HHS Public Access

Author manuscript

Prim Care. Author manuscript; available in PMC 2021 June 01.

Published in final edited form as:

Prim Care. 2020 June ; 47(2): 331–349. doi:10.1016/j.pop.2020.02.010.

Sexual Assault in Adolescents

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Keywords

Sexual abuse; Sexual violence; Sexual assault nurse examiner (SANE); Child advocacy center (CAC); Multidisciplinary investigational team (MDIT); Expert medical review; Vulnerable populations

INTRODUCTION

Pervasive sexual violence (SV) in the United States frequently affects youth under the age of 18. With the prevalence of sexual abuse/assault, medical providers of adolescents will see affected individuals, including many remaining silent of the one or more instances. Besides addressing potential pregnancy, infections, and physical/mental health concerns, when SV is disclosed to a health care professional, Child Protective Service (CPS) and law enforcement need to be involved. The age to consent, age set for statutory rape, and maximum age difference permissible for legal sexual activity among minors are legal determinations that vary among states. Practitioners should familiarize themselves with their jurisdiction's statutes (Appendix 1).

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DISCLOSURE

The authors have nothing to disclose.

Even with appropriate trauma-informed interventions, SV during childhood can result in immediate and lifelong adverse consequences.[1,2] SV in childhood triples an individual's likelihood of suffering future sexual or physical abuse or may increase the chances of becoming a perpetrator later in life.[1,2] Engaging in unhealthy behaviors with substances, exercise, and sexual activity is more prevalent in survivors of sexual abuse, as are other negative symptoms and physical and psychological health outcomes[3,4] (Table 1). Some resilient survivors are spared of these.[4]

No culture, socioeconomic class, race, gender, sexual orientation, nor age is immune from SV. It is a serious public health problem that can be prevented, and efforts are best focused on stopping SV before it starts.[2,3]

DEFINITIONS OF SEXUAL VIOLENCE

"Child sexual abuse occurs when a child is engaged in sexual activities that he or she cannot comprehend, for which he or she is developmentally unprepared and cannot give consent, and/or that violate the law or social taboos of society."[5] The first revision to the 1927 definition of rape occurred in 2012 by The Department of Justice: "The penetration, no matter how slight of the vagina or anus with any body part or object, or oral penetration by a sex organ of another person, without the consent of the victim."[6] Physical resistance is not required on the part of the victim to demonstrate lack of consent[6] (Table 2).

EPIDEMIOLOGY OF SEXUAL VIOLENCE IN MINORS IN THE UNITED STATES

Exact statistics on the prevalence of SV are not available because many victims do not disclose abuse until adulthood, and it is common for instances to never be reported (Table 3). Between 40% and 60% of all rape victims are under the age of 18, and most are adolescents.[7] It is estimated that two-thirds of minors who have experienced sexual abuse were 12 to 17 years old when it first occurred.[8] Women aged 16 to 19 are 4 times more likely to be sexually assaulted than women in all other age groups.[9]

Finkelhor and colleagues[10] amalgamated 3 telephone surveys of 2293 fifteen to 17 year olds between 2003 and 2011. The lifetime experience of 17 year olds with sexual abuse and sexual assault was 26.6% for girls (being 16.8% for 15 year olds) and 5.1% for boys (being 4.3% for 15 year olds).[10] This study notes an increase in perpetrator types (adults, peers, family, acquaintances, and, rarely, strangers) over time.[11] Adult perpetration of sexual abuse and assault was revealed in 1 in 9 girls and 1 in 53 boys less than the age of 18.[10]

Emerson Hospital's Youth Risk Behavior Survey[12] (2018) reported 8% of the 11,018 subjects had unwanted sexual contact with someone. This percentage was higher for female subjects (11%) than for male subjects (3%). Four percent of all the students had this abuse greater than 12 months before the survey; 3% within the past 12 months of the survey, and 1% both before and during the past 12 months. Common traits in those reporting sexual contact against their will are listed in Table 4.

Minors who experienced attempted or completed rape were perpetrated by someone known to the victim 89.9% to 93% of the time.[2,13] Older adolescents are most commonly victims during social encounters with assailants. In younger adolescent victims, the assailant is more

likely to be a member of the adolescent's extended family[11] (Table 5). In 88% of CPS-substantiated sexual abuse claims, the perpetrator is a man regardless of the sex of the victim; in 9% the perpetrator is a woman, and in 3% the sex of the perpetrator is unknown.[11,14]

EVALUATION OF THE ADOLESCENT PATIENT

Evaluation of the sexual assault patient can vary greatly based on details unique to the patient, such as age, gender identity; the assault itself, including the timeline; and what may be known about the perpetrator or perpetrators. Such evaluation can be greatly affected by the rapport developed between the examiner and the patient. One reason for delayed or lack of disclosures is the prevalence of SV inflicted by individuals known by the victim.[13] The provider should recognize that overcoming barriers to disclosure can be difficult for the child, and a safe place for the child to discuss their safety should be provided. Unless the patient objects, the adolescent should not have acquaintances present during the interview, allowing the victim to freely discuss safety, disclose information, discuss treatment, and ask questions that may not otherwise be addressed. The patient may require pain control. Local rape crisis centers have advocates who can be present for support during the sexual assault examination, should the patient desire. Other roles of advocates are discussed later.

