chronic pain	Depression Anxiety disorders, including PTSD Eating disorders Suicidal behavior Tobacco addiction Misuse of alcohol and other drugs Prescription and opioid misuse	HIV infection STD UTI Unplanned pregnancy Menstrual disorders Pelvic pain Dyspareunia Menopausal symptoms Incontinence	Obstetrical complications (miscarriage, injury, HTN) Perinatal depression, anxiety Smoking, alcohol, or substance misuse Death due to homicide or suicide Preterm birth, low-birth-weight infant	Frequent headaches Difficulty sleeping Gastrointestinal disorders Palpitations Fibromyalgia Musculoskeletal conditions Activity limitations Multiple physical symptoms

Figure 1. Common Medical and Psychiatric Sequelae of Exposure to Intimate Partner Violence.

HIV denotes human immunodeficiency virus, HTN hypertension, PTSD post-traumatic stress disorder, STD sexually transmitted disease, and UTI urinary tract infection.

subsequent episodes of violence against the mother.³⁰ Since partner violence often occurs in parallel with other adverse social conditions in families, recognition of food insecurity, unstable housing, and mental illness or substance misuse should trigger consideration of an additional assessment regarding exposure to violence and referral to community-based social services.³¹

The mental health consequences of intimate partner violence have been shown to contribute to health care costs and an increased disease burden among women.^{32,33} Partner violence has been associated with depression, post-traumatic stress disorder, anxiety, suicidal behavior, and substance misuse.^{10,14,16,17,34-36} Exposure to violence contributes to the genesis of, and exacerbates, mental health conditions, and existing mental health problems increase vulnerability to partner violence. Thus, screening in primary care for mental health disorders such as depression reasonably includes an inquiry about current and previous intimate partner violence.

Particular physical injuries in women are recognized indicators of intimate partner violence. These include contusions, lacerations, and fractures, especially in the head, neck, and face.³⁷ Strangulation (see Case 2), a common but frequently unrecognized form of assault by an intimate partner,³⁸ can have long-term neurologic sequelae due to anoxia³⁹ and is a predictor of future injury and homicide.^{40,41} Single or repeated concussions from blows to the head result in a variety of traumatic brain injuries.⁴²

Current or past intimate partner violence is therefore appropriately included in the differen-

Case 2. A Woman with Sore Throat and Hoarseness

A tearful young woman with throat pain, hoarseness, normal vital signs, and no lower respiratory tract symptoms seeks treatment for her pain in an emergency department. The oropharyngeal examination is normal; her neck is supple without adenopathy but is tender on palpation, especially anteriorly. The physician notes a "history of domestic violence" documented at a recent gynecologic visit. There are no ecchymoses on her neck or elsewhere. When asked, the patient discloses that her sore throat began after her partner "choked her" and she fainted. A "strangulation protocol" calls for a computed tomographic angiogram, which shows partial carotid dissection. The patient is hospitalized, and the injury is managed conservatively. She receives social service support, is connected to a local agency providing advocacy for victims of intimate partner violence, and ultimately enters an emergency shelter. The patient is counseled and supported in contacting law enforcement, and the perpetrator is arrested.

tial diagnosis of many medical and behavioral health conditions, particularly in women. A missed or delayed diagnosis may lead to unnecessary or incorrect tests, procedures, and treatments and to increased morbidity or mortality. The risks associated with a delayed diagnosis were highlighted in a Clinical Problem-Solving article published in the *Journal* almost 25 years ago concerning the underlying cause of stroke in a young woman: strangulation by an intimate partner that was not initially recognized.³⁸ In view of these risks, intimate partner violence has been acknowledged as a central safety issue in patient care.^{38,43,44}

IMPLICATIONS FOR PROVIDERS AND HEALTH CARE SYSTEMS

Estimates of the prevalence of intimate partner violence among women seeking medical care vary according to the study location (an inner-city

