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# Army Community Service Family Advocacy Program (FAP) Economic Assessment Report

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**Contents**

**Executive Summary**

The Army Family Advocacy Program (FAP) aims to provide all Army installations with necessary services and personnel to help treat and prevent cases of child maltreatment (CM) and intimate partner violence (IPV), as well-functioning families are considered vital to mission readiness. Army Community Service (ACS) FAP focuses primarily on prevention. For this report, only prevention level services offered by ACS FAP[1] will be addressed.

Specifically, within this report, we consider the economic relevance of ACS FAP with regard to the costs of negative outcomes and the **potential** economic return **if** ACS FAP was found to reduce CM and/or IPV. Although data are not currently available to conduct a rigorous cost-benefit analysis (CBA), we examine the overall costs of ACS FAP (e.g., Commanders briefing, troop training, classes to improve quality of life, prevention campaigns) relative to the **potential economic benefits** (i.e., the potential costs saved from lower rates of IPV and CM) that would be associated with true population-level change due to program impact. Although other positive outcomes (e.g., positive inter-personal relationships, increased productivity) associated with the prevention of CM and IPV may also offer societal benefits, such outcomes are difficult to monetize.

Based on information provided by the Army via Sponsors and Eligible Dependents (SED) data published by the Defense Manpower Data Center (DMDC) we approximated that for Active Duty Service members, there were 378,830 dependent children, age 17 or younger. [2] We rely on rates of CM cited in prior research based on averages in the general population. This research suggests a 10% rate of CM in the general population. Here, we assumed a 5% rate to reflect research suggesting that overall rates of CM are lower in the military (Milner, 2015).

Note that costs averted by prevention of CM represent services and resources delivered across a lifetime. Based on per person costs estimated in prior research (Fang, Brown, Florence, & Mercy, 2012), average savings to prevent one case of CM would be $235,402 (2015 dollars), across the following areas: child healthcare, adult medical costs, lost productivity, child welfare, criminal justice, and special education needs. On average, this translates into an annual cost of almost $4,000 per year for one case of CM.[3] From the per-unit costs of CM cited, the average total lifetime costs to children of Service members could total over $4.4 billion (5% rate of CM, or roughly 18,942 Army children age 17 or younger). Annually, this would translate into costs exceeding $75-million across the Army population.

Thus, a reduction of just .2% (i.e., down to 4.8%) in Army CM cases due to successful prevention would save over $178 million aggregate costs across service sectors. If the rates were reduced from 5% to 4% in the Army population (i.e., a full percentage point change or 20% reduction), the cost savings would exceed $891 million across the affected children's lifetimes. We note that it is uncertain how long it would take for such a reduction to occur as a result of effective FAP services (see Figure 1).

[1] References to the comprehensive Army FAP inclusive of both the IMCOM (i.e., prevention) and MEDCOM (i.e., treatment) components will be addressed in this report as Army FAP.

[2] This number is an approximation of the number of children, combining population counts where installation information was available and using percentages based on dependent rates for installations not listed in the SED document (using a percentage derived from the SED document).

[3] Costs presented in this study (Fang et al., 2012) are based on ages six through 64. This annual average represents costs across that timeframe divided equally across years. Costs would be substantial in early years (related to short-term medical costs, special education, etc.); however, costs on average would be higher in later years given adult categories such as criminal justice, productivity, and longer-term health/mental health issues.

For simplicity, we consider overall costs of ACS FAP for one fiscal year as noted in the report *An Overview of Costs of the Army Community Service Programs: Information from Overall Expenditures in 2015* (Jones, Crowley, White, & Perkins, 2016). Budget information from fiscal year 2015 indicated $46 million spent on ACS FAP, including both Headquarters ACS (QACS) and the Office of the Secretary of Defense (OSD) funding. Relative to costs of CM, these resources may represent a sound investment. For instance, a reduction of .2% in CM elicited from three or less years of implementation would make ACS FAP cost-effective, with eventual savings exceeding the roughly $145 million[4] in direct costs spent for ACS FAP over that time period. This reduction in the CM rate would represent preventing roughly 758 cases of CM among Army families within this period, based on current population numbers. Overall, any reduction in cases of CM would provide an economic return that may cover some substantial percentage of program costs.

