



NATIONAL DEFENSE RESEARCH INSTITUTE

CHILDREN AND FAMILIES
EDUCATION AND THE ARTS
ENERGY AND ENVIRONMENT
HEALTH AND HEALTH CARE
INFRASTRUCTURE AND
TRANSPORTATION
INTERNATIONAL AFFAIRS
LAW AND BUSINESS
NATIONAL SECURITY
POPULATION AND AGING
PUBLIC SAFETY
SCIENCE AND TECHNOLOGY
TERRORISM AND
HOMELAND SECURITY

The RAND Corporation is a nonprofit institution that helps improve policy and decisionmaking through research and analysis.

This electronic document was made available from www.rand.org as a public service of the RAND Corporation.

Skip all front matter: [Jump to Page 1](#) ▼

Support RAND

[Purchase this document](#)

[Browse Reports & Bookstore](#)

[Make a charitable contribution](#)

For More Information

Visit RAND at www.rand.org

Explore the [RAND National Defense Research Institute](#)

View [document details](#)

Limited Electronic Distribution Rights

This document and trademark(s) contained herein are protected by law as indicated in a notice appearing later in this work. This electronic representation of RAND intellectual property is provided for non-commercial use only. Unauthorized posting of RAND electronic documents to a non-RAND website is prohibited. RAND electronic documents are protected under copyright law. Permission is required from RAND to reproduce, or reuse in another form, any of our research documents for commercial use. For information on reprint and linking permissions, please see [RAND Permissions](#).

This product is part of the RAND Corporation occasional paper series. RAND occasional papers may include an informed perspective on a timely policy issue, a discussion of new research methodologies, essays, a paper presented at a conference, a conference summary, or a summary of work in progress. All RAND occasional papers undergo rigorous peer review to ensure that they meet high standards for research quality and objectivity.

Physical and Psychological Health Following Military Sexual Assault

Recommendations for Care, Research, and Policy

Coreen Farris, Terry L. Schell, and Terri Tanielian

RAND RESEARCH AREAS
CHILDREN AND FAMILIES
EDUCATION AND THE ARTS
ENERGY AND ENVIRONMENT
HEALTH AND HEALTH CARE
INFRASTRUCTURE AND
TRANSPORTATION
INTERNATIONAL AFFAIRS
LAW AND BUSINESS
NATIONAL SECURITY
POPULATION AND AGING
PUBLIC SAFETY
SCIENCE AND TECHNOLOGY
TERRORISM AND
HOMELAND SECURITY

Sexual assault has no place in this department. It is an affront to the basic American values we defend, and it is a stain on the good honor of the great majority of our troops and their—and our families.

Secretary of Defense Leon Panetta (Panetta, 2012)

Awareness of sexual violence within the military has been increasing both within the Department of Defense (DoD) and in civilian sectors. Research evidence suggests that sexual victimization among servicemembers is associated with significant physical and psychological consequences for the victim. Furthermore, violence within the ranks represents a threat to good order and discipline and undermines the command structure. Since 2005, with the support of the armed services, the DoD Sexual Assault Prevention and Response Office (SAPRO) has worked to improve awareness of sexual violence within the military, disseminate programs to respond to the needs of victims,¹ and prevent future assaults. While DoD’s “no tolerance” policy is an essential component of the military’s response to sexual assault, the problem remains. Further study, prevention efforts, and policy and program interventions are crucial.

The authors are grateful to many individuals for their contributions to this report, including Jody Larkin, Anna Smith, and Phyllis Gilmore. We thank Rajeev Ramchand and Jennifer Lamping for comments and review. We are grateful to our reviewers, Lisa Jaycox and Judith Linden, for their constructive critiques as part of RAND’s quality assurance process. Finally, we thank John Winkler, Director of the Forces and Resources Policy Center of the RAND National Defense Research Institute, for his support of this project.

¹ Victims of sexual trauma are often referred to as *survivors* to highlight men and women’s resiliency to this adverse event. However, in some cases, *victim* is used to refer to people during the immediate aftermath of an assault, and *survivor* is reserved for people who have a history of sexual victimization. Given this distinction and our focus on immediate services, we use the term *victim* consistently throughout the document.

This paper reviews data on the epidemiology of sexual victimization among civilians and military servicemembers and provides recommendations for improving the precision of prevalence estimates for military sexual assault (MSA). While preventing occurrences of MSA is of paramount importance, this review is limited to the aftermath of such assaults. We summarize the literature on the consequences of sexual trauma to better contextualize MSA. Because most services for victims are predicated on disclosure, we review predictors of disclosure and DoD efforts to improve disclosure. We also provide recommendations for further research to investigate efforts to improve disclosure. The bulk of this review characterizes victim care in the immedi-

Sexual Assault: “Intentional sexual contact characterized by use of force, threats, intimidation, or abuse of authority or when the victim does not or cannot consent. Sexual assault includes rape, forcible sodomy (oral or anal sex), and other unwanted sexual contact that is aggravated, abusive, or wrongful (including unwanted and inappropriate sexual contact), or attempts to commit these acts.” (DoD Directive 6495.01)^a

Military Sexual Assault (MSA): Sexual assault of a military servicemember.

Excluded from this review are sexual traumas that occurred in childhood, sexual harassment, sexual discrimination, and noncontact sexual crimes (indecent exposure).

^a The policy definition of *sexual assault* in DoD Directive 6495.01 includes rape, sexual assault, aggravated sexual contact, and abusive sexual contact, as defined by Article 120 of the Uniform Code of Military Justice; forcible sodomy, as defined by Article 125 of the Uniform Code of Military Justice; and attempts to commit these acts.

This product is part of the RAND Corporation occasional paper series. RAND occasional papers may include an informed perspective on a timely policy issue, a discussion of new research methodologies, essays, a paper presented at a conference, a conference summary, or a summary of work in progress. All RAND occasional papers undergo rigorous peer review to ensure that they meet high standards for research quality and objectivity.

© RAND 2013

www.rand.org

It is currently unknown whether sexual assault is more or less common among servicemembers than among civilians, although the demographic profile of servicemembers may put them at increased risk (e.g., younger age).

ate aftermath of a sexual assault and describes DoD efforts to improve this care. Specifically, this review summarizes a range of possible services for victims, including medical care that responds to physical injuries and to the risks of sexually transmitted illnesses, the human immunodeficiency virus (HIV), and pregnancy; forensic services to collect physical evidence of the assault; advocacy and support services to guide victims through complex legal and health care systems; and mental health care for victims who experience psychiatric problems as a result of the trauma. The review closes with recommendations for future research to support DoD's commitment to a culture free of sexual assault.

Epidemiology of Civilian and Military Sexual Assault

Understanding how many individuals MSA affects can inform decisionmaking about how best to design and implement interventions, programs, and policies. Precise and cost-effective dissemination of resources where and to whom they are needed depends in large part on accurate research to document the epidemiology of sexual assault. However, available estimates of sexual assault are likely imprecise for a number of reasons related to the lack of a standard definition of sexual assault in research, variations in screening methodology and criteria, and potential reluctance to report among the affected populations.

Definitions of sexual assault vary considerably across treatment contexts and research samples. Sexual assault may be defined narrowly, by limiting the definition to completed rapes, or broadly, by including all forms of unwanted or coercive sexual contact, as in the DoD definition shown in the box. Combined with variability in research methods, these definitional differences lead to a wide range of prevalence estimates. Surveys that rely on crime reports and use the word *rape* tend to produce small prevalence estimates, while those that ask behavioral questions, defining events that match the behaviors included in the definition of sexual assault under DoD Directive 6495.01, tend to produce the largest prevalence estimates (Bachman, 2000; Fisher, 2009; Tjaden and Thoennes, 1998).

Between 18 and 51 percent of adult women report that they have been sexually assaulted in their lifetimes (Black et al., 2011; Elliott, Mok, and Briere, 2004; Masho, Odor, and Adera, 2005; Randall and Haskell, 1995). Between 1 and 9 percent of adult men report that they have been sexually assaulted in their lifetimes (Black et al., 2011; Basile et al., 2007; Elliott et al., 2004; Sorenson and Siegel, 1992). It is

currently unknown whether sexual assault is more or less common among servicemembers than among civilians, although the demographic profile of servicemembers may put them at increased risk (e.g., younger age). There have been a number of published reports of sexual assault among servicemembers (see Suris and Lind, 2008, and Turchick and Wilson, 2010, for reviews). One comparison found that the lifetime prevalence of sexual assault among women in the Air Force (28 percent) was more than twice that reported by civilian women, aged 18–29, using identical measures (13 percent, Bostock and Daley, 2007). Note that this study estimated lifetime prevalence and that, therefore, many of the sexual assaults the Air Force women reported occurred prior to their military careers. We are not aware of any research that would allow such a comparison to be made in other branches of the services or for male victims. Street et al. (2008) completed telephone surveys with a random sample of former reservists; 13.1 percent of women and 1.6 percent of men reported an MSA. The survey was limited to reservists who had completed their military service by 2000 and, as such, may not generalize to servicemembers who are serving or have served in Afghanistan or Iraq. Finally, in a sample of Operation Enduring Freedom and Operation Iraqi Freedom veterans who have accessed Veterans' Administration services, 15.1 percent of the women and 0.7 percent of the men reported MSAs on an intake screening questionnaire (Kimerling et al., 2010). Note that veterans who access these services may differ substantially from veterans who do not.

The most comprehensive and regularly updated data on MSA are SAPRO's annual reports of sexual assaults (SAPRO, 2011) and the quadrennial Workplace and Gender Relations Survey of Active-Duty Members (WGRA), which gathers data on self-reported victimization (Rock et al., 2011). Since 2005, the armed services and DoD SAPRO have worked to standardize reporting of sexual assault for servicemembers to ensure that victims know how to report incidents and to prevent them from being penalized for disclosure (Iasiello et al., 2009). These reports are limited to incidents perpetrated by an adult against an adult and include rape; aggravated sexual assault; nonconsensual sodomy; aggravated, abusive, or wrongful sexual contact; and attempts to commit any of these offenses. Each report represents an incident with at least one servicemember victim or perpetrator and thus includes assaults or attempted assaults perpetrated by servicemembers on civilians and those perpetrated by civilians on servicemembers. There is no time limit on reporting, and there-

fore, incidents reported in a given fiscal year may not have occurred in that fiscal year. Finally, these data provide an estimate of *reported* MSA only. Many victims choose not to disclose their experiences because they do not want anyone to know, are uncomfortable making a report, or do not believe that their report will be kept confidential (Rock et al., 2011). In short, reported sexual assaults are likely to substantially underestimate the true number of MSAs.

In fiscal year (FY) 2010, 3,158 reports of sexual contact crimes involving servicemembers were filed (SAPRO, 2011), and 2,617 servicemembers reported that they had been the victim of a sexual assault (SAPRO, 2011), representing approximately 0.1 percent of all servicemembers (DoD, 2011b; National Defense Authorization Act for Fiscal Year 2012). Among unrestricted reports, the only form of reporting that provides demographic details about the perpetrator and victim, 71 percent involved a servicemember victim and at least 85 percent involved a servicemember perpetrator (Figure 1). In 11 percent of reports, the service status of the perpetrator was unknown; assuming that some proportion of these unidentified assailants were servicemembers, the proportion of servicemember perpetrators is likely to be greater than 85 percent. The majority of victims were female (90 percent); under the age of 25 (71 percent); and for those who were servicemembers, from junior enlisted ranks (85 percent E1–E4) (percentages adjusted to exclude missing data). See Figure 2 for illustration.

The WGRA provides a second estimate for MSA (Rock et al., 2011). The survey includes a number

of topics relevant to gender relations but focuses primarily on sexual harassment and sexual assault. It is conducted by the Defense Manpower Data Center every four years, with the most recent surveys taking place in 2006 and 2010. The 2010 WGRA was fielded between March and June and was completed by 24,029 active-duty servicemembers stratified by gender, branch, and pay grade. The weighted response rate was 31 percent.

There are a number of uncertainties in interpreting the WGRA data. Survey respondents were promised confidentiality and assured that identifying information would be stored separately from survey responses. However, respondents were not promised anonymity and were aware that identifiers were collected. As per typical human subject research requirements, servicemembers were informed that any direct threat to harm themselves or others would be forwarded for appropriate action. Thus, respondents knew that, in some cases, their confidentiality would be broken. Although this exception in confidentiality is standard and would not apply to reports of sexual victimization, experiences that could potentially violate DoD policy, or other infractions, this was not explicitly stated in the informed consent statement, and servicemembers may err on the side of caution under these conditions. Respondents are often more reluctant to report potentially stigmatizing experiences when anonymity cannot be positively assured, and reported rates may thus be artificially low. It is also important to note that the survey limited reporting to sexual assaults that occurred in the past year. Finally, the data may also be skewed by response bias,

Reported sexual assaults are likely to substantially underestimate the true number of MSAs.