Case 3. A Middle-Aged Woman with Frequent Headaches

A 51-year-old woman with frequent headaches is seen repeatedly by her primary care provider. She has a normal examination and has had a negative workup. Her headaches have been refractory to physical therapy, exercise, stress-reduction classes, and medications. The clinic staff has begun to offer all patients a wallet card with education about intimate partner violence and health. After five visits, the patient shares a history of physical injury by her husband, who is currently preventing her from visiting her grown children and other family members and from leaving home without his permission. The physician affirms that she is concerned about the patient, conducts a five-question danger assessment to determine the risk of violence, provides the patient a private place in the clinic to telephone a victim services advocate, and arranges for follow-up with social services.

health clinic vs. an integrated health delivery system), survey methods (anonymous survey vs. clinic screening), and time frame (lifetime vs. recent) and are higher than the estimated prevalence in the general population, especially in primary care, emergency, obstetrics and gynecology, mental health, and addiction services.^{17,21,45-47} Almost all clinicians are likely to encounter patients with a history of partner violence, and professional health organizations in the United States and elsewhere have called for health care system responses to this problem.⁴⁸ In 2013, the Department of Health and Human Services recommended screening and counseling for victims of interpersonal and domestic violence in the Women's Preventive Services Guidelines,⁴⁹ and the U.S. Preventive Services Task Force recommended routine screening for women of child-bearing age, with referral to intervention services if intimate partner violence is identified.⁵⁰ Updated recommendations that reinforce screening and emphasize interventions were recently published.¹

The majority of studies assessing interventions in primary care practices for women who report intimate partner violence have shown that the interventions reduce the risk of subsequent violence.⁵¹ In a review of 17 studies in primary care practices, 13 of the studies showed the value of a systematically applied intervention such as promotion of personal safety and use of community and violence-prevention resources. The lack of benefit in the other 4 studies may have been related to the type of intervention (e.g., an intervention delivered by computer) or the level of engagement with the patient.⁵¹ Another systematic review of intimate partner violence has highlighted the potential benefit of advocacy services to improve safety practices.⁵² A

compendium of instruments that can be used in various clinical settings to assess intimate partner violence is available from the National Center for Injury Prevention and Control of the CDC.⁵³ Examples of workflow and assessment approaches are provided in Figure S1 and Table S1 in the Supplementary Appendix, available with the full text of this article at NEJM.org.

The context in which screening occurs, how it is performed, and who asks the questions will influence a woman's decision about whether to disclose sensitive information concerning intimate partner violence.⁵⁴ Qualitative studies indicate that women experiencing such violence want health care providers to talk to them about the violence in a safe and private setting, to be prepared to ask multiple times without pushing for disclosure, and to offer tangible medical and social resources for support.^{55,56} Patients may not connect stress from partner violence to somatic symptoms such as frequent headaches, musculoskeletal pain, palpitations, and insomnia. Printed information about connections between stressful relationships and personal health can be useful in educating patients about abuse and advocacy resources while building trust with the practitioner and the practice. Over time, this may lead to a discussion with a clinician who can provide a brief but caring intervention and offer safety and recovery strategies, as described in Case 3.

Even with well-implemented screening and intervention practices, women may choose not to disclose abuse to a health care professional for a variety of reasons that include shame and fear of consequences. It has been suggested that universal education about prevention and counseling about harm reduction in relation to intimate partner violence shifts the emphasis away from disclosure-driven practices and counteracts the assumption that a "no" response to a screening question about partner violence means that the patient has not experienced violent or controlling behavior. One such universal approach, CUES (Confidentiality, Universal Education and Empowerment, Support), is described in Table S1 in the Supplementary Appendix. This approach, which has been evaluated in reproductive and adolescent health care settings, has been shown to increase patients' knowledge of resources and strategies for harm reduction and to reduce reproductive coercion and abuse among adolescents and young women.^{47,57,58} The brief Danger

Assessment–5 tool, containing five questions that ask for a “yes” or “no” response, can be used to assess the likelihood of severe or lethal assault for women who are experiencing intimate partner violence^{40,41} (Table 2). Women in danger should be offered immediate connection to their choice of advocacy services.