PRIMARY CARE VERSUS EMERGENCY DEPARTMENT

The provider should be aware of signs, symptoms, and behaviors suggestive of abuse. Because indicators or symptoms of sexual abuse are often nonspecific and common complaints, the provider's observation of the victim's behavior during a physical examination is crucial[15] (Box 1). Primary care has a role in screening for teen dating violence; if any SV is present, they should ask about commercial sexual exploitation.[16]

The patient may acutely present to the primary care provider's office or to an emergency department (ED). The decision to perform forensic examinations in the office is preferably triaged before the arrival of the patient. For patients triaged for sexual assault concerns, avoid prolonged periods in the waiting room. Ask the patient to refrain from eating, drinking, rinsing his/her mouth, and to remain clothed so that evidence is not compromised. Alert the patient, if he/she needs to void, to obtain an *un*clean ("dirty") specimen.[17] A patient with acute injuries or symptoms, such as pain on urination or anogenital bleeding, suggests a potential assault occurred within the past 72 hours. Even without a disclosure, this warrants further investigation of the child's safety and may indicate the need for a medical forensic examination.

Regardless of the timeframe since the abuse, the primary or initial care provider should evaluate the patient for injury, because assessing patient stability takes precedence over forensic evidence collection. If the contact was recent, referring to a protocolized sexual assault forensic examination (SAFE) for forensic assessment, documentation, evidence collection and preservation, and photography provides the patient with the best opportunity to investigate SV. If the patient is in the window for evidentiary collection, gloves should be worn during the entire physical assessment, taking care to avoid contamination of any evidence.

The primary care provider should educate the patient and parents/guardians on the medical forensic examination. The time-sensitive forensic examination often takes several hours to complete. Some clothing may be kept as evidence. Any items brought in from home as evidence should be stored in paper bags; plastic bags promote the growth of mold and degrade evidence. Only under certain circumstances whereby there is significant vaginal bleeding, suspicion for pelvic inflammatory infection, or a foreign body, would a victim experience a vaginal examination.[18,19] In a trauma-sensitive manner, the examiner will inquire if this is a first-time occurrence. Otherwise, a speculum or bimanual examination is rarely used.[20] If the provider defers conducting evidentiary examinations in their office, a listing of locations of local SAFE facilities should be accessed. Provided the patient and family desire this process, referral to a regional Child Advocacy Center (CAC) for medical evaluation may be appropriate.[21] If the patient's available option is a sexual assault nurse examiner (SANE) in the ED, contacting the nearest facility before patient transfer will confirm availability of an SANE to perform the SAFE.

Should the victim be identified outside of the timeframe for evidence collection, conducting a medical forensic examination is not appropriate. When an emergent physical examination is not required for a patient with ongoing symptoms (eg, genital pain, bleeding, discharge, or significant emotional duress), the most experienced practitioner should be sought in a scheduled appointment within a couple of days. Menstrual and contraceptive history, if ejaculate was near the genitals, or the last consensual contact should the adolescent be sexually active, may indicate the need for education on emergency and ongoing contraceptive. Pregnancy testing, safety, and mental-health assessments are appropriate at this visit.

Providers should limit documentation of the details of the assault if the detailed examination is anticipated by another examiner. It is more desirable to the patient to avoid retelling his/her experience and reduces possible discrepancies in the record. Refrain from words such as "normal," "alleged," "apparently," "story," "satisfactory," "positive," or "negative" in the documentation, because these imply judgment. The author should never document "no signs or symptoms of sexual assault" in the physical examination.

HISTORY AND PHYSICAL EVALUATION

Document open-ended questions and quote the patient's responses describing the timing, type of sexual contact, and any resultant symptoms for the purpose of learning the minimal facts to direct the medical evaluation and treatment. History and observations may raise suspicion for drug facilitation. Alcohol is the most common agent used in "date rape" and commonly accompanies SV within this age.[20,22] Benzodiazepines other than flunitrazepam are more commonly used than drugs suspected in sexual assault, for example, flunitrazepam (Rohypnol), gamma-hydroxybutyric acid, gamma-butyrolactone, and ketamine.[19,20,22] The latter 4 are not included in standard urine drug screen (UDS), but should be additions to the standard UDS to detect common benzodiazepines.

