

Sexual Assault

HOW TO RECEIVE CREDIT

- Read the enclosed course.
- Complete the questions at the end of the course.
- Return your completed Evaluation to NetCE by mail or fax, or complete online at www.NetCE.com. (If you are a physician, behavioral health professional, or Florida nurse, please return the included Answer Sheet/Evaluation.) Your postmark or facsimile date will be used as your completion date.
- Receive your Certificate(s) of Completion by mail, fax, or email.

Faculty

John M. Leonard, MD, Professor of Medicine Emeritus, Vanderbilt University School of Medicine, completed his post-graduate clinical training at the Yale and Vanderbilt University Medical Centers before joining the Vanderbilt faculty in 1974. He is a clinician-educator and for many years served as director of residency training and student educational programs for the Vanderbilt University Department of Medicine. Over a career span of 40 years, Dr. Leonard conducted an active practice of general internal medicine and an inpatient consulting practice of infectious diseases.

Faculty Disclosure

Contributing faculty, John M. Leonard, MD, has disclosed no relevant financial relationship with any product manufacturer or service provider mentioned.

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The division planners and director have disclosed no relevant financial relationship with any product manufacturer or service provider mentioned.

Audience

This course is intended for physicians, nurses, mental health professionals, and other healthcare professionals who may be called upon to provide care to victims of sexual assault.

Accreditations & Approvals



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INTERPROFESSIONAL CONTINUING EDUCATION

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Successful completion of this CME activity, which includes participation in the activity with individual assessments of the participant and feedback to the participant, enables the participant to earn 3 MOC points in the American Board of Pediatrics' (ABP) Maintenance of Certification (MOC) program. It is the CME activity provider's responsibility to submit participant completion information to ACCME for the purpose of granting ABP MOC credit.

This activity has been designated for 3 Lifelong Learning (Part II) credits for the American Board of Pathology Continuing Certification Program.

Successful completion of this CME activity, which includes participation in the evaluation component, earns credit toward the Lifelong Learning requirement(s) for the American Board of Ophthalmology's Continuing Certification program. It is the CME activity provider's responsibility to submit learner completion information to ACCME for the purpose of granting credit.

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NetCE designates this continuing education activity for 3 ANCC contact hours.



This activity was planned by and for the healthcare team, and learners will receive 3 Interprofessional Continuing Education (IPCE) credits for learning and change.

NetCE designates this continuing education activity for 3.6 hours for Alabama nurses.

AACN Synergy CERP Category A.

Social Workers participating in this intermediate to advanced course will receive 3 Clinical continuing education clock hours.

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Special Approvals

This activity is designed to comply with the requirements of California Assembly Bill 1195, Cultural and Linguistic Competency.

About the Sponsor

The purpose of NetCE is to provide challenging curricula to assist healthcare professionals to raise their levels of expertise while fulfilling their continuing education requirements, thereby improving the quality of healthcare.

Our contributing faculty members have taken care to ensure that the information and recommendations are accurate and compatible with the standards generally accepted at the time of publication. The publisher disclaims any liability, loss or damage incurred as a consequence, directly or indirectly, of the use and application of any of the contents. Participants are cautioned about the potential risk of using limited knowledge when integrating new techniques into practice.

Disclosure Statement

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Course Objective

The purpose of this course is to address knowledge gaps, enhance clinical and forensic examination skills, highlight management objectives, and improve outcomes for victims of sexual assault.

Learning Objectives

Upon completion of this course, you should be able to:

1. Apply knowledge of epidemiologic trends and clinical data to current practice with respect to diagnosis and treatment of sexual assault victims and prevention of sexual violence.
2. Craft a best-practice strategy for the clinical assessment, preventive treatment, and follow-up care of the patient who has been sexually assaulted.
3. Apply knowledge of the type, location, and character of genital and non-genital injuries caused by sexual assault and rape, to assure a comprehensive clinical and forensic physical examination of assault victims.
4. Describe key points of the forensic evaluation of sexual assault victims, including best practices for photographic documentation.
5. Devise a treatment approach, and select the appropriate drug regimen and/or consultation needed, for prophylaxis against sexually transmitted diseases (STDs) and prevention of pregnancy.
6. Anticipate the immediate and long-term emotional and psychologic impact of sexual assault, and arrange for appropriate crisis intervention and follow-up care.



EVIDENCE-BASED
PRACTICE
RECOMMENDATION

Sections marked with this symbol include evidence-based practice recommendations. The level of evidence and/or strength of recommendation, as provided by the evidence-based source, are also included so you may determine the validity or relevance of the information. These sections may be used in conjunction with the course material for better application to your daily practice.

INTRODUCTION

Sexual assault may be defined as any nonconsensual sexual act carried out by one person upon another by use of force or threat of violence or in the absence of the victim's ability to resist or give consent. Whether out of impulse, compulsion, anger, or the assertion of power, sexual assault is a criminal act of violence imposed on the vulnerable and the innocent, causing immediate physical and emotional suffering and often having long-lasting adverse psychologic effects. Sexual assault is the clinical term used in reference to physical violence coupled with unwanted sexual intent, part of a continuum of unwanted sexual experiences (victimization) that includes touching, verbal sexual intimidation, and stalking. Rape is the legal term for a sexual assault during which there is penetration of a body orifice (vagina, anus, or mouth) by force, the threat of force, or incapacity and non-consent of the victim.

Sexual violence, stalking, and intimate partner violence are serious public health problems affecting millions of persons in the United States each year [36]. Sexual violence impacts every community and affects people of all genders, sexual orientations, and ages. Violence experienced in childhood or adolescence is a risk factor for repeated victimization later in life. The perpetrator of sexual violence is usually someone known to the victim, such as a friend, coworker, former intimate partner, neighbor, or family member. Prevention of sexual violence is an urgent, complex issue for public health professionals and society as a whole.

Optimal clinical care of the sexual assault victim is a complex issue, one that requires an informed interprofessional team approach. This course will review the epidemiology and scope of sexual assault, the nature of genital and non-genital bodily injuries, key elements of the clinical and forensic examination of the patient, prophylaxis against sexually transmitted diseases (STDs), the importance of after-care and psychosocial support, and emerging strategies for prevention of sexual violence.

EPIDEMIOLOGY

POPULATION-BASED STUDIES

Although victims of sexual assault are overwhelmingly adult women, the problem is encountered among persons of diverse age and gender. In 1995–1996, a national survey of 8,000 women and 8,000 men found that 1 in 6 women and 1 in 33 men had experienced an attempted or completed rape at some time in their lives [1]. One-half of the female victims reported they had been assaulted before their 18th birthday. Most rape victims indicated the assailant was someone they knew, and only 1 in 5 reported the assault to the police. Based on these data, the lifetime incidence of sexual assault in the United States was estimated to be 18% for women and 3% for men. Given the complexity of the problem and the limited methodology of reported studies, most of which were survey-based, the actual incidence was considered to be greater than indicated by these data [2].