Screening alone, without intervention, does not necessarily improve women’s quality of life.^{54,59,60} If disclosure does occur, clinicians are most effective when they offer an empathetic response that is informed by the patient’s preferences and personal circumstances.^{61,62} An interactive decision-support aid, available as a mobile app and as a website, assists survivors in clarifying their personal values, weighing risks and benefits, and making informed decisions about safety. This tool has been shown to increase safety behaviors and reduce psychological and violent sexual victimization.⁶³

IMPROVING THE HEALTH CARE SYSTEM RESPONSE

Clinical programs for addressing intimate partner violence that have shown evidence of a benefit use a multicomponent approach that includes training of staff, use of clinical tools and establishment of workflow and documentation within practices, quality improvement, and connections to follow-up social services.^{62,64–67} An organizational assessment tool to track progress in improving the response to intimate partner violence is available for use in hospital and ambulatory care settings (<https://ipvhealthpartners.org/wp-content/uploads/2017/03/Health-Clinic-QA-QI-tool-2016-3043.pdf>), sponsored by the National Health Resource Center on Domestic Violence. There are several examples of health care organizations using system-level approaches, health information technology (including integration of information into the electronic health record, clinical pathways, and data analytics), and performance improvement.^{64–67} Evidence from appropriately designed trials will be necessary for widespread promotion and adoption of these approaches. Research is also needed to develop additional strategies for addressing intimate partner violence; those strategies must take into account the shift from fee-for-service to quality-driven payments, dissemination of the patient-centered medical home, and accountable care models, as

Table 2. Danger Assessment–5.*

Positive answers to two or more of the following questions indicate an increased risk of homicide or severe injury by an intimate partner:

Has the physical violence increased in frequency during the past year?

Has your partner ever used a weapon against you or threatened you with a weapon?

Do you believe your partner is capable of killing you?

Does your partner ever try to choke you?

Is your partner violently and constantly jealous of you?

* Adapted from Messing et al.⁴¹ Information about Danger Assessment–5 is available at https://learn.nursing.jhu.edu/instruments-interventions/Danger%20Assessment/DA-5_2.26.15.pdf.

well as the emerging interest on the part of health care systems in the social determinants of health.

The Health Resources and Services Administration (HRSA) is implementing a multiyear strategic framework to improve the response of health care systems to intimate partner violence.⁶⁸ This framework includes a partnership between HRSA and the Administration for Children and Families to advance systems-based transformation for domestic violence organizations and community health centers. Evaluation of this initiative is ongoing in several states.⁶⁸ An online tool kit for implementing services at community health centers (available at <https://ipvhealthpartners.org>) encompasses several key steps: building partnerships, preparing the practice, adopting an evidence-based intervention, training providers and all staff, and evaluating and sustaining progress.

Women seek preventive and routine health care numerous times over the course of their lives and their children’s lives, creating opportunities for meaningful interactions that include discussion of intimate partner violence within many health care settings. These settings have the advantages of privacy and safety, as well as a relationship with a caring provider, which supports disclosure and allows for tailored intervention and connection to supports within the community. Given the prevalence of intimate partner violence and its effect on women’s health, as well as evidence for effective interventions, routine assessment for intimate partner violence is appropriately incorporated into many clinical settings and may be performed by virtually all health care providers.

Disclosure forms provided by the authors are available with the full text of this article at NEJM.org.

We thank Ethan Copperman, Namita Dwarakanath, Linda S. Ely, Amber Hill, and Ashley Simenson for assistance in preparing

an earlier version of the manuscript; and Lisa James, director of health at Futures without Violence, for critical review of an earlier version of the manuscript.