Physical evaluation includes a detailed assessment of the scalp, all skin surfaces, mucosa, conjunctiva, anogenital region, and airway for the following:

- Hair removal, bruises, contusions, abrasions, petechia, and bite marks
- Palatal petechia, torn frenulum, and other evidence of oral/dental trauma, ulcerations
- Genital evaluation for bleeding, bruising, swelling, lacerations, irritation, scarring, discharge, urethral inflammation, odor, warts, ulcerations, hymenal transections, adenopathy
- Anal swelling, bruising, tearing, scarring, spontaneous or immediate dilation (without the presence of stool), loss of sphincter tone, or loss of anal rugae pattern

Strangulation has been identified as a lethality indicator in interpersonal violence (IPV), and all victims of sexual assault should be assessed for the signs of neck/airway injury.[23] Symptoms include neck/throat pain, petechia, vocal changes, shortness of breath, and difficulty swallowing.[24] Nonfatal strangulation is often present with no external physical signs. A computed tomography angiogram (CTA) should be considered in those with a history of strangulation evaluating potential vascular injuries, despite lack of physical examination findings[24] (see Appendix 1). This CTA is in addition to the usual physical examination, and forensic evidence collection at the direction of the patient (see Appendix 1).

Injuries should be photographed and described in the record. Providers should be aware that patients presenting for sexual assault evaluation often have no obvious physical injuries. Having no obvious physical injuries does *not* mean that assault/abuse has *not* occurred. This fact, or an explanation of the findings, needs communicated with the patient.

SEXUAL ASSAULT NURSE EXAMINER

SANEs are registered nurses with additional training in trauma-informed care and evidence collection. They act as liaisons between the medical and legal fields. The International Association of Forensic Nurses dictates the educational guidelines and certifies SANEs.[18] The SANE's involvement, with their knowledge of the neurobiology of trauma and forensics, allows for a victim-centered methodology to the investigation.

Whereas health care providers evaluate the patient for acute medical needs, the SAFE is the process of obtaining the assault history, documenting examination findings, and collecting evidence. Although state forensic guidelines vary, research suggests that DNA evidence may still be present up to 7 to 10 days.[19,25] Informed consent is needed for each step (eg, physical examination, photo-documentation, evidence collection, presence of an advocate, and treatment). Regardless of their age, the patient may at any time withdraw consent for any part of the evaluation.

It is not the SANE's focus to discern nor investigate whether an assault occurred; rather, SANE should remain nonbiased while providing medical treatment. Because the SANE's medical forensic documentation is considered evidence, it is recommended that this documentation remain separate of the medical record and kept in a secured manner that protects the chain of custody. The evidence is transferred to law enforcement, often

providing a starting point for the investigation. SANE evaluations result in improved evidence collection, expert testimony, and stronger cases for the prosecution.[26,27]

The SANE can educate on the trauma process and devise informed treatment plans while debunking myths surrounding sexual assault. The SANE may have suggestions, such as sexually transmitted infection (STI) prophylaxis and emergency contraception (EC), for the medical provider to be communicated before the patient's discharge.

MANAGEMENT OF POST–SEXUAL ASSAULT PREGNANCY AND SEXUALLY TRANSMITTED INFECTION RISKS AND FINAL DETAILS

All postpubertal patients are to be universally tested and presumptively treated for gonorrhea, chlamydia, and trichomonas in contrast to prepubertal patients, who do not receive empiric treatment.[16,19,28] If testing, with the patient's consent, is performed, nucleic acid amplification test (NAAT) is preferred for the diagnostic evaluation of postpubertal sexual assault survivors.[22,28] Urine specimens for chlamydia, gonorrhea, and trichomonas are suitable over vaginal or cervical specimens, or urethral specimens in men. Oropharynx and rectum specimens should be obtained if they are sites of penetration or attempted penetration.[28] A positive NAAT result warrants confirmatory testing, with an Infectious Disease Service consultation, which can be completed on the original specimen in adolescents with no history of consensual peer sexual activity (as is also imperative in prepubertal individuals). Serum samples for hepatitis B and syphilis should be obtained.[28] The baseline human immunodeficiency virus (HIV) *result* is not needed to expeditiously start the nonoccupational postexposure prophylaxis (PEP) if the risk-benefit ratio deems PEP initiation (see Appendix 1). PEP would then be changed to antiretroviral treatment if preexisting HIV infection is diagnosed. Empiric treatment and other considerations are listed in Table 6.[19,28] Admission of the survivor's previous sexual history into discovery is limited by laws in every state. These laws are meant to allow medical testing and treatment of STIs without demeaning the victim's credibility in court.[28]

The adolescent patient will need counseling regarding PEP and EC. The risk of pregnancy is higher than the 5% per sexual assault among women aged 12 to 45 quoted statistic because adolescents have higher fertility and lower rates of concurrent contraceptive use.[3] Levonorgestrel (Plan B One-Step) is most effective when taken within 72 hours.[29] If the patient's body mass index (BMI) is greater than 25 kg/m^2, or if the assault was between 72 and 120 hours, the likelihood of levonorgestrel providing effective prophylaxis for pregnancy is lessened considerably. As the BMI increases to greater than 25 kg/m^2, the efficacy decreases, and at a BMI over30 kg/m^2, the risk of pregnancy was 5.8% with levonorgestrel and 2.6% with ulipristal acetate (Ella). Therefore, Glasier and colleagues[30] recommend ulipristal acetate or a copper intrauterine device (IUD) as an alternative for pregnancy prophylaxis if the BMI is greater than 25 kg/m^2 with effectiveness up to 5 days after vaginal intercourse. In cases whereby the ulipristal acetate is given, hormonal birth control (progestin) should be avoided for 5 to 7 days following the progesterone receptor antagonist, ulipristal acetate, because it may decrease the progestin's effectiveness. Additional birth control measures should be used during those 7 days. Alternates to ulipristal acetate in those taking hormonal contraception should be considered.[29,31]