Figure 1
Military Service Affiliation of Perpetrators and Victims in Unrestricted DoD Reports of Sexual Assault

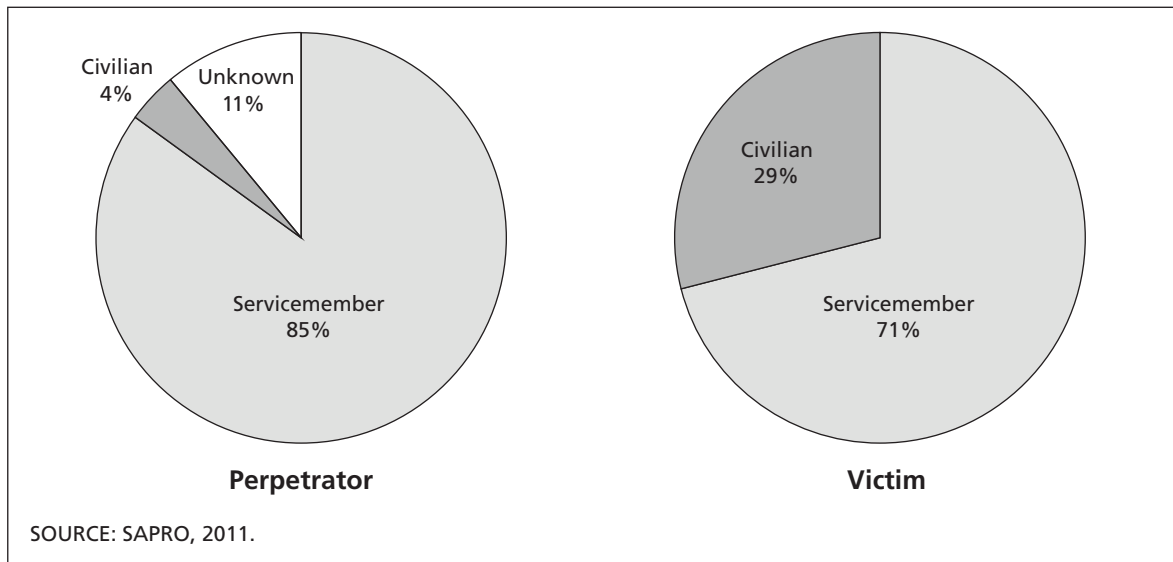
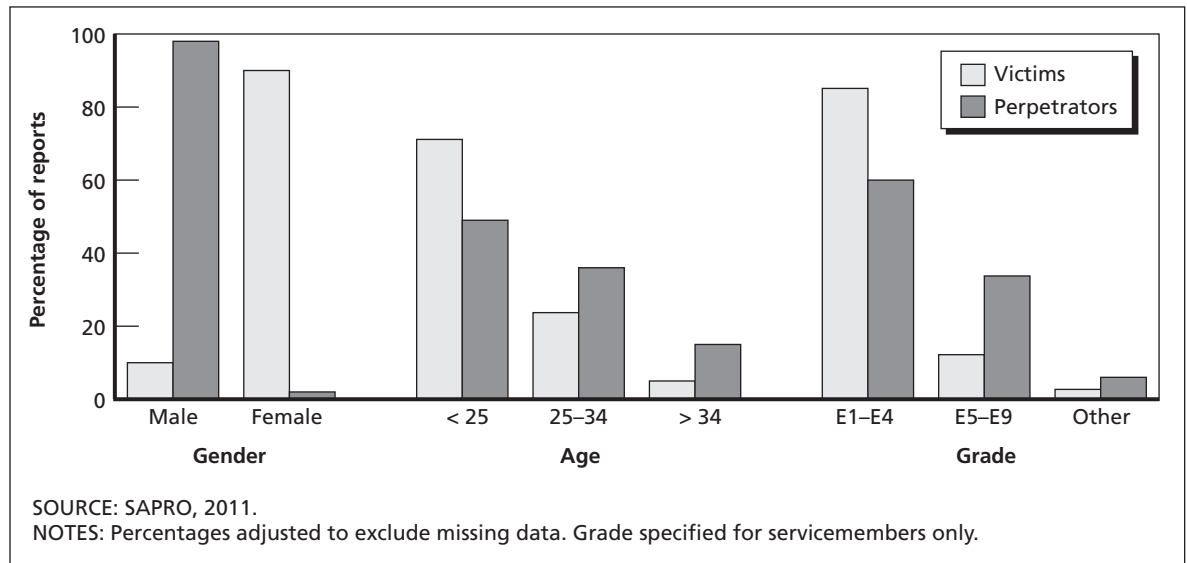


Figure 2
Gender, Age, and Grade in Completed Investigations of Unrestricted DoD Reports of Sexual Assault



The most common victim-perpetrator relationship, reported by both female and male victims, was military coworker (49 percent and 48 percent, respectively), and many perpetrators were in the victim’s chain of command (23 percent and 26 percent, respectively).

although the direction is unknown. If servicemembers who have experienced an MSA are more likely to decline participation, estimates will be biased downward. However, if victims are eager to take the opportunity to document their experience, and therefore more likely to participate than nonvictims, estimates could be biased upward.

According to the WGRA, in 2010, 4.4 percent of female and 0.9 percent of male active-duty servicemembers reported that they had experienced unwanted sexual contact during the previous year. Taking into account the size of the active-duty force (DoD, 2011b) and the representation of women (16 percent; Women in Military Service for America Memorial Foundation, 2011), these percentages can be compared with SAPRO reports to suggest that more than five out of every six sexual assaults are not reported to authorities.² If some victims were unwilling to disclose their victimization in response to the WGRA survey, even this value is biased to suggest greater disclosure than is true.

Among female active-duty servicemembers who self-reported victimization, the offender was most often

male (96 percent; Rock et al., 2011). For male victims, offenders were split equally between men and women. The most common victim-perpetrator relationship, reported by both female and male victims, was military coworker (49 percent and 48 percent, respectively), and many perpetrators were in the victim’s chain of command (23 percent and 26 percent, respectively). For female victims, the type of unwanted sexual contact was evenly divided between unwanted sexual touching, attempted rape, and completed rape (see Table 1).

Typically, epidemiological estimates of the extent of a problem serve as a starting point for intervention. Although even the most conservative estimates confirm that several thousand assaults occur every year, knowledge of precisely how many and what types of people are affected by a problem is necessary to scale prevention and intervention efforts. Unfortunately, for MSA, such baseline estimates are uncertain. Establishing a credible estimate of MSA prevalence would require a standardized definition of MSA, well-designed sampling strategies, and reporting contexts that reduce reporting biases (e.g., by assuring respondent anonymity, a non-DoD survey

² Weighted averages (accounting for pay grade and service branch) of the percentage of men and women active-duty servicemembers who self-report a past-year sexual assault on the WGRA were combined with the total 2010 active-duty force (DoD, 2011b) and gender ratio (Women in Military Service for America Memorial Foundation, 2011) to calculate the total number of active-duty servicemembers who would self-report a past-year sexual assault in response to the WGRA query. This value was used as an estimate of the total number of MSA cases. Note, however, that reporting biases, even when responding to a confidential survey, may push this estimate upward or downward. The number of nondisclosed

cases was calculated by subtracting the number of incidents with restricted or unrestricted DoD reports of sexual assault involving a servicemember victim filed in the past year from the total past-year incident estimate. The ratio of the number of nondisclosed cases over all MSA cases underlies the claim that more than five out of six MSA incidents are never reported to authorities. We are reasonably confident that the ratio is at least this large; however, the choice in reporting language is purposely nonprecise. Given methodological variance underlying the two data sources and uncertainty about nonreporting bias on the WGRA, we chose to avoid communicating greater precision than the data can support.

Table 1
Perpetrator and Assault Characteristics for Female and Male Victims

		Victim (percent)	
		Female	Male
Offender gender	Male	96	35
	Female	1	40
	Both male and female offenders	3	24
Relationship	Military coworker	49	48
	Within chain of command	23	26
Assault	Unwanted sexual touching	36	50
	Attempted rape	36	18
	Rape	29	32

SOURCE: Rock et al., 2011.
NOTE: Percentages adjusted to exclude missing data.

administrator). A direct method would be to conduct an anonymous survey of a representative sample of servicemembers—a not-insignificant task that would require access to population-level data, such as Defense Manpower Data Center data, from which to draw a representative sample. Alternatively, an assessment of sexual trauma might be included in an existing survey, such as the Survey of Health-Related Behaviors among Military Personnel. This is a regular assessment of health behaviors among a random sample of military personnel sponsored by the Office of the Secretary of Defense for Health Affairs; however, concerns about response rates and response bias may limit the generalizability of the results.

Without this research foundation, it is currently difficult to say with certainty how many servicemembers have or will experience an MSA. In addition, there are likely considerable differences between the needs of disclosed MSA victims and currently undisclosed victims. In the civilian sector, disclosed cases are more likely to be severe assaults (e.g., rape by unknown assailant or with severe physical injuries; Fisher et al., 2003), and as such, may be more likely to need medical care or forensic services. Thus, the services that are necessary and that victims who come forward value may be unwanted or irrelevant for victims who choose not to disclose MSA. Only by better research into the extent of undisclosed cases, the needs of these victims, and the processes by which to facilitate disclosure and help-seeking will policymakers be able to precisely and cost-effectively disseminate resources where and to whom they are needed.

Consequences of Sexual Assault

The experience of a sexual assault has costs for society, as well as consequences for the individual

victim. In the civilian sector, the average immediate medical cost for those who seek care is \$2,084, with victims paying approximately 30 percent out of pocket (National Center for Injury Prevention and Control [NCIPC], 2003). In addition to immediate costs, overall health care utilization increases by 56 percent annually after an assault, and this increased utilization persists for at least three years following the event (Koss, 1994). Approximately one-third of rape victims seek mental health services, and for those who do, the mean total cost is \$978, with the victim bearing 34 percent of that cost (NCIPC, 2003). Victims lose an average of 8.1 paid work days and 13.5 unpaid household labor days per assault (NCIPC, 2003). Lost productivity at work and in domestic tasks has been estimated to be 1.1 million days annually (NCIPC, 2003). Assuming mean daily earnings of \$95 produces a loss to the economy of \$104.5 million annually. In addition to these tangible financial costs, there are a number of intangible costs, such as a decline in quality of life, that would drive the total societal costs of sexual assault higher. Post et al. (2002) calculates the cost of each sexual assault to be \$129,908. Extrapolating these numbers to SAPRO estimates of all MSA cases (disclosed and undisclosed) suggests that the total cost of MSA was on the order of \$2.9 billion in FY 2010.³

Consequences for the victim may include immediate physical harm (from the assault itself) and increased risks of sexually transmitted illnesses, pregnancy, mental health problems (such as post-traumatic stress disorder [PTSD]), and chronic health problems (Cicchone et al., 2005; Fanslow and

The experience of a sexual assault has costs for society, as well as consequences for the individual victim.

³ Amounts taken from the sources cited here have been adjusted for inflation to 2010 dollars.

Robinson, 2004; Frayne et al., 1999; Golding, 1994; Kilpatrick, Edmunds, and Seymour, 1992; Kilpatrick et al., 1997; Resnick et al., 2007). Some of what we understand about the adverse outcomes associated with sexual assault is informed by the harm documented in reported cases. However, most sexual assault victims do not seek immediate medical care or report the assault to a primary care provider (Feldhaus, Houry, and Kaminsky, 2000). Those who do utilize medical services are likely to have experienced more physically aggressive events than those who do not access the medical system (Feldhaus, Houry, and Kaminsky, 2000). The following review of physical trauma should therefore not be generalized to all people who have been sexually assaulted. Furthermore, most of the research in this area has been conducted with civilian samples. Thus, the review that follows summarizes consequences of civilian sexual assaults unless otherwise specified.

For victims who present to an emergency room, approximately two-thirds have a physical trauma in addition to the sexual assault (Hilden, Schei, and Sidenius, 2005, and Riggs et al., 2000). The most common injuries are lacerations, abrasions, or contusions to the extremities and the head or neck and external genital, vaginal, rectal, or cervical trauma (Riggs et al., 2000). Victims are at risk of contracting a sexually transmitted infection (STI) or HIV (Holmes, 1999; Jenny et al., 1990), and for female victims, the risk of pregnancy following a sexual assault is 5 percent (Holmes et al., 1996). Over the long term, people who have experienced a sexual assault are more likely to experience chronic medical conditions, such as fibromyalgia, gastrointestinal symptoms associated with irritable bowel syndrome, infertility, chronic fatigue, and chronic pain (Ciccone et al., 2005; Frayne et al., 1999; Golding, 1994).

Acute psychological distress in the aftermath of a reported sexual assault is also common. The odds of receiving a PTSD diagnosis in the year following a sexual assault are 6.2 times higher than among the general population (Kilpatrick, Edmunds, and Seymour, 1992). More generally, people who have experienced a sexual assault report lower levels of psychological well-being on a number of dimensions (see Resick, 1993 for a review). On average, following sexual trauma, the quality of social, family, and intimate-partner relationships decline, and the risk of sexual dysfunction increases (Crome and McCabe, 1995). Relative to nonvictims, victims of sexual assault are three times more likely to experience depression, 2.8 times more likely to develop problems with alcohol, and three times more likely to attempt

suicide (Kilpatrick et al., 1997; Kilpatrick, Edmunds and Seymour, 1992; Fanslow and Robinson, 2004).