In 2010, the Centers for Disease Control and Prevention launched the National Intimate Partner and Sexual Violence Survey (NISVS), an ongoing surveillance system that assesses sexual violence, stalking, and intimate partner violence victimization among adult women and men in the United States [37]. Sexual violence was defined as a sexual act committed or attempted by another person without freely given consent of the victim or against someone unable to consent or refuse. It includes forced or alcohol/drug facilitated penetration of a victim (rape); forced or alcohol/drug facilitated incidents in which the victim was made to penetrate a perpetrator or someone else; non-physically pressured penetration (sexual coercion); or unwanted sexual touching [38].

The 2015 NISVS report (published in 2018) presents key findings [37]. With respect to sexual violence of women in the United States, the analysis showed:

- 43.6% of women experienced some form of contact sexual violence in their lifetime, with 4.7% experiencing this in the year preceding the survey.
- Approximately 1 in 5 (21.3%) women reported completed or attempted rape at some point in their lifetime (13.5% experienced completed forced penetration and 11.0% experienced completed alcohol/drug-facilitated penetration).
- 1.2% (approximately 1.5 million) reported completed or attempted rape in the 12 months preceding the survey.
- Approximately 1 in 6 women (16.0%) experienced sexual coercion (e.g., being worn down by someone who repeatedly asked for sex, sexual pressure by use of influence or authority) at some point in life.
- More than one-third of women (37%) reported unwanted sexual contact (e.g., groping) in their lifetime.

With respect to sexual violence perpetrated against men, the 2015 NISVS report found [37]:

- Nearly one-quarter of men (24.8%) experienced some form of contact sexual violence in their lifetime, with 3.5% experiencing this in the year preceding the survey.
- About 1 in 14 men (7.1%) was made to penetrate someone else (attempted or completed) at some point in their lifetime.
- About 2.6% of men (an estimated 2.8 million) experienced completed or attempted rape victimization in their lifetime.
- Approximately 1 in 10 men experienced sexual coercion in their lifetime.
- Almost one-fifth of men (17.9%) reported unwanted sexual contact (e.g., groping) at some point in life.

Among female victims of completed or attempted rape, 81% reported that it first occurred prior to 25 years of age, with 43% reporting that their first victimization occurred prior to 18 years of age. Among male victims of completed or attempted rape, 71% reported that their first experience occurred prior to 25 years of age, with 51% reporting that the initial incident occurred before 18 years of age [37].

Most victims of sexual assault are young, and population groups at increased risk are college students, children and adolescents, the mentally disabled, the homeless, and persons who are gay, lesbian, bisexual, or transgender [3; 4]. The victimization of college students, often perpetrated by an acquaintance and frequently associated with the heavy use of alcohol by both victim and assailant, has become a national problem and public health concern [5].

Sexual Assault on College Campuses

The sexual assault of young women on and around college campuses was the subject of an extensive and carefully designed collaborative study by two large universities, reported to the National Institute of Justice in 2007 [6]. A web-based survey involving 6,800 undergraduate students (5,466 women and 1,375 men) revealed that 13.7% of women had been victims of at least one completed sexual assault since entering college. The majority (85%) knew or had previously seen or talked with the assailant, and 57% of rape victims surveyed reported the assault occurred while they were incapacitated from the voluntary consumption of alcohol or drugs. Of those who were incapacitated at the time of the assault, 89% reported drinking alcohol and 82% reported being drunk prior to the assault. This study demonstrated [6]:

- One in five college women experience an attempted or completed sexual assault during their college years.
- The majority of assaults occur when women are incapacitated from the sedative effects of heavy drinking or drugs.

- Freshmen and sophomores are at greatest risk.
- The majority of students are victimized not by a stranger but by someone they know or trust, often a fellow student.

Sexual assault on campus is the extreme form of a larger pattern of unwanted sexual advances imposed by force or coercion, referred to collectively as “gender-based violence” [31]. The nature of unwanted, forceful behavior ranges from stalking to kissing or touching to attempted or completed sexual assault (e.g., forcible rape or incapacitated rape). In 2015, the Association of American Universities conducted a study of sexual assault and sexual misconduct among undergraduate and graduate students from 27 universities. An analysis of data from a cohort of 5,482 students at one large state university revealed that since entering college, 23.8% of female students had experienced nonconsensual acts of penetration or sexual touching involving physical force or incapacitation from alcohol or drugs [32]. Among senior year women, 30% reported victimization at some time since entering school and 15% had experienced an attempted or completed sexual assault.

As universities develop policies and programs designed to prevent unwanted sexual incidents on campus, an effort has been made to identify risk factors for victimization and perpetration and situational contexts associated with sexual assault. An online survey of 3,977 full-time students found that female gender, undergraduate status, and prior sexual victimization before joining the university were common risk correlates of victimization [39]. Nearly all incidents of sexual violence occurred when the victim was incapacitated from some combination of alcohol, sedative, or sleep. Victims most often identified the perpetrator as an acquaintance, peer, or colleague. Risk correlates of perpetrator behavior were male gender, undergraduate status, and history of perpetrating unwanted sexual incidents before joining the university. Perpetrators had most often targeted a current or former intimate partner or a stranger [39].

REPORTING

Reporting of a sexual assault by the victim to the police or other authorities varies with the age of the victim, social context of the assault event, whether a relationship exists between victim and assailant, and the extent of injury. Assaults of older women that occur in an unfamiliar place, perpetrated by a stranger or resulting in physical injury to the victim are most likely to be reported. Assaults perpetrated by an acquaintance, friend, or relative often go unreported to the police or other law enforcement official [33].

Among college women, the rate of reporting sexual victimization is low. It is estimated that more than 85% of rapes and attempted sexual assaults and nearly all (90%) other forms of unwanted sexual contact are unreported to the police or any campus official [31; 33]. The common reasons given for unwillingness to disclose sexual victimization are self-blame (especially if victims were under the influence of alcohol), knowing the assailant and fearing reprisal, embarrassment, and the desire to avoid stigma. Although unwilling to inform police or campus authorities, the majority of college students victimized by sexual assault do confide in a friend, relative, authority figure, or health professional [33].

In a national study involving 2,000 college women, only 27 of 230 (11.5%) rape victims reported the assault to law enforcement officials [34]. When analyzed according to type of completed assault, 16.0% of forcible rapes and 2.7% of incapacitated-alcohol/drug facilitated assaults were ever reported to authorities. Minority status (i.e., non-white race) was associated with lower likelihood of reporting, whereas sustaining injuries during the rape was associated with increased likelihood of reporting. Of those who reported the assault, 51.9% received medical attention and 44.4% sought help from an agency that assists victims of a crime (e.g. rape crisis center). In contrast, only 13.9% of those who failed to report the assault received medical care and/or other forms of victim assistance [34].