Cost information for IPV is based on incident-level data (not population-level data, as is available for CM) and cannot be appropriately translated to lifetime costs. Thus, an approximation of the reduction in the number of IPV incidents is difficult to imply without program effectiveness data. Incident-level data does not allow for costs to be linked to a hypothetical scenario where a program prevents a person from living a life impacted by IPV. Given that lifetime costs of IPV cannot be accurately projected, even hypothetical extrapolation is less appropriate.[5] In addition, determining combined costs related to both CM and IPV is difficult without data on program impact given potential associated costs where both occur. As such, the primary projections in this report leave out potential costs prevented due to IPV (i.e., potential economic return). However, **if** ACS FAP services could successfully reduce the number of incidents occurring, we could expect increased economic benefits attributable to the program. We speculate on these costs separately in order to provide a perspective on potential positive economic impact from successful ACS FAP prevention of IPV incidents. For instance, an average reduction of five incidents of IPV among couples who commit IPV would represent an economic savings of over $17 million among Army couples, or over a third of the costs of ACS FAP for a given year.

Thus, **if** ACS FAP **was found to be effective** through a rigorous evaluation, the potential savings for both the Army and society could be significant. ACS FAP has the potential to improve lives and prevent costly problems before they develop (e.g., by reducing the need for mental health services). These efforts could improve military families' well-being and ultimately, readiness. Effective programming has the potential to reduce the rates of family violence, while also being cost-effective given the large cost implications from unaddressed problems. **However, there is no evidence that current efforts within Army ACS FAP are effective; therefore, we cannot say whether these cost savings are realized.** If a future outcome evaluation demonstrated that ACS FAP is effective in reducing CM and/or IPV, there is a strong potential realization of a significant return on investment (ROI) for Army and society at large. In this report, we consider the economic relevance of ACS FAP with regard to the costly negative outcomes that are targeted through its services, and consider the potential economic return from successful prevention efforts.

[4] Amounts are based on 2015 costs of FAP; a 5% adjustment for inflation was factored in to reflect inflated costs across more than one year if several years of program services were required to achieve impact on population CM rates.

[5] The available IPV data is calculated per incident of violence; extrapolation of lifetime costs using multiplicative analysis processes (as is calculated for CM) is scientifically inappropriate. Further, there is no rigorous research available to calculate a reasonable potential reduction in IPV incidents - any reduction in the number of incidents used in analysis would be arbitrary. Finally, CM and IPV are often intertwined, thus overlapping costs are difficult to untangle for analysis. Overall, the findings presented in this report are *intentionally* conservative, such that they will stand the test of rigorous economic review.

**Recommendations**

*Recommendations for Program Improvement*

- Ensure existing psychoeducation programs and classes in use have demonstrated evidence of effectiveness; replace those without evidence with evidence-based or evidence-informed programs.
    - Focus programs on high risk families.
    - Focus programs to address high-risk times for military families (e.g., relocation, deployment, and family reunification).
    - Expand child care services to encourage families to attend events that provide ACS FAP related education.
    - Implement evidence-based, universal parenting programs, such as Triple P or the online version of the Take Root program.
    - Implement evidence-based universal programs focusing on relationship well-being (e.g., Marriage Check-Up, Couple Coping Enhancement Training).
    - Offer online/web-based or hybrid programming to reach a greater number of families and serve as a gateway for more intensive services.
- Implement additional marketing recruitment efforts.
- Utilize social media for recruitment and ongoing connection.
- Employ a marketing campaign targeting social norms.

*Recommendations for Program Evaluation*

- Conduct a rigorous process and outcome evaluation of ACS FAP and its sub-programs.
    - ACS FAP and each sub-program needs to be assessed for consistency in implementation.
    - If the outcome evaluation of ACS FAP and its sub-programs indicates positive impacts, assess data for a cost-benefit analysis.
    - If the outcome evaluation of ACS FAP or its sub-programs indicates no impacts or negative impact, refine or decommission programs.
- Conduct a comprehensive review of administrative data of service utilization to identify patterns and resource requirements for different ACS FAP services.
- Conduct an overhaul of the client tracking system (i.e., program usage data) to improve the system's comprehensiveness and utility in tracking process and outcome data related to ACS FAP and its sub-programs.
    - Implement enhancements to allow for better cost tracking and capture linkage among ACS FAP and its sub-programs.
- Develop a system for database interface of ACS FAP client tracking and MEDCOM FAP client tracking to provide ongoing, long-term follow-up outcome evaluations pertaining to the entire prevention and treatment continuum.