The risk of HIV in the United States for a women having receptive vaginal intercourse with ejaculation with an HIV-positive man is 1 in 1250, and the risk of HIV acquisition in the receptive partner via anal intercourse with an HIV-positive man with ejaculation is 1 in 70.[32–34] Decisions regarding PEP for HIV should be based on the individual's risk using the information provided by the victim and the examination, and if able, testing the assailant. PEP resources are provided (see Appendix 1). The patient should be informed that the cost of PEP medications can exceed $1000 to $2000. Although the cost of the medical forensic examination should be free to the patient in accordance with Violence Against Women Act, medical costs vary by facility.[18] Assistance, such as the Victim's Compensation Fund, may be available (see Appendix 1).

Recommended doses of azithromycin and metronidazole or tinidazole are likely to induce nausea and emesis. Because alcohol contributes to adolescent sexual assault, providers should be cognizant of the Antabuse-like reaction of the -idazoles with alcohol. A delay of several hours in administration of the empiric treatment of trichomonas will likely improve the patient experience.[19,28]

Before discharge, the patient should be offered the opportunity to clean up if desired. Because the patient's clothing items are often taken as evidence, a clothing bank in the office or ED may serve this purpose well. The mental health status of the patient should be assessed and the family provided with advice and resources to help their child through the process. Jenny and Crawford-Jakubiak's article is helpful in this regard (see Appendix 1). The patient should be educated on the symptoms of STIs, including acute retroviral syndrome, and instructed to return if symptoms present. Detailed written instructions should be given to the patient to share with the medical provider in follow-up.

SEXUAL ASSAULT REPORTING

In 42 U.S.C. § 13031 under the Victims of Child Abuse Act of 1990, it is required that all professionals report any suspicion of child abuse.[35] Any nonconsensual sexual act on an individual less than the age of 18 is considered child sexual abuse, and therefore, a mandatory reportable crime.[18] Law enforcement should be notified if the patient is less than 18 years of age or is a vulnerable adult (eg, has developmental or cognitive disabilities).[19] When in doubt, report to law enforcement and CPS or a similar agency in your state. The Rape, Abuse and Incest National Network provides a database on state laws (see Appendix 1).

FOLLOW-UP

The patient will need to follow up with his/her medical home or a specialty treatment center in 3 to 7 days to review the laboratory results, assess tolerance of medication, confirm, or clarify any initial positive findings on examination, and access healing. If the patient opted out of the recommended prophylaxis for sexually transmitted infections, 7 to 14 days after the event is an opportune time to retest for chlamydia, gonorrhea, trichomonas, and pregnancy. In addition, the patient has several distant laboratory studies and may need hepatitis B and human papilloma virus (HPV) vaccines to complete their series. Concerning

behaviors may prompt referral for trauma-focused cognitive-behavioral therapy, possible psychotropic medication, or hospitalization (Table 7).

ADVOCACY RESOURCES

Advocacy centers can offer emergency shelter, counseling, support groups, advocacy, and education. In addition to crisis intervention and support to the patient and family during the examination, rape and domestic abuse advocates provide support during the law enforcement investigation and court proceedings. Rape crisis centers effectually decrease secondary distress and retraumatization that the victim may experience following a traumatic event.[36,37]

CACs are able to help facilitate the investigation of child sexual abuse in a safe, child-focused environment.[21] The victim may disclose to a trained forensic interviewer, who is able to communicate with the child in a developmentally appropriate manner. CACs, present in every state, offer courtroom preparation, victim advocacy, case management, and sometimes, individual and group therapy.[21] Providers should direct clients to their local rape crisis centers and local CACs (see Appendix 1) and have protocols with them and their local multidisciplinary investigative teams (MDITs) to determine the appropriate response method within their community.

VULNERABLE YOUTH

Certain subgroups of adolescents, for example, lesbian, gay, bisexual, transgender, and queer (LGBTQ) youth, sexually exploited children, victims of IPV, and individuals with intellectual or developmental disabilities, are at higher risk for sexual harassment, assault, and other forms of victimization. Unfortunately, data on prevalence rates are limited and vary between studies.