The empirical literature on the consequences of sexual assault among servicemembers is not as advanced as among civilians. However, there is evidence that assaulted servicemembers suffer a range of significant problems (see Turchik and Wilson, 2010, and Weaver and Clum, 1995 for reviews). Veterans with a history of MSA report many of the same negative outcomes as civilians, including poor physical and mental health (Sadler et al., 2000). Female veterans who were sexually assaulted during their military careers are more likely to use mental health services, experience difficulty adjusting to civilian life, and have more trouble obtaining employment after discharge than are female veterans without a history of MSA (Skinner et al., 2000). Experiencing an MSA appears to be a more robust predictor of PTSD risk than other traumas or combat exposure (Kang et al., 2005; Yaeger et al., 2006).

Sexual assault during military service may differ from civilian assaults in a number of ways. The nature of military service and its emphasis on loyalty and community may result in servicemembers experiencing a heightened sense of shock and betrayal when a colleague perpetrates the offense. Although male servicemembers are less likely than female servicemembers to report an MSA incident (Rock et al., 2011), the greater proportion of male servicemembers overall means that over one-half of MSA victims will be male (Rock et al., 2011). It is plausible that male victims are at higher risk of subsequent mental health problems than are female victims (Peterson et al., 2011). Finally, when a servicemember is assaulted from within the chain of command, which occurs in almost one-quarter of reported cases, he or she may have no route by which to escape the situation and may remain vulnerable to repeated assaults and other abuses. Subsequently, there may be a significant negative influence on career trajectories, and retention may decline (Street and Stafford, 2004).

Disclosure

To respond to MSAs, DoD must know when such events occur. This often relies on victims reporting or disclosing such assaults. Since 2005, DoD has instituted a number of structural changes to improve the rate of disclosure by MSA victims, and SAPRO has reported progress toward creating a system in which all victims are able to disclose assaults and receive appropriate care (SAPRO, 2011). Before June 2005, to gain access to appropriate medical and psychological health care, victims were required to file a sexual assault report, which would begin an official investi-

Veterans with a history of MSA report many of the same negative outcomes as civilians, including poor physical and mental health.

gation (SAPRO, 2011). At that time, reports were not fully confidential. The contents of such reports were available to commanding officers (who may have been the perpetrators). In the era in which there was only one reporting option, it was believed that many victims chose not to report MSA incidents to protect their privacy. Beginning in June 2005, two reporting options were made available: restricted and unrestricted reports (SAPRO, 2011). Restricted reports allow victims to record a complaint and receive needed medical, forensic, and psychological support services. These reports are kept strictly confidential and are not released to commanding officers, and no investigation is launched. Victims have the opportunity to convert a restricted report to an unrestricted report at any time, and evidence collected as part of a forensic exam after an assault is maintained for five years (Deputy Secretary of Defense, 2011). The second option, unrestricted reporting, mirrors sexual assault reporting before the policy change in 2005. A victim's report is provided to law enforcement for investigation, and the commander is notified. Victims may access needed medical, forensic, and psychological support services.

These structural changes appear to have increased reporting. Between 2005, when restricted reporting was implemented, and 2006, MSA reports by servicemembers grew by nearly 30 percent (SAPRO, 2011). SAPRO has implemented education efforts to improve servicemembers' understanding of reporting options with some success; between 2006 and 2010, the number of female victims who did not report an MSA because they were not sure how to report it dropped from 18 percent to 15 percent, and the number of male victims indicating that they were uncertain about the procedures for reporting dropped from 26 percent to 8 percent (Rock et al., 2011). However, education efforts do not appear to have been entirely successful in convincing servicemembers that their reports will be kept confidential. In 2010, 60 percent of female victims and 36 percent of male victims who did not disclose chose not to do so because they did not believe the report would be kept confidential (Rock et al., 2011). It is unknown whether distrust of confidentiality assurances has declined over time; this question was not included in the 2006 WGRA.

Among active-duty servicemembers who self-reported victimization on the WGRA, only 29 percent of women and 16 percent of men indicated that they had reported the assault to any civilian or DoD authority or organization (Rock et al., 2011). Civilian victims cite a number of reasons for their reluctance to disclose the assault; the most common are shame

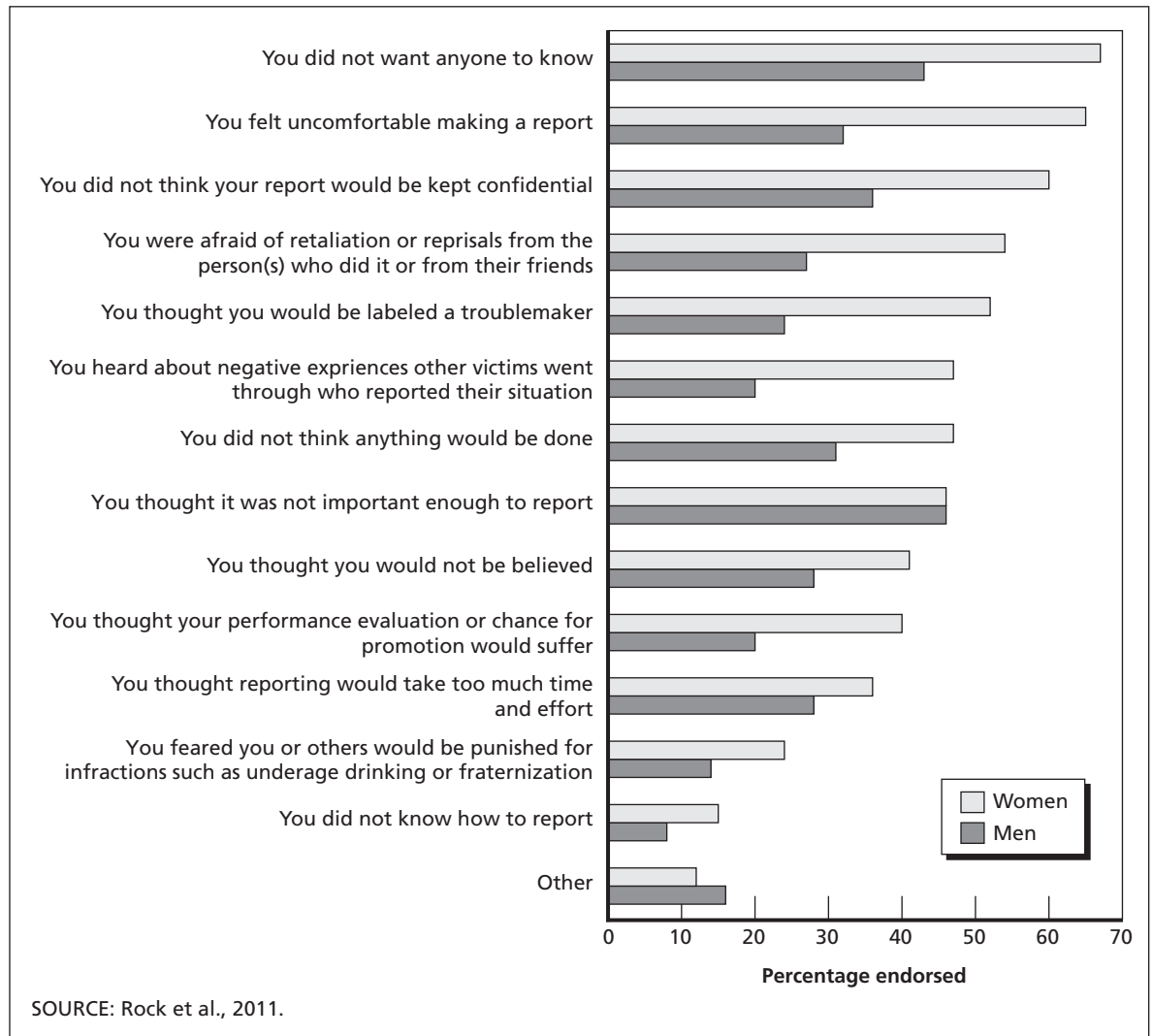
and a belief that the assault was a private matter (Walsh et al., 2010). Servicemembers offer similar reasons for their choice not to disclose but also provide explanations unique to the military, including reluctance to submit a report when the perpetrator is a superior officer, concerns about negative implications for performance reports, and worries about punishment for collateral misconduct (e.g., underage drinking, fraternization; Iasiello et al., 2009). Among female MSA victims who chose not to report, common reasons for not reporting were that they did not want anyone to know about the assault (67 percent), discomfort with making a report (65 percent), concern that confidentiality would not be protected (60 percent), and fear of retaliation from the assailant (54 percent). Among male MSA victims, common reasons for not reporting were a belief that the assault was not important enough to report (46 percent), not wanting anyone to know about the assault (43 percent), concern that confidentiality would not be protected (36 percent), and feeling uncomfortable about making a report (32 percent; Rock et al., 2011). See Figure 3 for all nondisclosure motivation responses.

In some ways, reluctance to report appears warranted; 47 percent of female victims who did not report had heard about negative repercussions another MSA victim had experienced (Rock et al., 2011) and presumably feared that they might face similar consequences for reporting. Of the women who reported an assault in 2010, 62 percent reported professional retaliation (e.g., denied promotion), social retaliation (e.g., ignored by coworkers), and/or administrative actions (e.g., placed on a medical hold; Rock et al., 2011). These findings reveal the paradox of disclosure. Disclosing a traumatic event opens the door to medical and legal services, but at the same time, victims often face negative social and professional consequences following disclosure (Herbert and Dunkel-Schetter, 1992; Ullman, Foyes, and Tang, 2010). Although supportive reactions to disclosure have a small positive effect on victims' adjustment after an assault, negative social reactions are quite common and have a more substantial negative effect on psychological health (Davis, Brickman, and Baker, 1991; Ullman, 1996).

Victims who choose not to file an unrestricted report may have rationally weighed the costs and benefits of disclosure and made an informed decision that it was not in their personal best interest. The emotional trauma of forensic exams and prosecution and the potential professional and social consequences of disclosure may outweigh any benefit obtained from the possibility of seeing the perpetra-

Education efforts do not appear to have been entirely successful in convincing servicemembers that their reports will be kept confidential.

Figure 3
Reasons for Nondisclosure Among MSA Victims



DoD has a significant interest in identifying and prosecuting MSA cases.

tor held accountable. However, the costs and benefits of unrestricted reporting can be viewed from multiple viewpoints. When a system-level actor, such as DoD, weighs the costs and benefits of victim disclosure servicewide, the rational choice may still be to invest in efforts to increase unrestricted reports. DoD has a significant interest in identifying and prosecuting MSA cases even when it is not in the individual best interest of the victim. Given the risk of additional sexual assaults, the cost, the effect on retention (Sadler et al., 2003), the abuse of the command structure, and the potential threat to good order and discipline, the DoD must respond to MSA cases. To do so, victims must file unrestricted reports because DoD cannot respond to MSA instances unless it is aware of them. The challenge will be to balance the costs and benefits the individual bears with those the

system bears. At the very least, it will be important to acknowledge the costs to victims who disclose and honor their contribution to justice and transparency.

Disclosure of MSA has been increasing since 2005, and therefore, it will be important to ensure that the needs of all victims are protected. The review that follows outlines the little that is known about good practices in care for victims in the immediate aftermath of a sexual trauma. In reviewing this literature, it is important to keep in mind that assaults that have been disclosed may be systematically different from those that have not. Disclosure is linked to a number of factors. For example, women who experience an assault by a stranger or an assault with a weapon are more likely to disclose the assault to formal and informal support providers (Starzynski et al., 2005). As such, the needs of victims who currently

enter the criminal justice, medical, and psychological health systems are likely to be different from those of the undisclosed majority. The subgroup of MSA victims who previously would not have disclosed but who now choose to do so may be qualitatively different. We know very little about whether increased disclosure among servicemembers leads to a net improvement or to a net decline in physical and psychological health. Research into these topics would be timely and may help direct the scope and form of DoD response efforts. For example, what are the costs and benefits of disclosure relative to nondisclosure for the victim? Does disclosure lead to increased or decreased productivity? Is retention influenced? Are the needs of servicemembers with an undisclosed history of MSA the same or different from the needs of servicemembers who disclose the assault? Could the needs of the undisclosed majority be met if efforts to improve disclosure were successful?

Evidence-Informed Practices and Guidelines

Responding to MSA requires a broad range of resources, including both prevention and intervention services. Prevention programming is designed to reduce the MSA rate, essentially to stop an assault before it occurs. Programs may focus on preventing perpetration or teaching strategies to avoid victimization. The primary DoD prevention strategy is the Active Bystander program, which encourages participants to step in and protect their fellow servicemembers from situations that place them at risk of perpetrating a sexual crime or becoming a victim (Banyard et al., 2004; Gidycz, Orchowski, and Berkowitz, 2011; Langhinrichsen-Rohling et al., 2011; SAPRO, 2011). Although prevention programming is an important component of a full portfolio of services directed at MSA, it is beyond the scope of this paper. Nonetheless, it is worth noting that there has been little empirical evaluation demonstrating that the existing primary prevention activities are affecting MSA rates. It is recommended that SAPRO and DoD continue to evaluate the effectiveness of Active Bystander interventions and other primary prevention strategies (e.g., social marketing) on the MSA rate.