REFERENCES

1. US Preventive Services Task Force, Curry SJ, Krist AH, et al. Screening for Intimate Partner Violence, Elder Abuse, and Abuse of Vulnerable Adults: US Preventive Services Task Force Final Recommendation Statement. *JAMA* 2018;320:1678-87.
2. Centers for Disease Control and Prevention. Intimate partner violence: definitions. 2017 (<https://www.cdc.gov/violenceprevention/intimatepartnerviolence/definitions.html>).
3. Breiding MJ, Basile KC, Smith SG, Black MC, Mahendra RR. Intimate partner violence surveillance: uniform definitions and recommended data elements, version 2.0. Atlanta: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, 2015.
4. Smith SG, Chen J, Basile KC, et al. The National Intimate Partner and Sexual Violence Survey (NISVS): 2010-2012 state report. Atlanta: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, 2017.
5. Messinger AM. Invisible victims: same-sex IPV in the National Violence Against Women Survey. *J Interpers Violence* 2011;26:2228-43.
6. Breiding MJ, Armour BS. The association between disability and intimate partner violence in the United States. *Ann Epidemiol* 2015;25:455-7.
7. Montesanti SR, Thurston WE. Mapping the role of structural and interpersonal violence in the lives of women: implications for public health interventions and policy. *BMC Womens Health* 2015;15:100.
8. Moore JL, Houck C, Hirway P, Barron CE, Goldberg AP. Trafficking experiences and psychosocial features of domestic minor sex trafficking victims. *J Interpers Violence* 2017 April 1 (Epub ahead of print).
9. Rasberry CN, Tiu GF, Kann L, et al. Health-related behaviors and academic achievement among high school students — United States, 2015. *MMWR Morb Mortal Wkly Rep* 2017;66:921-7.
10. Exner-Cortens D, Eckenrode J, Rothman E. Longitudinal associations between teen dating violence victimization and adverse health outcomes. *Pediatrics* 2013;131:71-8.
11. Zweig JM, Dank M, Yahner J, Lachman P. The rate of cyber dating abuse among teens and how it relates to other forms of teen dating violence. *J Youth Adolesc* 2013;42:1063-77.
12. Warshaw C, Lyon E, Bland PJ, Phillips H, Hooper M. Mental health and substance use coercion surveys. Chicago: National Center on Domestic Violence, Trauma & Mental Health and the National Domestic Violence Hotline, 2014.
13. McCloskey LA, Williams CM, Lichter E, Gerber M, Ganz ML, Sege R. Abused women disclose partner interference with health care: an unrecognized form of battering. *J Gen Intern Med* 2007;22:1067-72.
14. Coker AL, Davis KE, Arias I, et al. Physical and mental health effects of intimate partner violence for men and women. *Am J Prev Med* 2002;23:260-8.
15. Campbell J, Jones AS, Dienemann J, et al. Intimate partner violence and physical health consequences. *Arch Intern Med* 2002;162:1157-63.
16. Bonomi AE, Thompson RS, Anderson M, et al. Intimate partner violence and women's physical, mental, and social functioning. *Am J Prev Med* 2006;30:458-66.
17. Sugg N. Intimate partner violence: prevalence, health consequences, and intervention. *Med Clin North Am* 2015;99:629-49.
18. Breiding MJ, Black MC, Ryan GW. Chronic disease and health risk behaviors associated with intimate partner violence — 18 U.S. states/territories, 2005. *Ann Epidemiol* 2008;18:538-44.