A longitudinal study among LGBTQ youth aged 16 to 20 demonstrates 45.2% were physically abused and 16.9% were sexually victimized by a dating partner.[38] Female LGBTQ youth were significantly more likely to experience victimization than male LGBTQ youth, and transgender youth were 2.4 times more likely to experience victimization than cisgender youth.[38] The prevalence of physical IPV declined over time as youth aged, but that of sexual victimization increased over time, particularly among men.[38] Others support the higher prevalence of victimization among LGBTQ adolescents, noting 23% to 62% of LGBTQ adolescents reported bullying, sexual victimization, and child maltreatment.[39]

The 4500 youth from the Child and Adolescent Twin Study reported a high prevalence of sexual victimization among youth with neurodevelopmental disorders, for example, attention-deficit/hyperactivity disorder (ADHD) and autism spectrum disorder (ASD).[40] They reported that youth with ASD were almost 3 times more likely to experience coercive sexual victimization; youth with ADHD had double the risk.[40] A literature review on sexual abuse involving children with intellectual disabilities confirmed a higher risk of both victimization and perpetration among youth with cognitive and communication impairments.[41] The risk of abuse also increased by 78% among individuals with both intellectual and developmental disabilities because of the nature of the disability, but also environmental factors, such as existing institutional services.[42] Youth with disabilities are less likely to

receive appropriate sexual education or information regarding healthy sexuality, and the type of services and level of potential environmental control could contribute to the higher risk among this group for victimization.[43]

Clinical staff should be cognizant of any biases in working with vulnerable populations of youth and consider any additional service providers that are neededand/or received so that the individual understands the situation and the proposed treatment plan.[43] Trauma services may or may not be as effective if all needed services are not available. Vulnerable youth may also demonstrate trauma-related symptoms differently from other youth given previous experiences and/or the level of functioning. Clinicians should consider psychosocial factors the youth is experiencing and evaluate how these factors would influence the effectiveness of (and the youth's participation in) trauma-related services.[44]

Existing effective approaches for preventing adolescent (10 to 15years) IPV and SV were reviewed.[44] Overall, most studies available demonstrated short intervention periods, limited follow-up, and retention issues. Of those available, school-based dating violence interventions showed considerable success but were not being studied among low-income settings. Interventions focused on gender-equitable attitudes for boys and girls were equally successful targeting some factors that increase vulnerability for LGBTQ and male youth.

Trauma-related interventions, particularly for youth with disabilities, may also be overprotective and infantilized.[43] The individual's level of functioning should be considered, and this level incorporated into their care. Clinicians should ensure the individual understands the plan and has an opportunity to contribute to that plan when possible. Finally, clinicians should be aware of the level of sensory stimuli in the clinical setting, particularly when interviewing or examining youth with ASD.[43] Despite the current paucity of literature, select studies are available that could be used as resources for responding appropriately for youth representing these populations (see Appendix 1).

QUALITY ASSURANCE

Those working in this field should routinely review deidentified cases to review content completeness and to discuss the interpretation of findings with others. Medical peer review involves reviewing photo-documented findings of sexual abuse. This form of case review supports proficiency[45] and likely helps relieve compassion fatigue.

Expert review differs from peer review. Adams and colleagues[25] recommend practitioners have all abnormal cases reviewed by an expert provider. Participants may submit deidentified history and images securely to a board-certified child-abuse pediatrician for case review, or quality improvement projects (see Appendix 1). In addition to an independent assessment of clinical judgment, reviewers promote amelioration in written documentation and photographic proficiency, utilization of alternate diagnostic techniques, and interpretation of findings. It may even make one a more confident, credible witness. Medical providers who perform 5 or more sexual abuse examinations per month, remain current in the specialized literature, and regularly review cases with an expert demonstrate greater diagnostic accuracy in child sexual abuse evaluations.[45] Select educational opportunities are listed in Appendix 2.

PREVENTION EFFORTS

Sexual assault prevention programs for youth have historically relied on awareness campaigns and increasing risk-reduction behaviors among potential victims, for example, attending events with groups of friends, not traveling alone, and walking in well-lit areas. Given the failure of these individual-level approaches to produce meaningful reductions in rates of sexual assault, experts recommend prevention strategies that move beyond individual-level risk reduction techniques to target interpersonal, community, and societal level influences of sexual assault.[46] Approaches that aim to prevent SV perpetration are thought to hold greater promise than those solely promoting risk reduction practices for potential victims. There is ample evidence to suggest that endorsements of hostile masculinity, traditional gender roles, and dominating attitudes toward women are among the strongest predictors of violence perpetration.[47] In addition, rape-supportive attitudes and norms are strongly associated with violence perpetration across individuals, their peer groups, and within communities and society.[47] The bystander approach to sexual assault prevention, which targets entire communities as agents of change, as opposed to a sole focus on victims or perpetrators, has gained popularity in recent years. These programs aim to change social norms that promote violence by providing bystanders (ie, individuals observing risky or violent situations) with knowledge and skills to safely and effectively intervene instead of remaining silent.[47,48]