Intervention programs occur after an assault occurs. Perpetrator-focused programs are designed to prevent new offenses among those who have committed a sexual assault in the past. The mission of SAPRO currently does not extend to offender accountability and focuses instead on prevention, victim care, and system accountability. To the best of our knowledge, SAPRO has not included any

perpetrator-focused intervention efforts in its portfolio of programming (SAPRO, 2011).

Victim-focused programs are designed to manage the immediate health crisis (e.g., physical injuries, STI risk), help victims navigate the criminal justice system, and mitigate short- and long-term psychological health consequences. The review that follows focuses entirely on the evidence around victim-focused interventions. However, we acknowledge that a complete portfolio of effective programming must include services targeting both the offender and the victim. Furthermore, any comprehensive MSA plan will require a strong emphasis on prevention.

The remainder of this section reviews a range of possible programs to support MSA victims. Four subsections briefly review the literature on (1) immediate medical care, (2) forensic services, (3) advocacy and emotional support, and (4) mental health and psychiatric care. In each subsection, the review focuses primarily on what is known about care in civilian settings. Also included is any publicly accessible information regarding the availability and efficacy of these services within the armed forces. All the recommendations that are reviewed are based on what is known about appropriate care for victims who disclose to formal support services.

Medical Care

A victim may require multiple types of services, but according to the World Health Organization (WHO), “the overriding priority must always be the health and welfare of the patient” (WHO, 2003, p. 17). Department of Justice (DoJ) guidelines concur that the treatment of injuries and the assessment and management of sexually transmitted infections and pregnancy must come before forensic or other considerations (DoJ, 2004; Kelly and Regan, 2003). The American College of Surgeons Committee on Trauma (2006) recommends that patients with life-threatening physical traumas be transferred to an appropriate trauma center immediately. The DoJ and WHO guidelines recommend that patients with less-severe injuries receive appropriate care for them, including treatment of wounds; antibiotics and a tetanus booster, if indicated; and medications for pain relief and reduction of anxiety symptoms, when indicated (DoJ, 2004, and WHO, 2003).

Not all sexual assault victims require or choose to access postincident medical care. Only 17 percent of people who self-report experiencing a sexual trauma seek medical care after the assault (National Victim Center, 1992). Of those who do seek care, approximately two-thirds have suffered a physical injury in

Guidelines concur that the treatment of injuries and the assessment and management of sexually transmitted infections and pregnancy must come before forensic or other considerations.

addition to the sexual assault (Riggs et al., 2000). Other medical services, such as STI prophylaxis, may not be required by victims who were assaulted by a perpetrator with a known medical history (e.g., a spouse or committed boyfriend⁴) or by victims who experienced sexual contact or an attempted assault without penetration (WHO, 2003). The following recommendations are for victims who seek or need medical services in the immediate aftermath of the assault.

Five percent of female sexual assault victims will become pregnant without intervention (Holmes et al., 1996). The WHO guidelines recommend that victims who present for services within five days of the assault be offered emergency contraception and victims who present after this window be provided follow-up pregnancy testing and counseling about their options if they are pregnant (WHO, 2003; von Hertzen et al., 2002). The recommendations make clear that choices about emergency contraception and pregnancy termination are personal choices for the victim to make that health care workers should respect (WHO, 2003).

Victims are also at risk of acquiring an STI or HIV.⁵ When appropriate, victims may be tested for gonorrhea, chlamydia, trichomonas, syphilis, and HIV. Appropriate treatment can commence for those who test positive (Centers for Disease Control [CDC], 2010). Note that an STI may take up to 3 months to incubate prior to producing a positive result on a laboratory test; therefore, testing that occurs immediately after an assault will most likely be negative (unless the victim already has an STI). For this reason, follow-up testing and/or a prophylactic treatment for STIs may be indicated. Both the CDC and DoJ recommend that prophylactic treatment be offered (CDC, 2010; DoJ, 2004). Given the considerable side-effect profiles associated with prophylactics and uncertainty about effectiveness, providers may wish to practice shared decisionmaking with patients, discussing the victim's risk profile and providing information about the pros and cons of a regimen to allow the victim to make an informed choice (Charles, Gafni, and Whelan, 1999; WHO, 2003).

Victims and providers may also wish to discuss the appropriateness of HIV prophylaxis. Currently,

it is recommended that medication be provided only if it is known or suspected that the perpetrator was HIV positive (Kelly and Regan, 2003; Landovitz and Currier, 2009). Similarly, WHO recommendations encourage providers and victims to consider their risk profiles and undergo HIV prophylactic treatment only if risk is high (WHO, 2003). Examples of factors that increase risk for HIV seroconversion are a known HIV positive perpetrator; a high-risk perpetrator, such as an injection drug user; vaginal or anal trauma; presence of STIs; and multiple perpetrators (CDC, 2010; WHO, 2003). Some victims may be at such low risk that HIV prophylaxis is unlikely to be considered. For example, a victim who is assaulted by a fellow servicemember while deployed overseas is at low risk for HIV, given federal law prohibiting the deployment of HIV-positive servicemembers overseas or on ships (National Defense Authorization Act for Fiscal Year 1987 [P. L. 99-661, Section 705(c)]). The prophylactic regimen to prevent HIV seroconversion after an exposure has a significant side-effect profile that may interfere with work and social functioning for the one-month period required to complete the regimen (Parkin et al., 2000). Side effects include fatigue, nausea and vomiting, influenza-like illness, and hives and are experienced by 52–77 percent of people who take the regimen (Lai et al., 1999; Loutfy et al., 2008; Parkin et al., 2000). These considerable side effects may explain the fact that less than 33 percent of sexual assault victims who receive a prescription for HIV prophylaxis complete the 28-day regimen (Loutfy et al., 2008; Weibe et al., 2000).

WHO guidelines recommend scheduling follow-up visits for two weeks, three months, and six months after the assault (WHO, 2003). These visits allow the health provider to examine wounds and injuries for proper healing; check compliance with STI/HIV prophylactic treatment, when indicated; conduct follow-up tests to assess STI/HIV status; perform pregnancy tests and provide counseling about pregnancy options; conduct psychological health assessments; and provide referrals for additional medical or psychological services, when indicated.

DoD Policy on Provision of Medical Care Following Sexual Assault

Enhancing the quality of medical care for MSA victims is one of the primary goals outlined in SAPRO's *DoD Sexual Assault Prevention and Response Office Strategic Plan 2009–2014*. The *Medical Services Medical Facility Management of Sexual Assault* guidelines mandate "timely, accessible, and comprehensive medical

Five percent of female sexual assault victims will become pregnant without intervention.

⁴ In a nationally representative sample of civilians, half of all sexual assaults were committed by valued relationship partners, that is, spouses (9 percent) or someone whom the victim was "in love with" at the time of the assault (46 percent; Laumann et al., 1994).

⁵ Civilian guidelines encourage health care providers to also consider Hepatitis B testing and immunization. We have not reviewed these recommendations because all MSA victims will have already been vaccinated, per 2002 DoD policy.

management of sexual assault victims to include compassionate, confidential treatment aimed at restoring health and well-being” (Medical Command Regulation 40-36, 2004). These guidelines are largely consistent with civilian recommendations for medical care, including prioritization of physical injuries, diagnostic testing, compliance with CDC guidelines for STI preventative services, providing emergency contraception, and ensuring appropriate follow-up care.

In 2010, 46 percent of victims who reported an MSA to a DoD authority indicated that they were offered medical services (Rock et al., 2011). It is not known whether this rate is low because the remaining victims did not require medical services or if advocates failed to correctly direct them to appropriate services. As with all regulations, there is likely variability in the extent to which the letter and spirit of the guidelines have been implemented in a variety of settings with varying external constraints on the availability of services. To date, little is known about the likelihood that a victim who presents for services would receive appropriate care for physical injuries, pregnancy, and STI/HIV risk. Future research to examine the fidelity with which guidelines are implemented in various DoD settings would provide important information. For example, if services provided in a particular setting are inconsistent with guidelines, resources and oversight could be directed to that setting to support improvements in care. The majority of SAPRO victim advocates, who facilitate care for MSA victims, believe that victims receive the best care possible (78 percent; Iasiello et al., 2009). However, in the most recent survey of MSA victims, only 56 percent were satisfied with the quality of the medical services they received after the assaults (Rock et al., 2011). Although these data suggest a possible need for improvement, the precise reasons for this dissatisfaction have not yet been investigated.

Forensic Services

In a sexual assault, the body of the victim is part of the crime scene. Forensic exams often include examination of the entire body, including a genito-anal examination, to document evidence of the assault, such as abrasions and contusions, as well as such physical evidence as the assailant’s saliva, semen, or body hairs. Although the exam provides vital evidence for the criminal justice system, the intrusiveness of the exam, which comes so quickly on the heels of a sexual trauma, can lead some victims to experience the exam as a “second assault” (Madigan and Gamble, 1991). For this reason, it is recommended that providers treat the victim with respect and compassion, take the time

to obtain informed consent for *each* component of the exam, and respect the victim’s decisions (Kelly and Regan, 2003). Victims report that forensic exams are less traumatic when the examiner is female (regardless of the sex of the victim), privacy is adequate, the process is fully explained, and the examiner behaves professionally and empathically (Jordon, 2001; Kelly and Regan, 2003).

Although medical needs and forensic needs are distinct, when a victim requires medical attention and chooses to complete a forensic exam, it is preferable that the medical and forensic exams occur simultaneously to reduce the number of times a victim must submit to an intrusive exam and, further, to limit the number of providers (Kelly and Regan, 2003; WHO, 2003). To offer both services simultaneously, it is generally recommended that medical providers be trained to collect forensic evidence and protect the chain of custody (Kelly and Regan, 2003).⁶

A number of clinical guidelines recommend that victims of sexual assault be considered emergency cases and that victims ought to receive immediate care upon presentation to a medical facility, even if they do not have immediate medical needs (DoJ, 2004; Kelly and Regan, 2003; WHO, 2003). To protect physical evidence, sexual assault victims are counseled not to wash, change clothes, urinate or defecate, smoke, eat, or drink prior to the exam (DoJ, 2004). WHO recommends that, for the victim’s comfort, removing these restrictions as soon as possible should be a priority and that, in busy settings when a wait cannot be avoided, the victim should not be left alone but rather be provided with an advocate to offer support (WHO, 2003). Given the possible long-term consequences of an insensitive, unkind, or critical response from police, health care workers, or counselors in the immediate aftermath of an assault (Davis, Brickman, and Baker, 1991; Ullman, 1996), guidelines often include reminders that providers should be particularly aware of their interactions with the victim, choosing a response that is kind, gentle, and nonjudgmental (WHO, 2003). To prepare a victim for a forensic exam, the purpose and procedures can be explained carefully and consent obtained. Some victims may choose not to collect forensic evidence, and given their legal right to control access to their own bodies, this wish must be respected. As the exam proceeds, a trained examiner will explain each

Victims report that forensic exams are less traumatic when the examiner is female (regardless of the sex of the victim), privacy is adequate, the process is fully explained, and the examiner behaves professionally and empathically.

⁶ The *chain of custody* is the formal documentation that records the exact times and persons involved in the seizure, custody, control, transfer, analysis, and disposition of evidence to be submitted in court proceedings. Evidence that does not meet the standard may not be admissible in court.

step of the exam and provide an opportunity to opt out. Some components may be so intrusive that the victim decides that the costs outweigh the benefits.

Forensic exams typically begin by documenting the victim's account of the assault. It is recommended that, when possible, this occur in the presence of a police officer, the medical examiner, and the victim advocate to reduce the number of times the victim must repeat the account (Kelly and Regan, 2003). The goals of the interview are to gather the information necessary to detect and treat injuries, assess risk of pregnancy and STIs/HIV, guide specimen collection, and document the assault. Next, an extensive "head-to-toe" examination, guided by the patient report and the sexual examination kit, is conducted to detect and document injuries and collect forensic evidence, such as clothing; fingernail scrapings; loose hair and fibers (by combing of the victim's head and pubic hair); swabs of bite marks and the face, neck, genital, and thigh areas to test for saliva, blood, and semen; proctoscopy/anoscopy; and urine and blood samples from the victim, if drug-assisted rape is suspected (DoJ, 2004; Regan and Kelley, 2003; WHO, 2003). DoJ recommends scheduling a follow-up exam to document bruising, which may not be visible immediately after the assault but may emerge in the following days (DoJ, 2004).