19. Juster RP, McEwen BS, Lupien SJ. Allostatic load biomarkers of chronic stress and impact on health and cognition. *Neurosci Biobehav Rev* 2010;35:2-16.
20. Oliveira BS, Zunzunegui MV, Quinlan J, Fahmi H, Tu MT, Guerra RO. Systematic review of the association between chronic social stress and telomere length: a life course perspective. *Ageing Res Rev* 2016;26:37-52.
21. Miller E, Decker MR, McCauley HL, et al. Pregnancy coercion, intimate partner violence and unintended pregnancy. *Contraception* 2010;81:316-22.
22. Hess KL, Javanbakht M, Brown JM, Weiss RE, Hsu P, Gorbach PM. Intimate partner violence and sexually transmitted infections among young adult women. *Sex Transm Dis* 2012;39:366-71.
23. Li Y, Marshall CM, Rees HC, Nunez A, Ezeanolue EE, Ehiri JB. Intimate partner violence and HIV infection among women: a systematic review and meta-analysis. *J Int AIDS Soc* 2014;17:18845.
24. Grace KT, Fleming C. A systematic review of reproductive coercion in international settings. *World Med Health Policy* 2016;8:382-408.
25. Committee opinion: reproductive and sexual coercion. Washington, DC: American College of Obstetricians and Gynecologists, 2013.
26. Pavey AR, Gorman GH, Kuehn D, Stokes TA, Hisle-Gorman E. Intimate partner violence increases adverse outcomes at birth and in early infancy. *J Pediatr* 2014;165:1034-9.
27. Prevalence of self-reported postpartum depressive symptoms — 17 states, 2004–2005. *MMWR Morb Mortal Wkly Rep* 2008;57:361-6.
28. Kiely M, El-Mohandes AA, El-Khorazaty MN, Blake SM, Gantz MG. An integrated intervention to reduce intimate partner violence in pregnancy: a randomized controlled trial. *Obstet Gynecol* 2010;115:273-83.
29. Bair-Merritt M, Zuckerman B, Augustyn M, Cronholm PF. Silent victims — an epidemic of childhood exposure to domestic violence. *N Engl J Med* 2013;369:1673-5.
30. Sharps PW, Bullock LF, Campbell JC, et al. Domestic violence enhanced perinatal home visits: the DOVE randomized clinical trial. *J Womens Health (Larchmt)* 2016;25:1129-38.
31. Henize AW, Beck AF, Klein MD, Adams M, Kahn RS. A road map to address the social determinants of health through community collaboration. *Pediatrics* 2015;136(4):e993-e1001.
32. Bonomi AE, Anderson ML, Rivara FP, Thompson RS. Health care utilization and costs associated with physical and nonphysical-only intimate partner violence. *Health Serv Res* 2009;44:1052-67.
33. Bonomi A, Anderson ML, Reid RJ, Rivara FP, Carrell D, Thompson RS. Medical and psychosocial diagnosis in women with a history of intimate partner violence. *Arch Intern Med* 2009;169:1692-7.
34. Fowler KA, Jack SPD, Lyons BH, Betz CJ, Petrosky E. Surveillance for violent deaths — National Violent Death Reporting System, 18 states, 2014. *MMWR Surveill Summ* 2018;67(2):1-36.
35. Devries KM, Mak JY, Bacchus LJ, et al. Intimate partner violence and incident depressive symptoms and suicide attempts: a systematic review of longitudinal studies. *PLoS Med* 2013;10(5):e1001439.
36. Dillon G, Hussain R, Loxton D, Rahman S. Mental and physical health and intimate partner violence against women: a review of the literature. *Int J Family Med* 2013;2013:313909.
37. Sheridan DJ, Nash KR. Acute injury patterns of intimate partner violence victims. *Trauma Violence Abuse* 2007;8:281-9.
38. Thomas P, Lowitt NR. A traumatic experience. *N Engl J Med* 1995;333:307-10.