EMERGENCY DEPARTMENT STUDIES

Victims of sexual assault are most likely to present to hospital emergency departments (EDs), public health and gynecology clinics, college infirmaries, and primary care offices. Published clinical series from urban EDs have helped define the scope and character of sexual assault injury [7; 8; 9]. Based on these clinical reports, it may be seen that victims of sexual assault presenting to an ED are predominantly female, relatively young, often know their assailant, and are likely to have been threatened with violence and to show physical signs of trauma.

In one such study of 1,076 cases seen between 1992 and 1995, the age of victims ranged from 1 to 86 years (half were younger than 26 years of age) and 96% were women [7]. In 60% of cases, the assailant was someone known to the victim. Force was used in 80% and a weapon was present in 27% of incidents. Vaginal penetration was documented in 83% of cases, oral assault in 25%, and anal penetration in 17%. Signs of genital trauma were evident in 53% of cases, and extra-genital trauma was noted in 67% of victims. Similar results were found in an ED study of 1,100 patients published in 2009. In this study, 92% of victims were female, and the median age was 27 years. The majority of victims (57%) knew their assailant. Threat of force was used in 72% of cases, and physical trauma was evident in 52% of victims [8]. Alcohol consumption or drug use was involved in 54% of these assaults.

LONG-TERM PSYCHOSOCIAL IMPACT

The impact of sexual assault leads to immediate and long-term physical and mental health consequences. In addition to the potential risk for acquiring an STD, approximately 1% to 5% of rape victims become pregnant [10]. The National Violence Against Women Survey (NVAWS) found that 33% of women and 24% of men received counseling from a mental health professional as a direct result of their last assault; 28% and 10%, respectively, lost time from work [1]. Survivors of sexual assault are also at increased risk for re-victimization and experience higher rates of depression, post-traumatic stress disorder, substance abuse, and suicide.

EVALUATION

The proper clinical assessment of a person who has been sexually assaulted requires a systematic, patient, and thorough approach. It is of necessity time-consuming and should be conducted with sensitivity and respect for the patient's emotional state. Preferably, providers who have been specifically trained for this task should perform the initial clinical examination. More than 500 hospitals and other health facilities in the United States have now addressed this need by adopting the Sexual Assault Nurse Examiner (SANE) program. A SANE is a trained nurse specialist who works within an interdisciplinary team to carry out a general and forensic clinical examination of the sexual assault patient and to develop a strategy for support and after-care [11].

The evaluation and treatment of sexual assault victims should incorporate the following components [11; 12]:

- General assessment and treatment of physical injuries, with special attention to the genitalia
- Forensic evaluation, where indicated and with informed consent
- Pregnancy risk assessment and prevention
- Evaluation, treatment, and prevention of STDs
- Psychologic assessment, crisis intervention, and follow-up referral for counseling

ASSESSMENT FOR TRAUMATIC INJURY

The initial clinical assessment includes a careful history and physical examination, followed by selected laboratory testing and radiographic studies as indicated by clinical findings. Physical signs of bodily injury are present in more than half of all persons examined after sexual assault, and virtually all patients will appear emotionally distraught, embarrassed, and fearful [7; 8]. Specific needs to be addressed include general medical care and assessment of injury, an explanation of all facets of the clinical and forensic evaluation, a descrip-

tion of options for care, and provision of support for patient and family. Cases of sexual assault also carry the parallel consideration of potential criminal prosecution of the assailant and thus the need to inform authorities and to collect and preserve evidence.

Patients who present within the legal time frame for evidence collection should be referred for evaluation by an ED or treatment center with resources and staff trained for this purpose. The specified time limit varies among states and municipalities, usually ranging from 72 to 120 hours. Clinical care providers should inform themselves as to the time frame within their own jurisdiction. Where possible, the evaluation should be conducted by a multidisciplinary team that includes an emergency medicine physician, a trained nurse examiner (i.e., SANE), and a rape crisis counselor or social worker. The patient should be offered a formal forensic examination. This is optional and requires informed consent. The general approach to the history and physical examination is outlined in the following sections, followed by an expanded, detailed review of the principles that pertain to the forensic evaluation.

In the multicultural landscape of the United States today, interpreters are a valuable resource to help bridge the communication and cultural gaps between clients/patients and practitioners. If a patient has limited English proficiency, a medical interpreter (live or over the phone) should be accessed. Due to the sensitive nature of the evaluation, some patients will be embarrassed to discuss the matter with a third party. Even if an interpreter is initially declined by the patient, continue to assess the necessity of interpretation assistance. Family members are not considered appropriate interpreters.

Non-Genital Bodily Injury

Non-genital bodily injury is seen in more than half of all rape victims presenting to EDs [7; 8]. In one study of 162 women examined between 2002 and 2006, signs of bodily injury were found in 61% of patients, with genital injury present in 39% [13].

Most common were bruises (56%) and abrasions (41%), followed by lacerations, penetrating injury, and bites. Evidence of injury was higher in the 137 cases examined within 72 hours of assault (66% vs. 33%) and in cases in which the assaults occurred outdoors (79% vs. 52%).

On examination, one should inspect carefully for evidence of blunt traumatic injury to the head, neck, arms, legs, and torso, looking for signs of penetrating injury, lacerations, and bite marks. Bruising may be evident on the neck (attempted strangulation), hands, arms, breasts, or thighs. Signs of bodily injury are more prevalent in women younger than 30 years of age. Other factors showing a strong positive association with bodily injury include alcohol consumption, history of prior assault, and assault by strangers [7].

Genital Injury

Signs of genital traumatic injury are not always found after sexual assault, and in such cases should not be taken as evidence that sexual assault did not occur [13]. When routine inspection is combined with additional examination techniques, such as colposcopy and toluidine blue staining, the rate for identifying genital injury approaches 70% [9]. Observed rates of genital injury are highest in women examined within 72 hours (40% vs. 7%), in those of virginal state (60% vs. 33%), and in cases involving assault by strangers or multiple assailants [14].

The common types and location of genital injuries, and thus the areas to be examined most closely, are:

- Bruises and abrasions to the labia, fossa navicularis, or perianal area
- Ecchymoses, tears, or lacerations of the hymen
- Abrasions and/or tears of the posterior fourchette
- Tears/lacerations in the perianal area

FORENSIC EVALUATION

Ideally, the victim of a sexual assault should be offered a formal forensic evaluation. As noted, this is optional and requires written documentation of informed consent. A growing number of hospitals now employ dedicated forensic nurses, including SANEs, as part of a multispecialty sexual assault team [11].