During and after the exam, providers will document physical findings and injuries. Health care workers may not, as a matter of course, have adequate training to produce a legally sound record of the examination. We therefore recommend that providers who conduct forensic exams seek training to ensure that their efforts meet the standards of the justice system in which they operate. There have been significant efforts in the United States to standardize and improve the quality of forensic examinations after a sexual assault. The Sexual Assault Nurse Examiner program trains forensic nurses to provide 24-hour crisis intervention and comprehensive medical and forensic services to victims (Campbell, Patterson, and Lichty, 2005). Furthermore, standardized evidence protocols and evidence collection supplies, referred to as "rape kits," have been implemented in many jurisdictions (DoJ, 2004). Following the exam, the collected evidence must be properly preserved and must follow a strict chain of custody (DoJ, 2004). Any facility that is unable to meet minimum standards with respect to documenting and protecting evidence, including provision of secure storage and appropriate chain of custody handling, may reconsider collecting forensic evidence. If the evidence will not be admissible in a court of law, it may not be

reasonable to ask a victim to undergo a lengthy, emotionally trying exam.

DoD Policy on Provision of Forensic Services Following Sexual Assault

The Defense Task Force for Sexual Assault in the Military Services has made several recommendations to improve forensic services for MSA victims (Iasiello et al., 2009). First, it recommends that the secretaries of the military departments ensure that sexual assault forensic examination kits are available and accessible and that personnel qualified to provide safe and confidential forensic exams are available, even in deployed and remote locations (p. 74). Furthermore, in deployed settings, victims may need to be airlifted to receive care. Other recommendations include ensuring that victims' medical records are appropriately annotated to document physical and emotional injuries sustained as a result of the assault. Without these details, the Department of Veterans Affairs may have difficulty adjudicating claims of disability related to the assault (e.g., for PTSD).

DoD form 2911, *Forensic Medical Report: Sexual Assault Examination*, was revised in September 2011 to be consistent with DoJ guidelines for medical-forensic examinations of sexual assault victims (DoD, 2011a, 2011c, and DoJ, 2004). The instruction manual and form guide the conduct of any health care provider who performs a sexual assault exam in any military treatment facility. The instruction manual clearly states that sexual assault patients should be given priority as emergency cases, whether or not physical injuries are evident (DoD, 2011c). A cover page documents who was present for the exam and includes prompts for the names of the sexual assault response coordinator, victim advocate, and criminal investigative officer, which may help prompt examiners to conduct the exam with victim advocates available for support. Consistent with civilian DoJ guidelines, the form standardizes informed consent and cues providers to obtain consent for each component of the exam separately. It provides a structured medical history form that confines questions to pertinent medical history that could influence the interpretation of the exam findings and explicitly instructs examiners not to record other information about the victim's sexual history. The victim's account of the assault is documented and reviewed to guide the subsequent physical exam. The form directs the components of the physical exam, requires documentation of injuries, foreign materials, saliva, and blood. Consistent with civilian guidelines, examiners are cued to collect physical evidence (e.g.,

Health care workers may not, as a matter of course, have adequate training to produce a legally sound record of the examination.

swabs, pubic hair combings) and to rely on technological assistance where available and appropriate (e.g., alternative light sources, such as a Woods lamp; Toluidine blue dye; anosopic exams; vaginal speculum exams; coloscopes or other magnifiers). The form also provides instructions and standard documentation to ensure that chain of custody requirements are met. If the instruction manual is followed (DoD, 2011c), a properly completed form may help meet the task force's recommendation that a victim's physical injuries be adequately recorded in the patient's medical records (Iasiello et al., 2009).

SAPRO's FY 2010 annual report states that "the department's response resources are available to victims of sexual assault 24 hours a day, 7 days a week." This kind of round-the-clock access to care is consistent with many guideline recommendations. Without data, however, it is unclear to what extent administrative direction that care ought to be available corresponds with victims' actual experiences. Future research that surveys both disclosed and undisclosed MSA victims would be helpful for documenting the extent to which services were perceived to be available and, for those who sought services, the extent to which they received the services. Information about the extent to which services were available when needed and the quality of those services would provide important information to policymakers wishing to direct resources to the areas most in need and to direct oversight to programs that fail to meet benchmarks for quality care.

SAPRO offers training to medical providers to provide guideline-consistent care to MSA victims. In FY 2010, 95,429 health care personnel received basic training for sexual assault response (SAPRO, 2011). It is unclear from the report if this training was a basic introduction or met standards for certification in conducting forensic exams. One report indicated that 40 medical professionals in Afghanistan were trained to conduct forensic exams, many of whom were stationed at forward operating bases (Morales, 2011). These environments may make it difficult to provide comprehensive victim care; however, there have been no reported "gaps in supplies, trained personnel, or transportation resources" (SAPRO, 2011). In FY 2010, there were 268 reports of sexual assaults in combat areas involving Army, Navy, and Air Force personnel (Assistant Secretary of Defense, Health Affairs, 2010).⁷ Of these, 6 percent received a forensic exam; it is unclear whether the remaining 94 percent did not receive forensic services by choice or due to administrative, personnel, or infrastructure constraints. There was one known incident in which

a forensic exam could not be conducted because supplies were not available. No data are available on the extent to which a lack of trained personnel prevented exams or evidence was collected that did not meet standards for testing or admission to a court.

In the future, it will be important to conduct research with victims to assess their perception of the availability of forensic exams. Direct assessments would also allow an assessment of the likelihood that victims who wished to receive a forensic exam did receive one. It may be that victims are aware, or are made aware, that services are limited and therefore do not pursue them. Some victims may have such tightly controlled schedules (e.g., while deployed, in training) that they are unable to leave their units to receive care (Iasiello et al., 2009). If victims opt out without making any contact with medical providers, the providers will be poor informants about the degree to which lack of services or personnel interfere with guideline-consistent care. Direct surveys of victims could also provide valuable information about the care they received and provide a way to evaluate and improve care for MSA. Given evidence that the way in which exams are performed (professionally, empathically, by a female examiner) can significantly affect the victim's experience and long-term psychological health (Jordan, 2001; Kelly and Regan, 2003), it will be important to assess victim satisfaction with services and the availability and completeness of forensic exams and to determine the success of the training enterprise.

Advocacy and Emotional Support

Victims may experience secondary trauma by medical and criminal justice personnel, that is, they may report being judged or blamed for their victimization, doubted, treated insensitively, examined roughly, or not offered necessary care, such as emergency contraception or legal advocacy (Campbell and Raja, 1999; Campbell et al., 1999; Martin and Powell, 1994). In fact, the majority of victims who seek services report feeling violated, distrustful of others, and reluctant to seek further support as a result of their interaction with service providers (Campbell and Raja, 2005). MSA victims who reported to military legal personnel were more likely than civilian victims to indicate that their experience with the legal system made them reluctant to seek further help (83 percent versus 65 percent; Campbell and Raja, 2005). In an investigation of victim experiences that occurred prior to the SAPRO-initiated policy changes in 2005, MSA

If victims opt out without making any contact with medical providers, the providers will be poor informants about the degree to which lack of services or personnel interfere with guideline-consistent care.

⁷ Data for the Marine Corps were incomplete.

victims who received their care from military medical professionals were more likely than civilian victims to report being reluctant to seek further care as a result of negative interactions with medical professionals (80 percent versus 24 percent; Campbell and Raja, 2005).

There appears to be a significant need for advocate support to help victims navigate a multi-component system, ensure that victims receive guideline-consistent care, and buffer victims from providers who may judge or blame them for their victimization. Although guidelines that speak to care for sexual assault victims typically focus on medical, legal, and mental health needs, the negative experiences that victims of sexual violence report suggest that they may also need advocate support. It should be noted that the emotional support advocates provide immediately following an assault is distinct from formal mental health services, which are reviewed in the next subsection. Although support persons may come from the victim's informal support system (e.g., a friend, parent), formal advocates will have received training in sexual assault crisis intervention and often are affiliated with an organization that provides services to sexual assault victims. Many victim advocates align themselves with an empowerment model, which is a client-centered care model. They will often remain with a victim continuously, throughout the police report and medical and forensic exams, to provide a consistent support person and crisis intervention and to help prepare the victim for each new step in the process. Advocates also provide a second voice to the victim to ensure that his or her needs are met and wishes respected and to step in to prevent secondary victimization from medical providers or criminal justice representatives.

In the strongest evaluation of advocacy services to date, Campbell (2006) capitalized on a natural experiment by comparing two well-matched hospitals, one that routinely requested advocate services whenever a rape victim presented in the emergency department and another that did not. Although the majority of victims reported that they were discouraged from filing a police report, this occurred less often when an advocate was present (59 percent) than when one was not (81 percent). Police officers were less likely to refuse to take a victim's report when an advocate was present (18 percent) than when one was not (43 percent). Furthermore, in the presence of an advocate, both police officers and medical providers were less likely to ask victims insensitive and unnecessary questions, such as whether they were sexually aroused by the rape. Medical providers were signifi-

cantly more likely to provide guideline-consistent care when an advocate was present. Victims with advocates were more likely than victims without advocates to receive information about STI risk (72 percent versus 36 percent) and HIV risk (47 percent versus 24 percent) and to receive prescriptions for STI prophylaxis (86 percent versus 56 percent) and emergency contraception (33 percent versus 14 percent). Although the majority of victims, with or without an advocate, reported feeling guilty, bad about themselves, depressed, and reluctant to seek further services as a result of their contact with police and medical providers, fewer felt this way when an advocate was present (49 percent versus 86 percent, 60 percent versus 83 percent, 53 percent versus 88 percent, and 61 percent versus 89 percent, respectively).

Although Campbell (2006) appears to offer strong support for the value of formal victim advocates, it is important to note that the study was not a true experiment. Victim advocates were present at a hospital that had a policy to include them in the treatment of rape victims. It is entirely plausible that a hospital with such a policy also has other administrative and cultural traits that lead to better care for victims, while a hospital that chooses not to call advocates may have a different working culture that produces negative experiences for victims. Research on the value of formal victim advocates is still limited, and additional formal evaluations of victim advocacy are necessary to further test the value of victim advocates in ensuring guideline-consistent care and preventing secondary victimization.

DoD Policy on Provision of Advocacy and Emotional Support Following Sexual Assault

On the recommendation of the Defense Task Force on Sexual Assault in the Military Services, the DoD has initiated multiple training endeavors and programs to improve victim support and advocacy in the immediate aftermath of a sexual assault (Iasiello et al., 2009). To ensure high-quality care for MSA victims, SAPRO conducts a number of trainings. Every servicemember receives a briefing on forms of reporting and the availability of resources for MSA victims. In 2010, almost all servicemembers recalled receiving this training (93 percent), and 90 percent had learned the points of contact for their sexual assault response coordinators (SARCs) and victim advocates (Rock et al., 2011). SAPRO also sponsors initial and annual refresher training for military victim advocates and oversees sexual assault training for senior leaders, first responders, criminal investigators, law enforcement, health care professionals, judge advocates, and

In the presence of an advocate, both police officers and medical providers were less likely to ask victims insensitive and unnecessary questions.

chaplains (SAPRO, 2011). Trainings are designed to foster a climate of nontolerance of sexual assault and to reduce the stigma associated with reporting victimization. The information and skills taught in each session are tailored to the audience (SAPRO, 2010). By casting the net of sexual assault education so widely, it is possible that every DoD service provider a victim encounters will have had some MSA training. If this training enterprise is successful, the number of critical, judgmental, and blaming responses directed toward victims during the vulnerable period immediately after an assault may decline. However, at this time, the outcomes associated with these training programs are unknown. Additional research is needed to examine the success of training in reducing attitudes that justify rape and blame victims for the assaults and instilling attitudes that are victim supportive.

The DoD also supports two levels of victim advocacy. SARC's coordinate services and care and are the first contact person for a victim. Victim advocates help guide victims through the DoD reporting process (restricted or unrestricted), provide information about services, address safety and security needs, and offer support (SAPRO, 2011). Victims may contact their SARC's office directly or may be referred to the office through a superior, a service provider, or a DoD helpline.

The FY 2010 SAPRO report notes that resources to support MSA victims are available 7 days a week, 24 hours a day. "Each victim who reports a sexual assault is offered the assistance of a SARC or SAPRO victim advocate, who explains the reporting options, services available, access to those services, and resources available for assistance with navigating the military criminal justice system" (SAPRO, 2011, p. 28). However, only 57 percent of victims reported being offered sexual assault advocacy services, and of those who received advocacy services, 50 percent were either neutral or dissatisfied with the advocate (Rock et al., 2011).

A new initiative, the DoD Safe Helpline, operates 24 hours a day, 7 days a week and provides confidential counseling and information about available DoD support services for victims of sexual assault. Users can access the helpline via an online chat interface, a toll-free number, or by texting. As of 2012, the program was quite new; to our knowledge, there are no publicly available data about utilization, satisfaction, or effectiveness in linking users to services. It will be important for DoD to pursue such questions to ensure that resources are appropriately allocated and that the system best meets the needs of servicemembers.

In its FY 2010 annual report, SAPRO reported initiating an evaluation of its efforts to support and improve victim advocacy. A working group had convened with the goals (among others) of evaluating staffing of installation-level victim assistance programs, ensuring adequate capability and resources for the task, assessing the effectiveness of victim advocacy programs, and modifying programs and oversight as the evaluation deems necessary (SAPRO, 2011). Given the limited outcome research on sexual assault victim advocacy in civilian or military settings, the results of this investigation could be of considerable value. DoD is in a unique position both to contribute to the general knowledge base about the possible value victim advocates add to high-quality care for servicemembers who have experienced an MSA and to improve that care incrementally as additional data and resources become available. In 2012, Secretary of Defense Leon Panetta announced a directive to require all victim advocates to complete training to meet civilian certification standards.