Bystander-based SV prevention programs, such as *Green Dot* and *Bringing in the Bystander*, have demonstrated effectiveness in reducing SV among college populations[49] (see Appendix 1). Because a substantial proportion of individuals who experience sexual assault do so before age 18, there is a need for violence prevention efforts that begin earlier, such as in middle and high school settings. Recently tested in a randomized controlled trial in 26 Kentucky high schools, the college-adapted *Green Dot* bystander intervention found a significant reduction in the frequency of sexual assault, sexual harassment, physical and psychological dating violence, and reproductive coercion.[50] Findings indicate that a high school version of *Bringing in the Bystander*, and many other college-based violence prevention programs, may be successfully adapted for younger populations. Pre-matriculation education is particularly important given emerging evidence for the “red zone,” the timeframe shortly after college students’ arrival on campus when most sexual assaults occur.[51]

Although many are familiar with the Title IX Education Amendment of 1972 and its involvement on college campuses, Title IX is essential in providing guidance for prevention and response to violence for any federally funded education program.[52] They can be a great resource to adolescents in primary-secondary schools. Organizations should also be aware of other SV resources, such as RAINN (Rape, Abuse and Incest National Network), the largest anti-SV organization in the United States, and Prevent Child Abuse America (see Appendix 1).

IT TAKES A TEAM

An MDIT comprises allied professionals who work to coordinate a victim-centered response to sexual assaults to minimize the ambiguity of the medical and legal processes for the

victim and ensure medical, psychological, and emotional support to survivors and their families. MDITs encompass individuals involved in the care of a child, including CPS, law enforcement, criminal justice, medical providers, psychologists, and victim advocates. The coordinated effort prioritizes the needs of the sexual assault victim, works to minimize the trauma, and can increase the likelihood that a victim will attend wrap-around services, thus promoting actual healing. “Optimal management of adolescents who have been sexually assaulted can have a positive impact on these youth.”[53]

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

ACKNOWLEDGMENTS

The authors thank Emma Mason, MS, RN; Melinda Sharon; Aisha Lawson; and Clare McMahon, PharmD for their assistance with the preparation of this article.

APPENDIX

APPENDIX 1: MANAGEMENT OF SEXUAL ASSAULT VICTIM RESOURCES

Statutes by State	https://www.childwelfare.gov/topics/systemwide/laws-policies/state/
Locate a child advocacy center	https://www.nationalcac.org/find-a-cac/
Physical examination	Publication of the American College of Emergency Physicians: https://www.acep.org/globalassets/new-pdfs/sexual-assault-e-book.pdf US Department of Justice Office on Violence Against Women, A National Protocol for Sexual Assault Medical Forensic Examinations Adults/Adolescents, 2013 NCJ 228119. Through the court room processes: https://cdn.ymaws.com/www.safeta.org/resource/resmgr/Protocol_documents/SAFE_PROTOCOL_2012-508.pdf.
Strangulation resources	Training Institute on Strangulation Prevention protocol for medical and radiographic evaluations and discharge instructions:https://www.strangulationtraininginstitute.com/medical-radiographic-imaging-recommendations/ https://www.familyjusticecenter.org/wp-content/uploads/2019/07/SS-Discharge-Information-v3.26.19.pdf
Locate a victim advocate	RAINN (Rape, Abuse & Incest National Network) resource for victims and health care providers: http://centers.rainn.org
Treatment guidelines	STD Guidelines: https://www.cdc.gov/std/tg2015/sexual-assault.htm The Centers for Disease Control and Prevention (CDC) Updated Guidelines for Antiretroviral Postexposure Prophylaxis After Sexual, Injection Drug Use, or Other Nonoccupational Exposure to HIV, 2016: https://www.cdc.gov/hiv/pdf/programresources/cdc-hiv-npep-guidelines.pdf. • Figure 2, nPEP considerations summary on page 45 • Table 2, recommended schedule of laboratory evaluations of source and exposed persons for providing nPEP with preferred regimens on page 27 The National Clinician’s PEP Hotline:_ https://aidsetc.org/npep (888-448-4911)
Crime victim compensation fund	Compensation of funds and resources vary by state. Specific information regarding each state’s resources is provided by the National Association of Crime Victim Compensation Boards: http://www.nacvcb.org/index.asp?sid=6
Mitigating adverse effects of sexual trauma	Jenny C, Crawford-Jakubiak JE. Committee on Child Abuse and Neglect. The evaluation of children in the primary care setting when sexual abuse is suspected. Pediatrics 2013;132(2):e558–e567; https://pediatrics.aappublications.org/content/132/2/e558
Mandatory reporter	RAINN State Law Data Base: https://apps.rainn.org/policy/?_ga=2.159887550.225882788.1556472416-1832397619.1556472416
Special population resources	Pachankis JE, Safren SA. Handbook of evidence-base mental health practice with sexual and gender minorities. Oxford University Press; 2019 Musicaro RM, Spinazzola J, Arvidson J, et al. The complexity of adaptation to childhood

	polyvictimization in youth and young adults: recommendations for multidisciplinary responders. Trauma Violence Abuse 2017;20(1):81–98
Thorough sexual assault resource lists	https://www.rainn.org/national-resources-sexual-assault-survivors-and-their-loved-ones https://www.acog.org/More-Info/SexualAssault
Quality improvement	Access to expert reviewers available through Midwest Regional Child Advocacy Center: myCasereview: http://www.mrcac.org/medical-academy/myCasereview/ Children's Minnesota offers QI projects to nurses and physicians: MyQIportal is attainable through: https://www.mrcac.org/medical-academy/myqiportal/
Prevention efforts	https://alteristic.org/services/green-dot/ STOP SV prevention strategies in a CDC technical package https://www.cdc.gov/violenceprevention/pdf/sv-prevention-technical-package.pdf https://www.cdc.gov/violenceprevention/sexualviolence/resources.html