SANEs have completed specialized training in the medical forensic care of the patient who has experienced physical violence, abuse, or sexual assault. An important component of the care offered by the SANE is the medical forensic examination. This consists of a medical forensic history, a detailed physical and emotional assessment, written and photographic documentation of injuries, and collection and management of forensic samples. The SANE is trained to ensure that evidence is collected and documented according to established protocol and local jurisdiction procedures and that the “chain of custody” is properly maintained in the event of later legal proceedings. Evidence collection kits designed for this purpose are available commercially or, in some states, may be obtained through designated distribution centers.

Often, however, these trained specialists are not the first professionals to interact with the patient. Consequently, all healthcare professionals, particularly those in an emergency care setting, should have an understanding of the principles that govern proper collection and preservation of evidence during the examination of an assault victim. At stake is the successful prosecution of the assault perpetrator, which often is compromised by insufficient or improperly collected evidence or by not following evidence through the chain of custody.

EVIDENCE PRESERVATION

Nursing staff in EDs and clinics are often the first to interact with assault victims and their families. The ability to quickly recognize forensic issues, and thus direct the subsequent course of the evaluation, is a valuable skill to possess [14; 15]. Although life-saving measures take priority over considerations of evidence preservation, it should be recognized that quality of life could be significantly impacted for those whose assailant is not brought to justice.

Accurate and thorough forensic evidence is crucial to the successful arrest and prosecution of a criminal assailant. Evidence of the use of force and the assailant's identity and possible ties to the victim should be gathered to aid law enforcement in their investigation. It is essential that evidence remains intact as much as possible until proper collection and documentation is completed. It is equally important to accurately record all statements made by the victim, regardless of its seeming pertinence to his or her medical care. Evidence that is improperly collected by untrained individuals, destroyed or mishandled during the course of treatment (e.g., contamination, using wound sites for drainage), or not followed in the chain of custody may be of limited value to law enforcement and justice officials.

The first step in preserving evidence is identifying the precise nature of the assault, circumstances, and scope of injury to the victim. This helps to determine the direction of the investigation and the type of forensic evidence to be obtained during the course of the clinical and forensic evaluation. The time of the assault and the sequence of events following should be ascertained, as the quality of evidence often deteriorates over time. For example, DNA in saliva deteriorates especially rapidly, often in less than 48 hours. It is recommended that a sexual assault forensic exam be administered within 96 hours of an attack for the collection of trace evidence; however, bruises, bite marks, and other injuries are often still evident beyond this time frame [16; 17].

Any article or remnant of clothing worn by a victim or assailant at the time of the assault is considered important forensic evidence and should be preserved in transit. Each item should be placed in an individual evidence bag for forensic study by a law enforcement criminalist. An able patient needing to disrobe should do so over a drop sheet, which is then bound and labeled, in order to collect all traces of evidence. Upon arrival, whether by car or ambulance, the attempt should be made to locate all items of clothing. Emergency transport personnel should be able to account for this, but in their absence, the forensic team should identify and arrange to retrieve any relevant articles of clothing. Any tears or cuts to clothing made during treatment should be documented. Clothing removed in the ED must be recovered. If patients have changed clothing, the fresh clothing nearest the attack site (generally underwear or other undergarments) should be collected and examined as evidence.

Care should be taken to assure that the patient's skin remains unwashed until after examination and evidence collection is completed, because the skin often holds much of the most vital evidence for medical-forensic purposes. Contamination of evidence and swab specimens can be avoided by wearing appropriate protective equipment, handling as little as possible, and avoiding sneezing and/or coughing over samples. Forensic examiners should wear surgical masks during evidence collection, and gloves should be changed frequently.

In cases of food, beverage, and drug poisoning or tampering, vomitus is considered evidence and should not be discarded. In fact, whenever a forensic patient is vomiting, a sample should be collected and retained to determine if he or she has been the victim of poisoning. In certain instances, stool and urine samples should also be collected.

FORENSIC INTERVIEW

In the case of sexual assault, a determination should be made as to whether the assault has been reported to the police and whether representatives of law enforcement have already initiated an evaluation. If not, healthcare professionals have the duty to report cases of assault/abuse to officials. If law enforcement has already been involved, certain questions that could cause undue stress may be avoided during the examination (e.g., a description of the suspect); however, certain questions that pertain to the medical-forensic exam should be addressed. Questions that will have been asked by investigators include [18]:

- When the attack occurred (date and time)
- Where the attack occurred and how it was initiated
- What the suspect(s) said during the attack (e.g., threats)
- Whether any items were stolen after the attack
- How many individuals were involved in the attack
- Description of the suspect(s), including age, height, weight, race, tattoos, scars, and other defects
- If alcohol or drug use (or suspected “drugging”) occurred before, during, or after the attack
- How the patient was restrained during the attack (e.g., rope, belt, hands, feet)
- Use of weapons by suspect
- Use of powders, lubricants, or other chemicals during the attack
- Means (e.g., penis, fingers, sex toys, other objects) and areas (e.g., mouth, vagina, anus) of penetration and/or contact
- All injuries sustained during the attack (e.g., hitting, kicking, biting, spitting)

Questions pertaining to the medical-forensic exam include the last six on this list, as these serve to focus the physical exam and the search for evidence. If ejaculation took place, this location should be identified; however, other fluids, such as blood and saliva, are also useful for DNA collection. If there were multiple assailants, the patient should be encouraged to identify which assailant committed which act(s). The account should include all violence performed and/or threatened and should conclude by asking if there were any other acts performed that were not already covered.

Recent consensual sexual activity should be identified, along with information about what the patient did after the attack. Many women wipe their vulva with towels or toilet paper, and some may douche; this information should be noted so these items can be recovered for DNA testing. Tampons removed or inserted post-assault should also be recovered.

Sexual assaults are particularly difficult to discuss, but it is necessary to systematically explore several lines of questioning in order to assure a complete and accurate description of the assault. This will greatly aid both the collection of forensic evidence and the eventual prosecution of the suspect(s) for each violation. For example, an assailant can be convicted of attempted sodomy even if the act did not result in actual penetration. Therefore, a comprehensive list of possible sexual/violent acts should be discussed, each with its own specific question. There are four possible answers to every question: yes, no, attempted, and unsure [19]. Sample questions would read as follows:

- “Did the suspect put his/her finger(s) in your mouth?”
- “Did the suspect put an object in your mouth?”
- “Did the suspect put his penis in your mouth?”

Or, conversely:

- “Did the suspect put his/her finger(s) in your mouth?”
- “Did the suspect put his/her finger(s) in your vagina?”
- “Did the suspect put his/her finger(s) in your anus?”