Mental Health and Psychiatric Care

One of the most important elements of mental health care in the immediate aftermath of a sexual assault is nonjudgmental, compassionate support from informal and formal support persons. Many victims experience a constellation of acute stress symptoms, including anxiety, disorganized thoughts and memory, nausea, hypervigilance, and numbing or dissociation that may make them fear that they are "going crazy." A strength-based approach may be appropriate, which minimizes pathology and reassures victims that they are experiencing a normal response to a severe trauma. Many victims will find that acute stress symptoms resolve over time. Two weeks after an assault, 94 percent of victims meet the Diagnostic and Statistical Manual of Mental Disorders IV criteria for PTSD; that proportion drops to 64 percent by one month, then to 47 percent by three months (Rothbaum et al., 1992). For this reason, mental health services may not be necessary as a matter of course for every sexual assault victim, and we recommend that care for victims be approached individually, with mental health care provided if and when the victim needs it. While sexual assault is associated with an increased risk of developing a psychiatric condition, such as PTSD and depression, being a sexual assault victim does not necessarily imply a psychiatric condition.

For victims who do develop mental health problems, the most common are PTSD and depression (Kimerling et al., 2007; Kimerling et al, 2010;

While sexual assault is associated with an increased risk of developing a psychiatric condition, such as PTSD and depression, being a sexual assault victim does not necessarily imply a psychiatric condition.

Luterek, Bittinger, and Simpson, 2011; Suris and Lind, 2008). Evidence-based treatments are available for these common diagnoses (Burnam et al., 2008). PTSD, which is characterized by avoidance and intrusive reexperiencing symptoms following a traumatic event, can be treated effectively through exposure-based cognitive behavioral therapy (Burnam et al., 2008) in either individual or group settings. Several types of therapies use these techniques, which include teaching patients the skills to confront the feared situation, context, or memory until anxiety and other symptoms recede, as well as teaching anxiety reduction skills and ways to improve dysfunctional thinking and solve problems. It has been shown to be effective among female sexual assault victims (Foa, Keane, and Friedman, 2000). Pharmaceutical treatment may also be effective in treating PTSD, but evidence for this approach is mixed (Burnam et al., 2008).

Victims may develop major depression, which is characterized by persistent sadness, irritability, and/or lack of pleasure and may also include sleep, appetite, and sexual functioning disturbances; lack of energy; trouble concentrating; and thoughts of suicide. The evidence base supports pharmacological treatment of depression (selective serotonin reuptake inhibitors) and several behavioral therapies, including cognitive-behavioral therapy and interpersonal therapy (Burnam et al., 2008). Cognitive-behavioral therapy is a structured treatment in which patients modify unhelpful or unrealistic beliefs about themselves and the world and implement new behaviors and ways of thinking. This form of therapy has a broad literature base supporting its utility in improving depressive symptoms and maintaining short- and long-term improvement (Burnam et al., 2008). Interpersonal therapy, another short-term treatment, has also been shown to improve depression symptoms (Burnam et al., 2008). Interpersonal therapists help patients assess their social roles and relationships and improve their functioning by solving persistent problems.

DoD Policy on Provision of Mental Health and Psychiatric Care Following Sexual Assault

Given that the psychiatric sequelae of MSA are similar to those for combat exposure, policies and programs that support psychological health and deliver mental health care are applicable for MSA victims. Veterans' Administration and DoD guidelines for PTSD and depression treatment are consistent with the scientific evidence base (Burnam et al., 2008). However, multiple barriers stand between servicemembers with psychiatric conditions and access to care (see Schell

and Marshall, 2008). At the system level, there is inadequate access for those who seek care, as evidenced by long wait times, shortages of well-qualified mental health service providers, and limited availability of care in rural regions. Active-duty servicemembers are often unable to take time off during standard working hours to seek care. In addition, concerns about the confidentiality of their use of mental health services may prevent some servicemembers from seeking care. Servicemembers report concerns that they will appear weak to leadership and that seeking help will harm their careers. These barriers are limited to those reported by servicemembers seeking services stateside and may or may not correspond to barriers to care experienced in theater.

MSA victims are likely to face all the same barriers described above but may also have unique concerns that further hinder access to mental health care (Bell and Reardon, 2011). Servicemembers' concerns about the availability of mental health records to the chain of command may be particularly problematic for MSA victims, given that the perpetrator is within the victim's chain of command in about one-quarter of cases. Even counselors working in systems designed to increase the confidentiality of servicemembers seeking help, such as Military OneSource, are obligated to break confidentiality when violence is reported, so MSA victims cannot access confidential care (Military OneSource, 2012). Furthermore, DoD mental health providers likely have significant experience treating and responding to servicemembers recovering from combat-related disorders. These providers, despite their expertise, may be poorly prepared for responding to sexual trauma survivors. They may lack the training necessary to adapt services to the needs of MSA victims and to respond empathetically and professionally to MSA victims. In group treatment settings, MSA victims may not feel comfortable sharing their experiences with servicemembers who may share their symptoms but not a similar precipitating event. The extent to which MSA victims are able to access mental health care, the unique barriers they face, the efficacy of their treatment, and the extent to which they are satisfied with services and providers deserves further study.

Directions for Future Work

Since the inception of SAPRO in 2005, there has been an effort to raise awareness of MSA; prevent future assaults; and ensure that victims have access to advocacy and medical, forensic, and mental health services. As with any new task, outlining the goals and developing the plan for moving forward are only

Servicemembers' concerns about the availability of mental health records to the chain of command may be particularly problematic for MSA victims, given that the perpetrator is within the victim's chain of command in about one-quarter of cases.

the first steps in a long path toward success. On the basis of this review, we recommend several avenues for additional research and analysis that would provide important information to direct resources and services efficiently and effectively to those in need.

Improve quality of estimates of MSA incidence and prevalence. There is wide variability in the estimates of the incidence and prevalence of MSA. The design and implementation of an effective program for prevention and response requires a well-formulated understanding of the scope of the problem. The DoD might consider supporting a formal, anonymous survey conducted by a non-DoD entity (to encourage reporting and reduce respondent fears that reports may not be confidential) of a representative sample of servicemembers to establish an estimate of MSA experiences across the services. A strongly designed epidemiological survey would serve several purposes:

- Establish a baseline with which to track future improvements in the incidence of MSA.
- Document the relative proportion of victims who disclose and choose not to disclose their experiences and how this changes over time.
- Describe the characteristics of MSA to better target prevention and intervention programs. For example, if many assailants are partners or spouses, approaches that rely on bystanders to intervene may not be effective because these assaults would occur largely in private spaces without witnesses.
- Document the risk of sexual assault among servicemembers relative to civilians. Although the rate of sexual assault may appear heightened among servicemembers, this might be a result of the unique demographics of the U.S. military.
- Identify the characteristics of perpetrators to better target prevention efforts.

Study and document needs of undisclosed victims. Recommendations for care are based almost entirely on the experiences and needs of victims who disclose to the criminal justice system or seek formal support services. There is a great need to better understand the experiences and needs of the undisclosed majority. Mixed-methods studies comparing disclosed and undisclosed MSA victims would be useful to

- understand the barriers and facilitators of disclosure
- improve educational efforts to improve rates of disclosure
- develop strategies to decrease the likelihood that victims will be penalized for disclosure
- ensure that services are matched and scaled to

meet the needs of MSA victims who may not have disclosed in the past.

Evaluate training programs. SAPRO has undertaken a servicewide training initiative to ensure that all servicemembers are aware of MSA services and reporting options and that all leadership and medical personnel have been trained to respond to MSA. An outcome evaluation to assess the success of this enterprise would provide important information about whether the current strategy does or does not improve the likelihood that victims will disclose assaults, access care, and receive a competent and professional response from medical personnel and leadership.

Evaluate implementation of victim care guidelines. DoD guidelines for the care of MSA victims appear to match well with civilian recommendations for care. The next step in the process will be to evaluate the extent to which the care that victims actually receive matches DoD directives for the care they ought to receive. A mixed-methods study that included both qualitative interviews with MSA victims and anonymous surveys of MSA victims would allow DoD to examine this question. Such an evaluation would

- identify barriers and facilitators to seeking immediate care and follow-up services
- identify factors associated with improved short- and long-term outcomes among victims
- provide a baseline of service quality to track the effects of future quality-improvement initiatives
- provide a strategy to evaluate the value and success of victim advocates via rates of appropriate medical, forensic, and mental health services among victims with advocate support.

Conclusion

Former Secretary of Defense Robert Gates has said: “The department has a no-tolerance policy toward sexual assault. This type of act not only does unconscionable harm to the victim; it destabilizes the workplace and threatens national security” (SAPRO, 2011). SAPRO and DoD have invested considerable effort and resources to reduce MSA. For servicemembers who have been victimized, changes have been made to improve reporting options and service provision. As with any large undertaking, there is more to be done. DoD might consider several research projects to better direct the provision of services, identify promising intervention or prevention strategies, and monitor the effectiveness of existing efforts. These could include a comprehensive, longitudinal epide-

Recommendations for care are based almost entirely on the experiences and needs of victims who disclose to the criminal justice system or seek formal support services. There is a great need to better understand the experiences and needs of the undisclosed majority.

miological study of MSA, a needs assessment of disclosed and undisclosed MSA victims, an evaluation of the training enterprise, and an evaluation to document the extent to which DoD directives requiring immediate, evidence-based care for victims are being implemented with fidelity. Achieving an environment that does not tolerate sexual violence is likely to

be an iterative process with multiple cycles of policy recommendations, DoD directives, implementation, scientific research, and further recommendations. This process has the potential to reduce the incidents of sexual assaults, as well as to minimize the damage that these assaults cause. ■

Bibliography

- American College of Surgeons Committee on Trauma, *Resources for Optimal Care of the Injured Patient*, Chicago: American College of Surgeons, 2006.
- Assistant Secretary of Defense (Health Affairs), "Improved Prevention and Response to Allegations of Sexual Assault Involving Members of the Armed Forces and Availability of Care for Victims of Sexual Assault," Report to Congress, Washington, D.C.: U.S. Department of Defense, July 2010.
- Bachman, R., "A Comparison of Annual Incidence Rates and Contextual Characteristics of Intimate Partner Violence Against Women from the National Crime Victimization Survey (NCVS) and the National Violence Against Women Survey (NVAWS)," *Violence Against Women*, Vol. 6, August 2000, pp. 839–867.
- Banyard, V. L., E. G. Plante, and M. M. Moynihan, "Bystander Education: Bringing a Broader Community Perspective to Sexual Violence Prevention," *Journal of Community Psychology*, Vol. 32, No. 1, January 2004, pp. 61–79.
- Basile, K. C., J. Chen, M. C. Black, and L. Saltzman, "Prevalence and Characteristics of Sexual Violence Victimization Among U.S. Adults, 2001–2003," *Violence and Victims*, Vol. 22, No. 4, August 2007, pp. 437–448.
- Bell, M. E., and A. Reardon, "Experiences of Sexual Harassment and Sexual Assault in the Military Among OEF/OIF Veterans: Implications for Health Care Providers," *Social Work in Health Care*, Vol. 50, No. 1, June 2011, pp. 34–50.
- Black, M. C., K. C. Basile, M. J. Breiding, S. G. Smith, M. L. Walters, M. T. Merrick, J. Chen, and M. R. Stevens, "The National Intimate Partner and Sexual Violence Survey (NISVS): 2010 Summary Report," Atlanta: National Center for Injury Prevention and Control, November 2011. As of June 6, 2012: http://www.cdc.gov/ViolencePrevention/pdf/NISVS_Report2010-a.pdf
- Bostock, D. J., and J. G. Daley, "Lifetime and Current Sexual Assault and Harassment Victimization Rates of Active-Duty United States Air Force Women," *Violence Against Women*, Vol. 13, No. 9, September 2007, pp. 927–944.
- Breitenbecher, K. H., and C. Gidycz, "An Empirical Evaluation of a Program Designed to Reduce the Risk of Multiple Sexual Victimization," *Journal of Interpersonal Violence*, Vol. 13, No. 4, August 1998, pp. 472–488.
- Breslau, N., H. D. Chilcoat, R. C. Kessler, and G. C. Davis, "Previous Exposure to Trauma and PTSD Effects of Subsequent Trauma: Results from the Detroit Area Survey of Trauma," *American Journal of Psychiatry*, Vol. 156, No. 6, June 1999, pp. 902–907.
- Burnam, M. A., L. S. Meredith, T. C. Helmus, R. M. Burns, R. A. Cox, E. D'Amico, L. T. Martin, M. E. Vaiana, K. M. Williams, and M. R. Yochelson, "Systems of Care: Challenges and Opportunities to Improve Access to High-Quality Care," in Terri Tanielian and Lisa H. Jaycox, eds., *Invisible Wounds of War: Psychological and Cognitive Injuries, Their Consequences, and Services to Assist Recovery*, Santa Monica, Calif.: RAND Corporation, MG-720-CCF, 2008. As of August 1, 2011: <http://www.rand.org/pubs/monographs/MG720.html>
- Campbell, R., "Rape Survivors' Experiences with the Legal and Medical Systems: Do Rape Victim Advocates Make a Difference?" *Violence Against Women*, Vol. 12, January 2006, pp. 30–45.
- Campbell, R., D. Patterson, and L. F. Lichty, "The Effectiveness of Sexual Assault Nurse Examiner (SANE) Programs: A Review of Psychological, Medical, Legal, and Community Outcomes," *Trauma Violence and Abuse*, Vol. 6, October 2005, pp. 313–329.
- Campbell, R., and S. Raja, "Secondary Victimization of Rape Victims: Insights from Mental Health Professionals Who Treat Survivors of Violence," *Violence and Victims*, Vol. 14, No. 3, Fall 1999, pp. 261–275.
- Campbell, R., and S. Raja, "The Sexual Assault and Secondary Victimization of Female Veterans: Help-Seeking Experiences with Military and Civilian Social Systems," *Psychology of Women Quarterly*, Vol. 29, February 2005, pp. 97–106.
- Campbell, R., T. Seff, H. E. Barnes, C. E. Ahrens, S. M. Wasco, and Y. Zaragoza-Diesfeld, "Community Services for Rape Survivors: Enhancing Psychological Well-being or Increasing Trauma?" *Journal of Consulting and Clinical Psychology*, Vol. 67, No. 6, December 1999, pp. 847–858.
- Campbell, R., S. M. Wasco, C. E. Ahrens, T. Seff, and H. E. Barnes, "Preventing the 'Second Rape': Rape Survivors' Experiences With Community Service Providers," *Journal of Interpersonal Violence*, Vol. 16, No. 12, December 2001, pp. 1239–1260.
- CDC—See Centers for Disease Control.
- Centers for Disease Control, "Sexually Transmitted Diseases Treatment Guidelines, 2010," *Morbidity and Mortality Weekly Report*, Vol. 59, No. RR-12, December 2010, pp. 1–110.
- Charles, C., A. Gafni, and T. Whelan, "Decision-Making in the Physician-Patient Encounter: Revisiting the Shared Treatment Decision-Making Model," *Social Science & Medicine*, Vol. 49, September 1999, pp. 651–661.
- Ciccone, D. S., D. K. Elliott, H. K. Chandler, S. Nayak, and K. G. Raphael, "Sexual and Physical Abuse in Women with Fibromyalgia Syndrome: A Test of the Trauma Hypothesis," *The Clinical Journal of Pain*, Vol. 21, No. 5, September/October 2005, pp. 378–386.