39. Messing JT, Patch M, Wilson JS, Kelen GD, Campbell J. Differentiating among attempted, completed, and multiple non-fatal strangulation in women experiencing intimate partner violence. *Womens Health Issues* 2018;28:104-11.
40. Campbell JC, Webster DW, Glass N. The Danger Assessment: validation of a lethality risk assessment instrument for intimate partner femicide. *J Interpers Violence* 2009;24:653-74.
41. Messing JT, Campbell JC, Snider C. Validation and adaptation of the Danger Assessment-5: a brief intimate partner violence risk assessment. *J Adv Nurs* 2017;73:3220-30.
42. Kwako LE, Glass N, Campbell J, Melvin KC, Barr T, Gill JM. Traumatic brain injury in intimate partner violence: a critical review of outcomes and mechanisms. *Trauma Violence Abuse* 2011;12:115-26.
43. Cohn F, Rudman WJ. Fixing broken bones and broken homes: domestic violence as a patient safety issue. *Jt Comm J Qual Saf* 2004;30:636-46.
44. The National Academies of Sciences, Engineering, and Medicine. Improving diagnosis in health care. Washington, DC: National Academies Press, 2015.
45. Sprague S, Goslings JC, Hogentoren C, et al. Prevalence of intimate partner violence across medical and surgical health care settings: a systematic review. *Violence Against Women* 2014;20:118-36.
46. McCloskey LA, Lichter E, Ganz ML, et al. Intimate partner violence and patient screening across medical specialties. *Acad Emerg Med* 2005;12:712-22.
47. Miller E, Tancredi DJ, Decker MR, et al. A family planning clinic-based intervention to address reproductive coercion: a cluster randomized controlled trial. *Contraception* 2016;94:58-67.
48. García-Moreno C, Hegarty K, d'Oliveira AFL, Koziol-McLain J, Colombini M, Feder G. The health-systems response to violence against women. *Lancet* 2015;385:1567-79.
49. Health Resources and Services Administration. Women's preventive services guidelines: Updated HRSA-supported women's preventive services guidelines. 2017 (<https://www.hrsa.gov/womens-guidelines-2016/index.html>).
50. Moyer VA. Screening for intimate partner violence and abuse of elderly and vulnerable adults: U.S. Preventive Services Task Force recommendation statement. *Ann Intern Med* 2013;158:478-86.
51. Bair-Merritt MH, Lewis-O'Connor A, Goel S, et al. Primary care-based interventions for intimate partner violence: a systematic review. *Am J Prev Med* 2014;46:188-94.
52. Trabold N. Screening for intimate partner violence within a health care setting: a systematic review of the literature. *Soc Work Health Care* 2007;45:1-18.
53. Basile K, Hertz M, Back S. Intimate partner violence and sexual violence victimization assessment instruments for use in healthcare settings: version 1. Atlanta: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control, 2007.
54. Hussain N, Sprague S, Madden K, Hussain FN, Pindiprolu B, Bhandari M. A comparison of the types of screening tool administration methods used for the detection of intimate partner violence: a systematic review and meta-analysis. *Trauma Violence Abuse* 2015;16:60-9.
55. Chang JC, Cluss PA, Ranieri L, et al. Health care interventions for intimate partner violence: what women want. *Womens Health Issues* 2005;15:21-30.
56. Feder GS, Hutson M, Ramsay J, Taket AR. Women exposed to intimate partner violence: expectations and experiences when they encounter health care professionals: a meta-analysis of qualitative studies. *Arch Intern Med* 2006;166:22-37.
57. Miller E, Decker MR, McCauley HL, et al. A family planning clinic partner violence intervention to reduce risk associated with reproductive coercion. *Contraception* 2011;83:274-80.
58. Miller E, Goldstein S, McCauley HL, et al. A school health center intervention for abusive adolescent relationships: a cluster RCT. *Pediatrics* 2015;135:76-85.
59. MacMillan HL, Wathen CN, Jamieson E, et al. Screening for intimate partner violence in health care settings: a randomized trial. *JAMA* 2009;302:493-501.
60. Kleven J, Kee R, Trick W, et al. Effect of screening for partner violence on women's quality of life: a randomized controlled trial. *JAMA* 2012;308:681-9.
61. Liebschutz JM, Rothman EF. Intimate-partner violence — what physicians can do. *N Engl J Med* 2012;367:2071-3.
62. McCaw B, Berman WH, Syme SL, Hunkeler EF. Beyond screening for domestic violence: a systems model approach in a managed care setting. *Am J Prev Med* 2001;21:170-6.
63. Glass NE, Perrin NA, Hanson GC, et al. The longitudinal impact of an Internet safety decision aid for abused women. *Am J Prev Med* 2017;52:606-15.
64. Young-Wolff KC, Kotz K, McCaw B. Transforming the health care response to intimate partner violence: addressing "wicked problems." *JAMA* 2016;315:2517-8.
65. Miller E, McCaw B, Humphreys BL, Mitchell C. Integrating intimate partner violence assessment and intervention into healthcare in the United States: a systems approach. *J Womens Health (Larchmt)* 2015;24:92-9.
66. O'Campo P, Kirst M, Tsamis C, Chambers C, Ahmad F. Implementing successful intimate partner violence screening programs in health care settings: evidence generated from a realist-informed systematic review. *Soc Sci Med* 2011;72:855-66.
67. Decker MR, Frattaroli S, McCaw B, et al. Transforming the healthcare response to intimate partner violence and taking best practices to scale. *J Womens Health (Larchmt)* 2012;21:1222-9.
68. The HRSA strategy to address intimate partner violence: 2017-2020. Rockville, MD: Health Resources and Services Administration, 2017.

Copyright © 2019 Massachusetts Medical Society.