This line of questioning should continue until a very detailed description of the assault is documented; many jurisdictions use a locally standardized form for this task. It is important to remember that informed, written, and signed consent by the patient (or parent/legal guardian, where applicable) is required for a formal forensic evaluation. A provision for consent may be included in the forensic report paperwork. The U.S. Department of Defense Sexual Assault Forensic Examination Report is a good example of a federally standardized, complete form that incorporates a consent provision. It may be accessed online at https://www.sapr.mil/public/docs/miscellaneous/toolkit/dd2911__Sept_2015.pdf [19].

FORENSIC PHYSICAL EXAMINATION

Examination of the patient should be conducted in a thorough head-to-toe manner, with the intent of documenting every indication of injury related to the incident (no matter how insignificant and involving every part of the body) using a body-map or wound chart. The entire body surface should be inspected and palpitated to identify areas of bruising and injury to muscle and bone. As evidence is detected during the course of the examination, it should be collected, documented, and preserved [15]. Information gathered from transport personnel and during the forensic interview helps to identify areas requiring careful attention, but this should not detract from conducting a thorough examination.

An important component of the physical examination/interview is the patient’s general appearance and demeanor upon presentation [15]. This should be recorded as objectively and with as much description as possible in a few sentences. The ability of the patient to remember details of the incident and to cooperate with the exam should be noted.

Skin

The surface of the skin is usually examined first in cases of sexual assault. Those regions identified by history of the attack should be inspected first in good ambient light and then examined with an ultraviolet Wood’s lamp to help visualize dried semen. Areas of fluid should be photo-documented and then swabbed completely until all material is removed from the skin [15]. All regions of the body surface should be inspected for fluids. Control swabs should be taken from areas of the patient’s skin not containing visible or fluorescent stains. Foreign hairs and fibers should be collected, and reference hairs should be selected for culling. Fingernail scrapings or cuttings should also be collected.

The examiner should then move to the oral cavity and inspect carefully for injury from forced entry, a hand or gag over the mouth, or other insult. Two swabs each are usually taken from the tongue, the tonsillar fossae, behind the buccal sulci, and behind the upper incisors when indicated by forcible oral copulation (or its attempt) or uncertain patient history (e.g., if the patient was drugged) [15].

Bite Marks

The examiner should also be alert for bite marks. In sexual assault cases, these are seen most commonly on the arms, breasts, and thighs. Bite marks are particularly useful for perpetrator identification (i.e., bite mark matching) and for saliva collection, both of which can be used to link the victim to the suspect (self-defense biting) or the suspect to the victim (attack biting). Whenever possible, bite injuries should be examined by a forensic odontologist.

Bite marks should be very thoroughly photo-documented using an American Board of Forensic Odontology (ABFO) No. 2 scale. The location, size, shape, color, depth, and any other characteristics should be recorded. The area of the bite mark should then be double-swabbed for saliva, first using a swab wetted with distilled water and then immediately with a dry swab on the same area. The collection procedure involves rolling the swab while moving it in a circular pattern for 10 seconds [15]. Both swabs should be air dried for at least 30 minutes or placed in a drier unit. The samples can then be sent for polymerase chain reaction amplification within 6 hours of collection if the swabs are kept at room temperature. The samples should be refrigerated (not frozen) if this time frame is not realistic.

Anogenital Region

The genital and perianal area should be examined thoroughly. As with the recovery of clothing, a drop sheet should be placed underneath the patient (separate from the clean paper sheet covering the table) to collect evidence that falls during the exam. The patient's pubic hair should be combed after the other steps are completed, and the drop sheet should be folded and labeled with pertinent information for later inspection by the criminalistics laboratory.

Crusted secretions or other attached material should be clipped out of the pubic hair and placed into evidence. Approximately 20 to 30 samples of the patient's own pubic hair should be plucked and kept separate as a control. A Wood's lamp should be used in the collection of semen samples from the external genital area, and enough swabs should be used to completely remove all visible traces. Following collection, a magnification device should be employed to further examine the area for micro-trauma. A gynecologic colposcope is useful for this purpose as it provides sufficient lighting, magnification, and photographic capability [15].

The labia minora, posterior fourchette, and fossa navicularis typically sustain the most injury during an assault involving penile penetration only, while assaults involving digital penetration cause damage to the aforementioned sites and the vaginal walls, the cervix, and perineum (due to fingernails). Speculum examination of the vagina and cervix should be performed using only water as a lubricant. Where available, the use of colposcopy will facilitate the identification of trauma to these deep tissues. Though trauma from penile penetration alone is uncommon in women of childbearing age, significant vaginal or cervical trauma may be caused by penetration with objects [15]. Adolescent and postmenopausal women typically sustain more damage during sexual assaults than others. Any items found inside the vagina should be removed and placed into evidence bags. Next, four swabs should be placed in the posterior fornix to absorb secretions. A dry mount and wet mount slide should be prepared from two swabs, while the remaining two are placed into evidence [15]. The wet mount slide should be viewed within 10 minutes to identify motile sperm, and the slide examiner's name should be documented.

The perineum and anus should always be examined for trauma. If the patient is uncertain of anal penetration, if there was anal penetration with a foreign object, or if there is any bleeding or pain, the rectum should be examined with an anoscope and swabbed as per the technique discussed for vaginal swabbing. Secretions present on the anus are not considered conclusive evidence of anal penetration, as fluids may have leaked from the vagina.

Collection and Documentation of Evidence

Evidence collection kits may be created from materials on hand or may be obtained as prepackaged units. Either type functions effectively if it contains all the items necessary for evidence collection and documentation and includes a sturdy box for transportation and storage. Collection kits are not standardized on a state or federal level but should be on a jurisdictional basis. Every hospital should have a standard forensic protocol developed in accordance with, or in union with, the jurisdictional crime lab that must be followed in all forensic cases.

Forensic documentation includes a written component, a diagrammatic component, and a photographic component. Each should accurately inform the other. The written component should be detailed, accurate, and objective; the diagrammatic component should be thorough and legible; and the photographic component should include a measurement scale, be representative of the evidence, and remain objective.

Photographic Documentation

In many cases of abuse and assault, the body is the only “crime scene.” It is the duty of the medical-forensic examiner to accurately and diligently record the details of the injuries and the evidence present on the victim and/or perpetrator. The somewhat special skills once required by a forensic photographer shooting with a roll-film camera have been superseded by the widespread use of digital photography. Digital documentation simplifies many aspects of forensics, including ease of use, the number of images that can be recorded at very low cost, ability to review images and reshoot if needed, better control of the evidence chain of custody, and later ease of distribution during legal proceedings.

Photo-documentation will typically proceed along with the physical examination and the collection of evidence. When an injury or other evidence (e.g., fluids, fibers) is found, it should be photographed. It is considered good practice to capture four images of each finding [15]. One should be an overall shot of the body and should include a clear anatomical reference (e.g., arm, hand, leg, foot), another should be a medium shot, and there should be two detailed shots of the finding. The wide and medium shots can be used to document multiple findings. Detailed shots of each finding should be taken before evidence collection, during manipulation, and after the evidence is swabbed or removed. If a lifesaving measure may disturb evidence, it is ideal to photograph the site/finding beforehand, if possible.