- Crome, S., and M. P. McCabe, "The Impact of Rape on Individual, Interpersonal, and Family Functioning," *Journal of Family Studies*, Vol. 1, No. 1, April 1995, pp. 58–70.
- Davis, R. C., E. Brickman, and T. Baker, "Supportive and Unsupportive Responses of Others to Rape Victims: Effects on Concurrent Victim Adjustment," *American Journal of Community Psychology*, Vol. 19, No. 3, 1991, pp. 443–451.
- Department of Defense Directive 6495.01, Sexual Assault Prevention and Response (SAPR) Program, January 23, 2012.
- Deputy Secretary of Defense, "Document Retention in Cases of Restricted and Unrestricted Reports of Sexual Assault," DTM 11-062, December 16, 2011. As of October 10, 2012:
<http://www.dtic.mil/whs/directives/corres/pdf/DTM-11-062.pdf>
- DoD—See U.S. Department of Defense.
- DoJ—See U.S. Department of Justice.
- Elliott, D. M., D. S. Mok, and J. Briere, "Adult Sexual Assault: Prevalence, Symptomatology, and Sex Differences in the General Population," *Journal of Traumatic Stress*, Vol. 17, No. 3, June 2004, pp. 203–211.
- Fanslow, J., and E. Robinson, "Violence Against Women in New Zealand: Prevalence and Health Consequences," *The New Zealand Medical Journal*, Vol. 117, No. 1206, November 2004, pp. 1–12.
- Federal Bureau of Investigation, "Crime in the United States, by Volume and Rate per 100,000 Inhabitants," September 2010. As of February 22, 2010:
http://www2.fbi.gov/ucr/cius2009/data/table_01.html
- Feldhaus, K. M., D. Houry, and R. Kaminsky, "Lifetime Sexual Assault Prevalence Rates and Reporting Practices in an Emergency Department Population," *Annals of Emergency Medicine*, Vol. 36, No. 1, July 2000, pp. 23–27.
- Fisher, B. S., "The Effects of Survey Question Wording on Rape Estimates: Evidence from a Quasi-Experimental Design," *Violence Against Women*, Vol. 15, February 2009, pp. 133–147.
- Fisher, B. S., L. E. Daigle, F. T. Cullen, and M. G. Turner, "Reporting Sexual Victimization to the Police and Others: Results from a National-Level Study of College Women," *Criminal Justice and Behavior*, Vol. 30, February 2003, pp. 6–38.
- Foa, E. B., T. M. Keane, and M. J. Friedman, "Guidelines for Treatment of PTSD," *Journal of Traumatic Stress*, Vol. 13, 2000, pp. 539–588.
- Frayne, S. M., K. M. Skinner, L. M. Sullivan, T. J. Tripp, C. S. Hankin, N. R. Kressin, and D. R. Miller, "Medical Profile of Women Veterans Administration Outpatients Who Report a History of Sexual Assault Occurring While in the Military," *Journal of Women's Health and Gender-Based Medicine*, Vol. 8, July 1999, pp. 835–845.
- Gidycz, C. A., M. J. Laymann, C. L. Rich, M. Crothers, J. Gylys, A. Matorin, and C. D. Jacobs, "An Evaluation of an Acquaintance Rape Prevention Program: Impact on Attitudes, Sexual Aggression, and Sexual Victimization," *Journal of Interpersonal Violence*, Vol. 16, No. 11, November 2001, pp. 1120–1138.
- Gidycz, C. A., S. J. Lynn, C. L. Rich, N. L. Marioni, C. Loh, L. M. Blackwell, J. Stafford, R. Fite, and J. Pashdag, "The Evaluation of a Sexual Assault Risk Reduction Program: A Multisite Investigation," *Journal of Consulting and Clinical Psychology*, Vol. 69, No. 6, December 2001, pp. 1073–1078.
- Gidycz, C. A., L. M. Orchowski, and A. D. Berkowitz, "Preventing Sexual Aggression Among College Men: An Evaluation of a Social Norms and Bystander Intervention Program," *Violence Against Women*, Vol. 17, No. 6, June 2011, pp. 720–742.
- Golding, J. M., "Sexual Assault History and Physical Health in Randomly Selected Los Angeles Women," *Health Psychology*, Vol. 13, March 1994, pp. 130–138.
- Herbert, T. B., and C. Dunkel-Schetter, "Negative Social Reactions to Victims: An Overview of Responses and Their Determinants," in Leo Montada, Sigrun-Heide Filipp, and Melvin J. Learner, eds., *Life Crises and Experiences of Loss in Adulthood*, Hillsdale, N.J.: Lawrence-Erlbaum Associates Inc., April 1992, pp. 497–518.
- Hilden, M., B. Schei, and K. Sidenius, "Genitoanal Injuries in Female Victims of Sexual Assault," *Forensic Science International*, Vol. 154, November 2005, pp. 200–201.
- Holmes, M., "Sexually Transmitted Infections in Female Rape Victims" *AIDS Patient Care and STIS*, Vol. 13, No. 12, December 1999, pp. 703–708.
- Holmes, M. M., H. S. Resnick, D. G. Kilpatrick and C. L. Best, "Rape-Related Pregnancy: Estimates and Descriptive Characteristics from a National Sample of Women," *American Journal of Obstetrics and Gynecology*, Vol. 175, No. 2, August 1996, pp. 320–325.
- Iasiello, L. V., M. Wassell, I. Arias, A. M. Carpenter, S. K. G. Dunbar, J. M. Grant, et al., *Report of the Defense Task Force on Sexual Assault in the Military Services*, Alexandria, Va., December 2009.
- Jenny, C., T. M. Hooton, A. Bowers, M. K. Copass, J. N. Krieger, S. L. Hillier, N. Kiviat, L. Corey, W. E. Stamm, and K. K. Holmes, "Sexually Transmitted Diseases in Victims of Rape," *The New England Journal of Medicine*, Vol. 322, No. 11, March 1990, pp. 713–715.

- Jordan, J., "Worlds Apart? Women, Rape and the Police Reporting Process," *British Journal of Criminology*, Vol. 41, No. 4, 2001, pp. 679–706.
- Kang, H., N. Dalager, C. Mahan, and E. Ishii, "The Role of Sexual Assault on the Risk of PTSD Among Gulf War Veterans," *Annals of Epidemiology*, Vol. 15, No. 3, March 2005, pp. 191–195.
- Kelly, L., and L. Regan, "Good Practice in Medical Responses to Recently Reported Rape, Especially Forensic Examinations," briefing paper, London: Child and Woman Abuse Studies Unit, London Metropolitan University, July 2003. As of February 16, 2012: <http://www.rcne.com/downloads/RepsPubs/Forensic.pdf>
- Kilpatrick, D. G., R. Acierno, H. S. Resnick, B. E. Saunders, and C. L. Best, "A 2-year Longitudinal Analysis of the Relationships Between Violent Assault and Substance Use in Women," *Journal of Consulting and Clinical Psychology*, Vol. 65, No. 5, October 1997, pp. 834–847.
- Kilpatrick, D. G., C. N. Edmonds, and A. Seymour, *Rape in America: A Report to the Nation*. Arlington, Va.: National Victim Center and Medical University of South Carolina, 1992.
- Kimerling, R., K. Gima, M. W. Smith, A. Street, and S. Frayne, "The Veterans Health Administration and Military Sexual Trauma," *American Journal of Public Health*, Vol. 97, No. 12, December 2007, pp. 2160–2166.
- Kimerling, R., A. E. Street, J. Pavao, M. W. Smith, R. C. Cronkite, T. H. Holmes, and S. M. Frayne, "Military-Related Sexual Trauma among Veterans Health Administration Patients Returning from Afghanistan and Iraq," *American Journal of Public Health*, Vol. 100, No. 8, August 2010, pp. 1409–1412.
- Koss, M. P., "The Negative Impact of Crime Victimization on Women's Health and Medical Use," in Alice J. Dan, ed., *Reframing Women's Health: Multidisciplinary Research and Practice*, Thousand Oaks, Calif.: Sage Publications, 1994.
- Lai, C., A. Beardsell, B. Yip, R. Hogg, and, A. McLeod, "Utilization and Adherence of a Population-Based Post-Exposure Prophylaxis Program," *Canadian Journal of Infectious Disease*, Suppl B, 1999, pp. 10–28B.
- Landovitz, R. J., and J. S. Currier, "Postexposure Prophylaxis for HIV Infection," *New England Journal of Medicine*, Vol. 261, No. 18, October 2009, pp. 1768–1775.
- Langhinrichsen-Rohling, J., J. D. Foubert, H. M. Brasfield, B. Hill, and S. Shelley-Tremblay, "The Men's Program: Does It Impact College Men's Self-Reported Bystander Efficacy and Willingness to Intervene?" *Violence Against Women*, Vol. 17, No. 6, June 2011, pp. 743–759.
- Laumann, E. O., J. H. Gagnon, R. T. Michael, and S. Michaels, *The Social Organization of Sexuality: Sexual Practices in the United States*, Chicago: University of Chicago Press, December 1994.
- Litz, B. T., M. J. Gray, R. A. Bryant, and A. B. Adler, "Early Intervention for Trauma: Current Status and Future Directions," *Clinical Psychology: Science and Practice*, Vol. 9, June 2002, pp. 112–134.
- Loutfy, M. R., S. MacDonald, T. Myhr, H. Husson, J. Du Mont, S. Balla, T. Antoniou, and A. Rachlis, "Prospective Cohort Study of HIV Post-Exposure Prophylaxis for Sexual Assault Survivors," *Antiviral Therapy*, Vol. 13, 2008, pp. 87–95.
- Luterek, J. A., J. N. Bittinger, and T. L. Simpson, "Posttraumatic Sequelae Associated with Military Sexual Trauma in Female Veterans Enrolled in VA Outpatient Mental Health Clinics," *Journal of Trauma and Dissociation*, Vol. 12, No. 3, April 2011, pp. 261–274.
- Madigan, L., and N. C. Gamble, *The Second Rape: Society's Continued Betrayal of the Victim*, New York: Lexington Books, December 1991.
- Martin, P. Y., and R. M. Powell, "Accounting for the 'Second Assault': Legal Organizations Framing of Rape Victims," *Law and Social Inquiry*, Vol. 19, No. 4, October 1994, pp. 853–890.
- Masho, S. W., R. K. Odor, and T. Adera, "Sexual Assault in Virginia: A Population-Based Study," *Women's Health Issues*, Vol. 15, No. 4, July–August 2005, pp. 157–166.
- Medical Command Regulation 40-36, *Medical Facility Management of Sexual Assault*, Ft. Sam Houston, Tex.: Headquarters, U.S. Army Medical Command, December 23, 2004.
- Military OneSource, "Privacy Policy," web page, 2012. As of March 6, 2012: <http://www.militaryonesource.mil/MOS/f?p=MOS:CONTENT:0:::::SV,UT,LG,CID,TID,CT,COHE:,EN,23.10.60.10.0.0.0.0.,0>
- Morales, L., "Deployed Medical Professionals Learn to Conduct Sexual Assault Forensic Exams," U.S. Army website, June 7, 2011. As of February 22, 2012: <http://www.army.mil/article/59075/>
- National Center for Injury Prevention and Control, *Costs of Intimate Partner Violence Against Women in the United States*, Atlanta: Centers for Disease Control and Prevention, March 2003.
- National Defense Authorization Act for Fiscal Year 2012.
- National Victim Center, *Rape in America: A Report to the Nation*, Arlington, Va., 1992.
- NCIPC—See National Center for Injury Prevention and Control.