APPENDIX

APPENDIX 2: EDUCATIONAL OPPORTUNITIES

Online studies:	The New York Child Abuse Medical Provider Program online free "Evaluating Child Sexual Abuse" and "Adolescent Sexual Assault: Consent Issues" courses on https://champprogram.com/courses.asp Online self-paced twenty-seven hour Midwest Regional CAC's Medical Training Academy https://www.mrcac.org/elearning/mta/
Onsite preceptorship:	A 4-day intensive clinical experience, the Midwest Regional CAC's Medical Academy Preceptorship, https://www.mrcac.org/medical-academy/preceptorship/ is available in: TX, OR, MI, MO, PA
Webcasts on trauma sensitive topics:	The Wisconsin Child Abuse Network https://wichildabusenetwork.org/upcoming-webinars/ New York Child Abuse Medical Provider Program https://www.champprogram.com/webcasts.shtml National Child Advocacy Center Virtual Training Center https://www.nationalcac.org/online-training-catalog/

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Box 1

Symptoms of sexual assault or abuse

Headaches
Stomachaches
Fatigue
Sadness
Withdrawal
Irritability
Difficulty sleeping
Outbursts of anger
Change in academic performance
Substance abuse
Risky sexual behaviors

Data from Hanson RF, Adams CS. Childhood sexual abuse identifications, screening, and treatment recommendations in primary care settings. Prim Care. 2016;43(2):313–26.

KEY POINTS

- Alarming numbers of US adolescents have experienced sexual violence, with 26.6% of 17-year-old girls and 5.1% of 17-year-old boys reporting having experienced sexual abuse.
- Other studies support the higher prevalence of victimization among lesbian, gay, bisexual, transgender, and queer adolescents, noting between 23% and 62% of this population reports bullying, sexual victimization, and child maltreatment.
- Undesired sexual experiences in adolescence may increase later physical and sexual violence experiences, and the victim may perpetrate physical or sexual violence in the future.
- Medical peer review, in addition to expert review, is invaluable to assure utmost quality of interpretation of questionable or findings interpreted indicative of sexual abuse.
- Prevention of adolescent sexual abuse would have a pronounced effect on public health and health economics.

Table 1

Sequelae of adult survivors of child sexual abuse

Gynecologic problems	Chronic pelvic pain
	Dyspareunia
	Dysmenorrhea
	Vaginismus
	Disturbances of sexual desire, arousal, and orgasm
	May seek little to no prenatal care/have Pap smears
	Early adolescent or unintentional pregnancy
	History of STI
	>50 intercourse partners
	Prostitution
Substance use	Alcohol and illicit drug use, 4 to 5 × rate of general population
	Tobacco use, 2× as likely
Increased somatic complaints	Disproportionately use health care services
	Lower pain threshold
	Chronic and diffuse pain, especially abdominal or pelvic pain
	Gastrointestinal disorders
Mental health	Symptoms of posttraumatic stress
	Depression
	Anxiety
	Eating disorders
Miscellaneous	Self-neglect
	Victimized repeatedly
	Physically sedentary, 2 × as likely
	Severe obesity, 2× as likely

Data from Adult manifestations of childhood sexual abuse. ACOG committee opinion No. 498. Obstet Gynecol 2011; 118:392–95.

Table 2

Forms of sexual violence

Sexual assault		
• Nonconsensual sexual acts that occur in the context of physical force, psychological coercion, incapacitation, or impairment, and/or the inability of a victim to provide consent or understand their actions because of age, developmental limitations, or the influence of alcohol or drugs		
• May involve threatened or actual physical force in the use of coercion, intimidation, or weapons		
Contact	Abuser touching the child	Child being urged to touch the abuser
	Penetrative (eg, digital, penile, and object insertion into the vagina, anus, or oral cavity)	*Nonpenetrative* (eg, fondling of the victim's genitals, breast, groin, or anus; sexual kissing)
Noncontact	Exposure to exhibitionism, voyeurism, sexual harassment, and involvement in pornography (both filming and exposure)	
Other forms of SV	Being made (forced) to penetrate another	Verbal threats

Data from Refs.[1,19,54,55]

Table 3

Sexual violence experienced during youth[a]