A measurement scale, such as the ABFO No. 2 scale, should be included in the two detailed shots. The finding should appear in the center of the frame, should be shot straight on (i.e., the body surface plane and the camera plane should be parallel), and the background should be as neutral as possible.

SEXUALLY TRANSMITTED INFECTION

The possibility of exposure to sexually transmitted infection should be considered in every victim of sexual assault. Of necessity, this assessment often involves the collection of specimens for laboratory diagnosis and a decision as to antimicrobial prophylaxis. The evaluation should be carried out by an experienced clinician and approached in such a way as to minimize further emotional and psychological distress to the patient. The decision to obtain specimens should be made on an individual basis in relation to the characteristics of the assault and any associated injury, and only after an explanation of the issues and procedures. A plan for after-care and close follow-up is required to ensure timely review of laboratory results, appropriate treatment, and patient compliance with prescribed medication.

STD DIAGNOSTIC TESTING AFTER SEXUAL ASSAULT	
Initial Examination	Follow-Up Examination (Within 1 to 2 Weeks)
<ul style="list-style-type: none"> • Nucleic acid amplification tests (NAATs) for <i>C. trachomatis</i> and <i>N. gonorrhoeae</i> at the sites of penetration or attempted penetration should be performed. These tests are preferred for diagnostic evaluation of adolescent or adult sexual assault survivors. • Females should be offered NAAT testing for <i>T. vaginalis</i> from a urine or vaginal specimen. Point-of-care or wet mount with measurement of vaginal pH and KOH application for the whiff test from vaginal secretions should be performed for evidence of bacterial vaginosis and candidiasis, especially if vaginal discharge, malodor, or itching is present. • MSM should be offered screening for <i>C. trachomatis</i> and <i>N. gonorrhoeae</i> if they report receptive oral or anal sex during the preceding year, regardless of whether sexual contact occurred at these anatomic sites during the assault. Anoscopy should be considered in instances of reported anal penetration. • A serum sample should be performed for HIV, hepatitis B, and syphilis infection. 	<ul style="list-style-type: none"> • Follow-up to detect any new infections acquired during or after the assault. • Establish a schedule for completion of hepatitis B vaccination. • Complete prophylaxis or course of treatment for any other STD. • Monitor side effects and adherence to postexposure prophylactic medication, if used.
Source: [21]	Table 1

RISK

The infections commonly reported in women after sexual assault are chlamydia, gonorrhea, trichomoniasis, bacterial vaginitis, and pelvic inflammatory disease (PID) [21]. The possible exposure to hepatitis B virus and human immunodeficiency virus (HIV) is also an important consideration. In general, the risk of infection is relatively low; published estimates are 3% to 16% for chlamydia, 7% for trichomoniasis, and 11% for PID [20]. The risk, however, does vary directly with the degree of genital trauma, associated bleeding (sustained by the victim or assailant), and the number of assailants. The Centers for Disease Control and Prevention (CDC) has published guidelines for the assessment, counseling, and preventive treatment of infection following sexual assault, including common pelvic infections, hepatitis B, human papilloma virus (HPV), and HIV [21].

Although HIV transmission after sexual assault has been reported, there are no epidemiologic data upon which to estimate risk from assault by an unknown assailant. In the context of consensual sex, the risk following a single exposure (vaginal

intercourse) is estimated to be 0.1% to 0.2% for vaginal intercourse and 0.5% to 3% for receptive anal intercourse [21; 22]. While the overall risk of acquiring HIV after a rape event is likely to be low, this risk may be substantially greater under certain circumstances, including:

- Assaults occurring in geographic locales where the background prevalence of HIV is relatively high
- Either the victim or assailant has open genital lesions and/or traumatic bleeding
- Anal penetration and male-on-male rape
- Multiple assailants

LABORATORY TESTING

Testing for sexually transmitted infection during the acute evaluation phase is of limited value and may be deferred until later. In selected cases, the decision to administer antimicrobial prophylaxis may obviate the need for testing. **Table 1** provides a suggested approach to testing, derived from the CDC’s 2021 guidelines [21]. The initial examination includes testing of cervical/vaginal secretions for chlamydia and gonorrhea by nucleic

PREVENTIVE TREATMENT OF ADULTS AND ADOLESCENTS AFTER SEXUAL ASSAULT	
Condition	Protocol
Pregnancy	Levonorgestrel, 1.5 mg orally (single dose), preferably given within 12 hours of exposure if urine and/or serum pregnancy test is negative
Sexually transmitted infections	
Gonorrhea, chlamydia, and trichomoniasis	Ceftriaxone, 500 mg IM, <i>plus</i> doxycycline, 100 mg twice daily for 7 days. For female patients, add metronidazole, 500 mg twice daily for 7 days. In patients weighing 150 kg or greater, increase dose of ceftriaxone to 1 g.
Hepatitis B	Vaccination protocol (unless known to be immune)
HPV	Vaccination protocol for girls/women through 26 years of age and boys/men through 21 years of age
HIV	HIV combination antiviral therapy, 28-day course, initiated within 72 hours of exposure. The decision to treat (based on risk assessment) and the choice of drug regimen should be made in consultation with local infectious disease specialists
<i>Source: [21; 22; 23; 24]</i>	

Table 2

acid amplification test (NAAT) and for trichomoniasis by vaginal swab wet mount examination and/or NAAT from specimens of urine or vaginal secretions. Serum serologic testing for hepatitis B, syphilis, and HIV should also be considered.

The CDC recommends HIV screening of sexual assault patients after the patient has been informed and unless the patient declines [21]. Some states stipulate that HIV testing must be coupled with mandatory counseling and follow-up care. The policy and guidelines should be worked out in advance within each locale and jurisdiction, in accordance with prevailing law and established guidelines.

Testing for HIV in the immediate post-assault period has limited utility, as it will not confirm or exclude exposure, nor will it indicate whether the victim is likely to become infected [22]. For purposes of later criminal or civil action, the patient may wish to have baseline testing to demonstrate absence of prior infection. Thus, the option for confidential, anonymous baseline testing should be offered and discussed.

Antimicrobial Prophylaxis

Empiric prophylactic antimicrobial treatment is recommended for all rape victims following the initial evaluation, in part because most patients want this and in part because of uncertainty as to when and where the patient will be followed. The CDC has established guideline recommendations for drug prophylaxis to prevent gonorrhea, chlamydia, and trichomoniasis infection (**Table 2**) [21]:

- Gonorrhea and chlamydia: Ceftriaxone, 500 mg IM, in combination with doxycycline, 100 mg twice daily for 7 days.
- Trichomoniasis: Metronidazole, 2 grams PO (single dose) or tinidazole, 2 grams PO (single dose).