# ACS FAP: Economic Assessment Report

## Introduction

Services to address family violence are essential wherever there are families. Violence in families may lead to ruined relationships and physical and/or mental health disorders that can affect all family members in substantial ways. The implications from unaddressed cases of CM and IPV can have significant long-term negative impacts for many lives (Fang, Brown, Florence, & Mercy, 2012; Schafer, Caetano, & Clark, 1998). This negative impact on personal and family well-being can translate into lower productivity at school or work (Currie & Widom, 2010). Children exposed to violence and neglect can have developmental problems that last a lifetime, with an increased likelihood for emotional and behavioral disorders, as well as family relationship problems that extend morbidity across generations (Dube, Felitti, Dong, Giles, & Anda, 2003; Turner, Finkelhor, & Ormrod, 2006). Therefore, addressing CM and IPV is critical to preventing further violence and reversing long-term negative impacts. But the circumstances for effectively addressing these problems are complicated; often individual cases of CM or IPV are undetected, unseen, and underreported. Few effective interventions exist and those that are effective may be less effective if not delivered in a timely and sustained manner (MacMillian et al., 2009). For higher-risk cases, short-term interventions may have little impact, if any. Nonetheless, given the dire outcomes from unaddressed issues, family violence must always be a concern to governments and communities.

According to DoD Instruction 6400.06, child maltreatment is the physical or sexual abuse, emotional abuse or neglect of a child by a parent, guardian, foster parent, or by a caregiver, whether the caregiver is intrafamilial or extrafamilial, under circumstances indicating the child's welfare is harmed or threatened. Domestic abuse[6] is defined as domestic violence or a pattern of behavior resulting in emotional/psychological abuse, economic control, and/or interference with personal liberty that is directed toward a person who is a current or former spouse, a person with whom the abuser shares a child in common; or a current or former intimate partner with whom the abuser shares or has shared a common domicile. The Army FAP aims to provide all Army installations with necessary services and personnel to help prevent and treat cases of CM and IPV, as well-functioning families are considered vital to mission readiness.

The Army's FAP is sanctioned by Department of Defense Directive (DODD) 6400.1 and Army Regulation (AR) 608.18, and its programs and services are designed for the prevention and treatment of family violence. Therefore, FAP activities and services include prevention, intervention, and treatment components. Consequently, the Army executes the program from two organizational structures: Installation Management Command (IMCOM) and Medical Command (MEDCOM). ACS FAP is part of the IMCOM FAP structure and manages prevention efforts, while MEDCOM manages treatment services.

At times, families in the Army may have greater exposure to stress than the general population, which may in turn lead to greater risk for family violence. ACS FAP focuses on prevention, and thus is an instrumental part of helping to reduce risk factors and increase protective factors to stop problems before they occur. Under the Bin Chart[7], the Army prioritizes ACS FAP as a high-

[6] For the purposes of this report, domestic violence is referred to as intimate partner violence (IPV).
[7] In 2013, the Army developed a program priority list based on Army Command assessment of mission risk; commonly referred to as the Bin Chart. In 2016, OACSIM was directed to update the program prioritization list; as part of the update, the original program

risk program given the potentially serious consequences associated with CM and IPV. Thus, promoting familial well-being through ACS FAP programs and services is considered a priority for resource allocation, in order to support aims to educate and inform families to help prevent problems.

For this report, only the prevention level services offered by ACS FAP will be addressed (e.g., Commanders briefing, troop training, classes to improve quality of life, and prevention campaigns). Further, ACS FAP provides administrative oversight and execution of three other ACS FAP *sub-programs:* Victim Advocacy Program (VAP), New Parent Support Program (NPSP), and Transitional Compensation (TC)[8]. IMCOM HQ staff may share functions within one or more sub-programs; however, each sub-program has independent goals and objectives. Only the QACS and OSD funds allocated for ACS FAP prevention services previously mentioned will be included in the economic assessment (i.e., exclusive of the ACS FAP sub-programs).

**Economic Assessment of FAP**

In addition to the implications CM and IPV have on the well-being of individuals and families, there are also very large economic costs that can occur related to relationship problems, the need for both physical and mental healthcare, productivity losses, and developmental disorders in children. These costs can be short-term or long-term, and direct (e.g., need for immediate healthcare, lost days of work) or indirect (e.g., productivity loss and mental health needs related to longer term emotional problems). Employing effective efforts to prevent family violence problems can represent a substantial cost savings and lessen the burden on Army and societal service systems. ACS FAP has the potential to improve lives and prevent costly problems before they develop. Indeed, the effectiveness of ACS FAP could be gauged in terms of outcomes that are monetized (e.g., reduced need for mental health services). In this report, we consider the economic relevance of ACS FAP with regard to the costly negative outcomes that are targeted through its services, and consider the potential economic return from successful prevention efforts.

Data are not currently available to conduct a rigorous cost-benefit analysis. However, an understanding of the overall costs associated with family violence can help us speculate on the conceivable economic benefits, that is, costs saved from lower rates of CM and IPV if programming was determined to be successful. This identification of the hypothetical, potential costs of problems and subsequent savings from ACS FAP prevention efforts can provide direction for a more rigorous cost-benefit analysis that can combine estimates of the effectiveness of ACS FAP prevention efforts with data on monetized program outcomes.