Rape		Made to Penetrate
Girls	**Boys**	**Boys**
Approximately 8% or an estimated 10 million experienced rape or attempted rape	0.7% or an estimated 791,000 experienced either rape or attempted rape	Almost 2% or an estimated 2 million were made to penetrate someone or there was an attempt to make them penetrate someone
About 6% or an estimated 7 million experienced	Rape 0.4% or an estimated 500,000 experienced rape	0.8% or an estimated 883,000 were made to penetrate someone
About 4% or an estimated 4 million experienced rape involving drugs or alcohol	X	1% or an estimated 1 million experienced being made to penetrate, involving drugs or alcohol
2% or an estimated 2.6 million experienced attempted rape	X	X

X, Estimates are not reported. Too few men and boys reported these forms of violence in 2012 to produce a reliable estimate.

[a]Adult women and men reported on their SV experiences, including those that occurred in youth (before the age of 18) on the National Intimate Partner and Sexual Violence survey. The authors use the terms “girls” and “boys” in this fact sheet to describe these experiences.

From National Center for Injury Prevention and Control Division of Violence Prevention. In: Sexual Violence in Youth Findings from the 2012 National Intimate Partner and Sexual Violence Survey. 2013.

Table 4

Emerson Hospital's youth risk behavior survey, 2018 (Massachusetts)

(6th, 8th, and 9th to 12th Graders)	**N = 11,018**
Youth who use illegal drugs	38–51%
Youth who smoke cigarettes	32%
Youth with grades in the "D-F″ range	32%
Gender-nonconforming youth	28%
Youth who misuse others' or their own prescription medication	27–28%
Youth who chew tobacco	27%
LGBTQ youth	17%
Middle Eastern youth	16%
African American youth	15%

Data from Emerson Hospital 2018 Youth Risk Behavior Survey, www.emersonhospital.org.

Table 5

Perpetrators of sexual violence among victims who experienced sexual violence during youth

Completed or Attempted Rape (Girls)	Completed or Attempted Made to Penetrate (Boys)
43.6% Acquaintance	35.1% Acquaintance
28.8% Current or former intimate partner	X
27.7% Family member	X
4.5% Person in a position of authority	X
10.1% Stranger	X

X, Estimates are not reported. Too few men and boys reported these forms of violence in 2012 to produce a reliable estimate for type of perpetrator.

From National Center for Injury Prevention and Control Division of Violence Prevention. In: Sexual Violence in Youth Findings from the 2012 National Intimate Partner and Sexual Violence Survey. 2013.

Table 6

2015 Centers for Disease Control and Prevention guidelines for sexually transmitted infection prophylaxis after sexual assault

Gonorrhea	Ceftriaxone 250 mg IM (single dose)
Chlamydia	Azithromycin 1 g PO (single dose)
Trichomonas	Metronidazole 2 g PO or tinidazole 2 g PO (single doses)
Pregnancy	Levonorgestrel 1.5 mg PO or ulipristal acetate 30 mg PO or Cu IUD
Consider as indicated:	
HIV PEP ≤72 h exposure	
HPV vaccine, if ≥9 y and not fully immunized	
Tdap (tetanus, diphtheria, acellular pertussis) booster	
Hepatitis B vaccine and hepatitis B immune globulin (HBIG)	
Antiemetic avoiding ondansetron if susceptibility to prolongation of the QT interval exists	

Adapted from Division of STD Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, Centers for Disease Control and Prevention. Sexual assault and abuse and STDs. In: 2015 sexually transmitted diseases: treatment guidelines 2015. Available at: https://www.cdc.gov/std/tg2015/default.htm

Table 7

Follow-up

	SAFE or Initial Examination	3–7 d[a]	2 wk[a]	3–6 wk[a]	3 mo[a]	6 mo[a]
UDS if suspect drug facilitation	≤96 h					
Pregnancy	X	≥7 d				
Anogenital examination	X	Reevaluate any positive findings		Evaluate for warts; primary syphilis with dark field examination	if signs present	
Wet mount if discharge present	X	X				
Gonorrhea, chlamydia, trichomonas if negative initial test and no empiric treatment	X	≥7 d or, not initially tested	if signs present	*b*		
Medication tolerance/adherence. Adjust medications accordingly		X	X			
ALT, AST, creatinine, complete blood count if taking PEP	X		X			
HIV combined antigen/antibody, with confirmatory test as needed	X			X (4 wk if fourth generation; 6 wk if third generation)	X	In addition, only if third generation
Hepatitis B surface antibody	X					
Hepatitis C[c]	X					x
Nontreponemal syphilis (RPR or VDRL), with confirmatory test as needed	X			X	X	X
Psychiatric well-being	X	X	X	X	X	X

[a]Time from last suspected encounter.

[b]Retest sexually active women 2 wk to 3 mo after trichomonas treatment. Retest chlamydia and gonorrhea 3 mo after treatment in both genders for assessment of new infection if sexually active.

[c]Hepatitis C serology may be considered, but is not substantiated by research in the circumstance of sexual assault.