HEPATITIS B

If the latent infection status of the assailant is unknown, routine postexposure hepatitis B vaccination is adequate, without the need for specific immune globulin (HBIG). If the assailant is known to be hepatitis B positive, HBIG should be added.

To complete the hepatitis B vaccine series, follow-up doses of vaccine should be scheduled for 1 to 2 and 5 to 6 months after the initial dose [21].

HUMAN PAPILLOMAVIRUS

Victims of rape are also at risk for acquiring HPV infection. Post-exposure administration of HPV vaccine is effective in preventing primary infection and other HPV-associated diseases, including cancers. HPV vaccination is recommended for female sexual assault survivors 9 to 26 years of age and male survivors 9 to 21 years of age [21]. The CDC recommends two doses of HPV vaccine rather than the previously recommended three doses [40]. The vaccine should be administered at the time of initial examination and follow-up dose given 6 to 12 months after the first dose.

HIV

The possibility of HIV exposure should be assessed at the time of the initial evaluation of a sexual assault victim. Despite the low risk of HIV transmission, most clinicians and other healthcare professionals experienced in the care of sexual assault patients believe that postexposure prophylaxis (PEP) should be offered in nearly all cases. The CDC guidelines recommend a 28-day course of highly active antiretroviral therapy (HAART), initiated within 72 hours of exposure [21]. Available data indicate that the effectiveness of HAART falls off if initiated beyond 72 hours of exposure, at which point the risk/benefit ratio begins to favor omitting PEP. Thus, antiretroviral therapy should be started as soon as possible after the assault, ideally within 4 hours, and probably should not be initiated if greater than 72 hours have elapsed. Other information that impacts the decision to initiate

PEP includes knowledge of the assailant's HIV status or prior risk behaviors (e.g. injection drug use), whether there was vaginal or anal penetration, evidence of ejaculation on mucosal surfaces, the character and extent of injury, and whether multiple assailants were involved. It is recommended that the decision and choice of antiviral therapy be made in consultation with an infectious disease specialist or other healthcare professional familiar with the most current PEP guidelines.

FOLLOW-UP

Follow-up within one to two weeks after the initial evaluation provides the opportunity to review previous test results, complete an assessment for STDs, and ensure safety and adherence to prescribed medication. CDC guidelines advise that a follow-up examination at one to two months should be considered to re-evaluate for development of anogenital warts, especially in patients who received a diagnosis of other STDs following the assault. If initial tests were negative and infection in the assailant could not be ruled out, serologic tests for syphilis can be repeated at four to six weeks and three months. To exclude acquisition of HIV, tests for acute infection should be repeated at six weeks, three months, and six months after the assault [21].

PREGNANCY

The risk of becoming pregnant after vaginal rape is estimated to be 5% [8]. A baseline urine or serum pregnancy test is recommended for victims of childbearing age and ability, followed by a prophylactic regimen to prevent pregnancy if the result is negative.

Postexposure emergency contraceptive treatment options are available for preventing pregnancy after unwanted intercourse [23]. The simplest and best-studied product is levonorgestrel (Plan B), an oral progestin-only medication developed for this purpose. The dosage regimen is 1.5 mg (two 0.75-mg tablets) administered as a single oral dose. It is considered to be most effective when administered within 12 hours of the assault. In one carefully conducted study, the success rate (prevention of pregnancy) exceeded 95% when administered up to 120 hours after unprotected intercourse [24]. This medication is safe and well tolerated, even if given to someone who is pregnant. Systemic side effects, such as headache, nausea, fatigue, and gastrointestinal/abdominal complaints, occur in less than 10% of patients. Transient vaginal bleeding is common (25% to 30%) in the days following treatment.

SEXUAL ASSAULT/ ABUSE OF CHILDREN

In contrast to sexual victimization of adolescents and adults, who usually present in the aftermath of an assault, pre-pubertal victimization of children tends to be “discovered” when the child is found to have signs of physical or sexual abuse (e.g. genital injury or scarring) or when a sexually transmissible infectious agent is identified. Gonorrhea, syphilis, and HIV (not linked to prior blood transfusion or maternofetal transmission) acquired during the postnatal period of childhood are indicative of sexual abuse. Chlamydia infection might be indicative of sexual abuse in children 3 years of age or older. Sexual abuse should be suspected when genital herpes, *Trichomonas vaginalis*, or

anogenital warts are diagnosed [21]. In cases in which any STD has been diagnosed in a child, further evaluation for other STDs and for the possibility of sexual assault/abuse should be made in consultation with a specialist.

Just as the identification of a sexually transmissible infection in a child raises suspicion for prior sexual assault/abuse, so does known or suspected childhood sexual assault/abuse warrant an assessment for STDs. The decision to perform a diagnostic evaluation and to collect vaginal or other specimens should be made on an individual case basis. Among factors to consider in the decision to screen a child for STDs are [21; 35]:

- Child has experienced penetration or has evidence of recent or healed penetrative injury.
- The perpetrator of the abuse is a stranger.
- The perpetrator is known to have an STD or is at high risk for STDs.
- Child has a relative or another person in the household with an STD.
- Child has symptoms or signs of active infection (e.g., vaginal discharge or pain, genital itching or odor, genital lesions or ulcers).
- Child or parent requests STD testing.

The examination and collection of vaginal specimens, often frightening and uncomfortable for a child, should be conducted by an experienced clinician. The CDC and the American Society of Pediatrics provide updated guidance for healthcare providers involved in the evaluation of childhood sexual assault/abuse (**Resources**).

LONG-TERM PHYSICAL AND EMOTIONAL IMPACT OF SEXUAL ASSAULT	
Chronic Somatic Disorders	Psychosocial Disorders
Pelvic pain, dyspareunia Functional gastrointestinal disorder Fibromyalgia Multisystem physical complaints Headaches Abdominal pains	Anxiety, depression, phobias Post-traumatic stress disorder Sexual dysfunction Sleep disturbance Anorexia Work absenteeism
Source: [25; 26; 27; 28; 29; 30]	Table 3

PSYCHOSOCIAL ASSESSMENT AND FOLLOW-UP CARE

Clinical care providers should be alert for, and responsive to, the lingering emotional impact of sexual trauma on the victim. In the hours following an assault, these patients exhibit a range of emotional responses, including fear, panic, shame, anger, mistrust, and denial. They are in need of emotional support, comfort, and the assurance of protection. Often, there is a need for reassurance that the victim is not at fault, no matter the circumstances surrounding the assault. Rape crisis counseling and social services should be enlisted early to assist in the care of the patient and to develop a discharge plan that addresses emotional needs, support systems, safety issues, and follow-up care.