- Panetta, Leon, "DoD News Briefing with Secretary Panetta from the Pentagon," Washington, D.C.: Office of the Assistant Secretary of Defense (Public Affairs), Department of Defense, January 2012. As of August 6, 2012:
<http://www.defense.gov/transcripts/transcript.aspx?transcriptid=4959>
- Parkin, J. M., M. Murphy, J. Anderson, S. El-Gadi, G. Forster, and J. Pinching, "Tolerability and Side-Effects of Post-Exposure Prophylaxis for HIV Infection," *The Lancet*, Vol. 355, No. 9205, February 2000, pp. 722–723.
- Peterson, Z. D., E. K. Voller, M. A. Polusny, and M. Murdoch, "Prevalence and Consequences of Adult Sexual Assault of Men: Review of Empirical Findings and State of the Literature," *Clinical Psychology Review*, Vol. 31, February 2011, pp. 1–24.
- Polusny, M., and V. M. Follette, "Long-Term Correlates of Child Sexual Abuse: Theory and Review of the Empirical Literature," *Applied and Preventive Psychology*, Vol. 4, No. 3, Summer 1995, pp. 143–166.
- Post, L. A., N. J. Mezey, C. Maxwell, and W. N. Wibert, "The Rape Tax: Tangible and Intangible Costs of Sexual Violence," *Journal of Interpersonal Violence*, Vol. 17, July 2002, pp. 773–782.
- Public Law 99-661, Section 705(c), National Defense Authorization Act for Fiscal Year 1987.
- Randall, M., and L. Haskell, "Sexual Violence in Women's Lives: Findings from the Women's Safety Project, a Community-Based Survey," *Violence Against Women*, Vol. 1, No. 1, March 1995, pp. 6–31.
- Rennison, C. M., *Rape and Sexual Assault: Reporting to Police and Medical Attention, 1992–2000*, Washington, D.C.: Bureau of Justice Statistics, August 2002.
- Resick, P. A., "The Psychological Impact of Rape," *Journal of Interpersonal Violence*, Vol. 8, June 1993, pp. 223–255.
- Resnick, H., R. Acierno, A. E. Waldrop, L. King, D. King, C. Danielson, K. J. Ruggiero, and D. Kilpatrick, "Randomized Controlled Evaluation of an Early Intervention to Prevent Post-Rape Psychopathology," *Behavioral Research and Therapy*, Vol. 45, No. 10, October 2007, pp. 2432–2447.
- Riggs, N., D. Houry, G. Long, V. Markovchick, and K. M. Feldhaus, "Analysis of 1,076 Cases of Sexual Assault," *Annals of Emergency Medicine*, Vol. 35, April 2000, pp. 358–362.
- Rock, L. M., R. N. Lipari, P. J. Cook, and A. D. Hale, *2010 Workplace and Gender Relations Survey of Active Duty Members: Overview Report on Sexual Assault*, Arlington, Va.: Defense Manpower Data Center, March 2011.
- Rothbaum, B. O., E. B. Foa, D. S. Riggs, T. Murdock, and W. Walsh, "A Prospective Examination of Post-Traumatic Stress Disorder in Rape Victims," *Journal of Traumatic Stress*, Vol. 5, 1992, pp. 455–475.
- Sadler, A. G., B. M. Booth, B. L. Cook, and B. N. Doebbeling, "Factors Associated with Women's Risk of Rape in the Military Environment," *American Journal of Industrial Medicine*, Vol. 5, March 2003, pp. 262–273.
- Sadler, A. G., B. M. Booth, D. Nielson, and B. N. Doebbeling, "Health-Related Consequences of Physical and Sexual Violence: Women in the Military," *Obstetrics and Gynecology*, Vol. 96, No. 3, September 2000, pp. 473–480.
- SAPRO—See Sexual Assault Prevention and Response Office.
- Schell, T. L., and G. N. Marshall, "Survey of Individuals Previously Deployed for OEF/OIF," in Terri Tanielian and Lisa H. Jaycox, eds., *Invisible Wounds of War: Psychological and Cognitive Injuries, Their Consequences, and Services to Assist Recovery*, Santa Monica, Calif.: RAND Corporation, MG-720-CCF, 2008. As of August 1, 2011:
<http://www.rand.org/pubs/monographs/MG720.html>
- Sexual Assault Prevention and Response Office (SAPRO), *Department of Defense Annual Report on Sexual Assault in the Military: Fiscal Year 2009*, Department of Defense, March 2010.
- , *Department of Defense Annual Report on Sexual Assault in the Military: Fiscal Year 2010*, Department of Defense, March 2011.
- Skinner, K. M., N. Kressin, S. Frayne, T. J. Tripp, C. S. Hankin, D. R. Miller, and L. M. Sullivan, "The Prevalence of Military Sexual Assault Among Female Veterans' Administration Outpatients," *Journal of Interpersonal Violence*, Vol. 15, March 2000, pp. 291–310.
- Sorenson, S. B., and J. M. Siegel, "Gender, Ethnicity, and Sexual Assault: Findings from a Los Angeles Study," *Journal of Social Issues*, Vol. 48, Spring 1992, pp. 93–104.
- Starzynski, L. L., S. E. Ullman, H. H. Filipa, and S. M. Townsend, "Correlates of Women's Sexual Assault Disclosures to Informal and Formal Support Services," *Violence and Victims*, Vol. 20, No. 4, August 2005, pp. 417–432.
- Street, A., and J. Stafford, "Military Sexual Trauma: Issues in Caring for Veterans," in *Iraq War Clinician Guide*, 2nd ed., Washington, D.C.: National Center for Post-Traumatic Stress Disorder, June 2004, pp. 66–69. As of February 21, 2012:
http://www.ptsd.va.gov/professional/manuals/manual-pdf/iwgcg/iraq_clinician_guide_v2.pdf

Street, A. E., J. Stafford, C. M. Mahan, and A. Hendricks, "Sexual Harassment and Assault Experienced by Reservists During Military Service: Prevalence and Health Correlates," *Journal of Rehabilitation Research and Development*, Vol. 45, No. 3, 2008, pp. 409–420.

Suris, A., and L. Lind, "Military Sexual Trauma: A Review of Prevalence and Associated Health Consequences in Veterans," *Trauma, Violence and Abuse*, Vol. 9, October 2008, pp. 250–269.

Tjaden, P., and N. Thoennes, "Prevalence, Incidences, and Consequences of Violence Against Women: Findings from the National Violence Against Women Survey," Washington, D.C.: National Institute of Justice and Centers for Disease Control and Prevention, November 1998.

Turchik, J. A., and S. M. Wilson, "Sexual Assault in the U.S. Military: A Review of the Literature and Recommendations for the Future," *Aggression and Violent Behavior*, Vol. 15, July–August 2010, pp. 267–277.

Ullman, S. E., "Social Reactions, Coping Strategies, and Self-Blame Attributions in Adjustment to Sexual Assault," *Psychology of Women Quarterly*, Vol. 20, December 1996, pp. 505–526.

Ullman, S. E., M. M. Foyne, and S. S. S. Tang, "Benefits and Barriers to Disclosing Sexual Trauma: A Contextual Approach," *Journal of Trauma and Dissociation*, Vol. 11, April 2010, No. 2, pp. 127–133.

U.S. Air Force, *Report Concerning the Assessment of USAF Sexual Assault Prevention and Response*, Washington, D.C.: Department of the Air Force, August 2004. As of March 6, 2012: http://www.dtic.mil/dacowits/agendadoc/USAF_Sexual_Assault_p_r.pdf

U.S. Department of Defense, "Task Force Report on Care for Victims of Sexual Assault," Washington, D.C., April 2004. As of March 6, 2012: <http://www.defense.gov/news/may2004/d20040513satreport.pdf>

———, "DD Form 2911, DoD Sexual Assault Forensic Examination Report," Washington, D.C., September 2011a. As of June 6, 2012: <http://www.dtic.mil/whs/directives/infomgt/forms/eforms/dd2911.pdf>

———, "Active Duty Military Personnel Strengths by Regional Area by Country (309A)" Washington, D.C., March 2011b. As of August 6, 2012: <http://www.globalsecurity.org/military/library/report/2011/hst1103.pdf>

———, "Victim Instructions: DoD Sexual Assault Evidence Collection Kit and DD Form 2911," Washington, D.C., September 2011c. As of June 6, 2012: <http://www.dtic.mil/whs/directives/infomgt/forms/eforms/dd2911iv.pdf>

U.S. Department of Justice, Office on Violence Against Women, "A National Protocol for Sexual Assault Medical Forensic Examinations: Adults/Adolescents," September 2004. As of February 16, 2012: <https://www.ncjrs.gov/pdffiles1/ovw/206554.pdf>

von Hertzen, H., G. Piaggio, J. Ding, J. Chen, S. Song, G. Bartfai, E. Ng, K. Gemzell-Danielsson, A. Oyunbileg, S. Wu, W. Cheng, F. Ludicke, A. Pretnar-Darovec, R. Kirkman, S. Mittal, A. Khomassuridze, D. Apter, and A. Peregoudov, "Low Dose Mifepristone and Two Regimens of Levonorgestrel for Emergency Contraception: A WHO Multi-centre Randomised Trial," *The Lancet*, Vol. 360, No. 9348, December 2002, pp. 1803–1811.

Walsh, W. A., V. L. Banyard, M. M. Moynihan, S. Ward, and E. S. Cohn, "Disclosure and Service Use on a College Campus After an Unwanted Sexual Experience," *Journal of Trauma & Dissociation*, Vol. 11, April 2010, pp. 134–151.

Weaver, T. L., and G. A. Clum, "Psychological Distress Associated with Interpersonal Violence: A Meta-Analysis," *Clinical Psychology Review*, Vol. 15, No. 2, 1995, pp. 115–140.

WHO—See World Health Organization.

Wiebe, E. R., S. E. Comay, M. McGregor, and S. Ducceschi, "Offering HIV Prophylaxis to People Who Have Been Sexually Assaulted: 16 months' Experience in a Sexual Assault Service," *Canadian Medical Association Journal*, Vol. 162, No. 5, March 2000, pp. 641–645.

Women in Military Service for America Memorial Foundation, "Statistics on Women in the Military," Washington, D.C., November 2011. As of August 6, 2012: <http://www.womensmemorial.org/PDFs/StatsonWIM.pdf>

World Health Organization, *Guidelines for Medico-Legal Care for Victims of Sexual Violence*, Geneva, 2003. As of February 16, 2012: <http://whqlibdoc.who.int/publications/2004/924154628X.pdf>

Yaeger, D., N. Himmelfarb, A. Cammack, and J. Mintz, "DSM-IV Diagnosed Posttraumatic Stress Disorder in Women Veterans with and Without Military Sexual Trauma," *Journal of General Internal Medicine*, Vol. 21, March 2006, pp. S65–69.

About This Paper

This research was conducted within the Forces and Resources Policy Center of the RAND National Defense Research Institute (NDRI), a federally funded research and development center sponsored by the Office of the Secretary of Defense, the Joint Staff, the Unified Combatant Commands, the Navy, the Marine Corps, the defense agencies, and the defense Intelligence Community. For more information on the Forces and Resources Policy Center, see <http://www.rand.org/nsrd/ndri/centers/frp.html> or contact the director (contact information is provided on the web page). The authors can be contacted by mail at the RAND Corporation, 1776 Main St., Santa Monica, CA 90405-2138; or by email at cfarris@rand.org, tschell@rand.org, and territ@rand.org.

RAND publications are available at www.rand.org

The RAND Corporation is a nonprofit institution that helps improve policy and decisionmaking through research and analysis. RAND's publications do not necessarily reflect the opinions of its research clients and sponsors. **RAND**® is a registered trademark.

RAND

Headquarters Campus

1776 Main Street
P.O. Box 2138
Santa Monica, CA
90407-2138

Offices

Santa Monica, CA
Washington, DC
Pittsburgh, PA
New Orleans, LA/Jackson, MS
Boston, MA

Cambridge, UK
Brussels, BE

www.rand.org