The patient should be seen in follow-up within one to two weeks. The purpose of this encounter is to assess clinical progress and compliance with medication, to check the adequacy of the patient’s support system, and to offer counseling. A diagnostic evaluation for STDs may be performed as well, if this was deferred at the time of the initial evaluation.

Additional medical follow-up is indicated at six weeks, three months, and six months for repeat serologic testing (e.g., syphilis, HIV) and to complete the hepatitis B vaccination protocol.

LONG-TERM CONSEQUENCES OF SEXUAL ASSAULT

In the aftermath of sexual assault, a variety of chronic somatic, cognitive, and emotional sequelae have been observed in sexual assault victims (Table 3). The individual’s response and subsequent ability to cope with the trauma of the assault are influenced by a number of related factors. These include the nature and severity of the assault itself, age of the victim, relationship between the victim and assailant, prior history of abuse, and the person’s own ambient life stress and coping mechanisms. For some, the impact of a sexual assault experience is severe and long-lasting, often resulting in difficulty with interpersonal relationships and tasks of daily living, sexual dysfunction, loss of work-time, and increased utilization of healthcare resources [25; 26; 27].



The World Health Organization recommends that women who disclose sexual assault by any perpetrator should be offered immediate support. If healthcare providers are unable to provide first-line support, they should ensure that someone else (within their healthcare setting or another that is easily accessible) is immediately available to do so.

(https://apps.who.int/iris/bitstream/handle/10665/85240/9789241548595_eng.pdf. Last accessed September 17, 2020.)

Strength of Recommendation/Level of Evidence:
Strong/Indirect Evidence

A meta-analysis of clinical studies published between 1980 and 2002 revealed a significant association between prior sexual assault and the lifetime diagnosis of fibromyalgia, chronic pelvic pain, and functional gastrointestinal disorders [28]. In a cross-sectional, randomly selected study of 219 women followed in a Veterans Administration (VA) primary care clinic, a history of prior sexual assault was found to be associated with a significant increase in somatization scores, multisystem physical complaints, anxiety, work absenteeism, and health care utilization [29]. Among another cohort of women receiving VA medical and mental health care, the prevalence of post-traumatic stress disorder was found to be 7 to 9 times higher in women who had experienced a prior sexual assault, compared with those having no assault history [30].

To summarize, the priorities of acute care counseling are to provide emotional support, assure a plan for patient safety, and assess coping skills and strength of support system post-discharge. When possible, arrangements should be made for ongoing counseling through sexual assault crisis programs. In anticipation of the long-term adverse effects of sexual assault, arrangements should be made for primary care follow-up and patients and families should be offered information and access to mental health services.

SEXUAL VIOLENCE PREVENTION

The CDC National Center for Injury Prevention and Control provides technical assistance documents to help communities, colleges, and universities take advantage of best available evidence to prevent sexual violence. *STOP SV: A Technical Package to Prevent Sexual Violence* is a collection of strategies designed to impact individual behaviors as well as relationship, family, school, community, and societal issues that affect risk and protective factors for violence [36; 41]. The package lays out five approaches based on best available evidence:

- Promote societal norms that protect against violence:
 - Bystander approaches
 - Mobilizing men and boys as allies
- Teach skills to prevent sexual violence:
 - Social-emotional learning
 - Healthy, safe dating and intimate relationship skills to teens
 - Healthy sexuality
 - Empowerment-based training
- Provide opportunities to empower and support girls and women:
 - Strengthening economic supports
 - Strengthening leadership and opportunities for girls
- Create protective environments:
 - Improve safety and monitoring in schools
 - Develop workplace policies
 - Address community-level risks by environmental approaches
- Support victims/survivors to lessen harms:
 - Victim-centered services
 - Treatment for victims of SV
 - Treatment for at-risk children and families to prevent problem behavior

In 2017, the CDC, in consultation with the Department of Education and a group of colleges and universities, released *Sexual Violence on Campus: Strategies for Prevention*, an evidence-based technical approach to the problem of sexual violence on campuses [42; 43]. This document is intended to be a starting place for sexual violence practitioners and their campus partners to begin planning and implementing sexual violence prevention strategies in the college and university setting.

Among several CDC-funded research projects are two that make use of bystander-based models of sexual violence prevention. The Green Dot program is designed to increase positive bystander behavior, change social norms, and reduce interpersonal violence perpetration and victimization [42]. Green Dot was designed for college populations but has been adapted high school, community, and military populations. A CDC-funded evaluation of Green Dot in Kentucky high schools found that the program decreased rates of sexual violence perpetration and victimization. The RealConsent program consists of six 30-minute web-based, interactive modules that include didactic activities and episodes of a serial drama to model sexual communication, consent, and positive bystander behaviors. A CDC-funded study found that the program was effective in decreasing sexual violence perpetration and increasing positive bystander behavior at six-month follow-up in a sample of college-age men [42].

RESOURCES

National Protocol for Sexual Assault Medical Forensic Examinations

<https://www.ncjrs.gov/pdffiles1/ovw/241903.pdf>

National Protocol for Sexual Abuse Medical Forensic Examinations, Pediatric (Pediatric SAFE Protocol)

[https://www.justice.gov/ovw/file/846856/
download](https://www.justice.gov/ovw/file/846856/download)

National Best Practices for Sexual Assault Kits: A Multidisciplinary Approach

<https://www.ncjrs.gov/pdffiles1/nij/250384.pdf>

American College of Emergency Physicians Management of the Patient with the Complaint of Sexual Assault

<https://www.acep.org/Clinical---Practice-Management/Management-of-the-Patient-with-the-Complaint-of-Sexual-Assault>

Sexual Assault Forensic Examiner Technical Assistance

<https://www.safeta.org>

International Association of Forensic Nurses

<https://www.forensicnurses.org>

Centers for Disease Control and Prevention

Workowski KA, Bachmann LH, Chan PA, et al. Sexually transmitted infections treatment guidelines, 2021. *MMWR*. 2021;70(RR4):1-187.

Branson BM, Handsfield HH, Lampe MA, et al. Revised recommendations for HIV testing of adults, adolescents, and pregnant women in health-care settings. *MMWR Recomm Rep*. 2006;55(RR14):1-17.

STOP SV: A Technical Package to Prevent Sexual Violence

[https://www.cdc.gov/violenceprevention/pdf/
sv-prevention-technical-package.pdf](https://www.cdc.gov/violenceprevention/pdf/sv-prevention-technical-package.pdf)

Sexual Violence on Campus:

Strategies for Prevention

[https://www.cdc.gov/violenceprevention/pdf/
campusvprevention.pdf](https://www.cdc.gov/violenceprevention/pdf/campusvprevention.pdf)

Green Dot Program

<https://alteristic.org/services/green-dot>

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