Costs for ACS FAP must be sufficient to cover the many activities, personnel, and materials that must be coordinated for effective implementation to any Army family needing or seeking services. Detailing costs provides key information to determine what the potential is for ROI. Any degree of success through prevention efforts of ACS FAP is likely to lead to cost savings for

list was revised to reflect only programs resourced through the family and community bin of the installations program evaluation group. This list provides an enterprise-wide approach of assessing risk to readiness of resource reductions and gives garrisons flexibility to match available resources to the needs of the soldiers and families they serve and support. ACS FAP and its sub-programs are ranked as high-risk programs, thus, funding priority is given to ensure that ACS FAP can operate with the resources it needs to meet its objectives.

8 TC was established by Congress as an entitlement for abused dependents of military personnel in FY 1994. The legislation authorized temporary payment (36 months) for families in which the Active Duty Service member has been court martialed with a qualifying sentence or is being administratively separated from the military as a result of a dependent abuse offense. As detailed in AR 608-18 (3-27), TC is considered an intervention and support service (i.e., not a prevention service).

the Army and society, assuming that the outcomes targeted in the ACS FAP logic model are achieved (See Appendix A).

Data on the costs per participant for using ACS FAP are not currently attainable. Program usage data are captured by the ACS Client Tracking System (CTS) that tracks levels of program activity without collecting data on the number of unique participants involved and the extent of their involvement in any given service. Due to the variety of programs and services offered by ACS FAP and the inherent complexities associated with the CTS usage data, we instead consider the overall costs of ACS FAP relative to the potential economic benefits that would be associated with true population-level change due to program impact. Such projections do not rely on per-unit costs that could be compared to demonstrated program effects. Due to the inadequacies of the program use data previously discussed, this analysis is not currently possible.

Below, we first present research on the costs of select outcomes targeted by ACS FAP. Second, we provide background information on ACS FAP including the tiers of prevention covered through ACS FAP programming, and review the associated risk and protective factors associated with CM and IPV. Third, a review of evidence-based programs is conducted that highlights promising programs for addressing family violence in the civilian context.[9] This review of the evidence provides insight on how the 'needle can be moved' on family violence outcomes. Finally, we present hypothetical potential costs returned based on reduced rates of family violence problems that could be achieved at a population-level through successful ACS FAP programming.

## The Cost of Family Violence

Family violence is a significant public health problem that can result in immediate consequences including injury and death, long-term individual physical and psychological health problems, and lasting community-level economic repercussions. As noted, family violence is generally categorized into two types: CM and IPV. CM is a broad term encompassing physical abuse, psychological abuse, sexual abuse, and neglect. IPV classifications include physical, psychological, and sexual abuse.

*Cost of CM.* Children who have experienced maltreatment are more likely to have poorer physical health, poorer emotional and mental health, and social and cognitive deficits (e.g., insecure attachments and low problem-solving skills). The effects of CM can result in adverse effects throughout the lifespan. CM can transcend into adulthood resulting in lower rates of educational attainment, increased problem behaviors (e.g., delinquency, criminality, violent behavior, substance abuse), and overall lower quality of life (Butchart et al., 2006; Gilbert, et al., 2009). In addition, adults who have experienced CM may be more likely to abuse or neglect a child (Crouch, Milner, & Thomsen, 2001; Merrill, Thomsen, Crouch, May, Gold, & Milner, 2005; Milner et al., 2010).

In the United States, 3.3 million cases of CM are reported to child protective services (CPS) each year (Fang, Brown, Florence, & Mercy, 2012). Of course, the number reported does not include all cases of CM, and research has indicated that the rate of children who have experienced maltreatment is roughly 10% (Finkelhor, Turner, Ormrod, & Hamby, 2009). Using prevalence-based calculations, Prevent Child Abuse America (PCAA) estimates that the economic burden of CM is $103.7 billion (Wang & Holton, 2007). While the PCAA estimates are

[9] Military focused, evidence-based family violence prevention programs were not available for comparison.

the most comprehensive and most widely used when determining the economic impact of CM, the calculated direct and indirect costs are often overestimations[10] (Corso & Fertig, 2010). Corso & Fertig (2010) adjusted these original estimates to account for various methodological considerations resulting in a total cost of $65.1 billion. The direct costs resulting from the immediate needs of children who experience maltreatment (e.g., hospitalizations, mental health care, child welfare services, and law enforcement) are $26.8 billion. Indirect costs, long-term or secondary effects of experiencing CM (e.g., special education, juvenile delinquency, lost productivity, and adult criminality) are estimated at $38.3 billion. Other costs, such as pain and suffering, quality of life, and social stigma are intangible and difficult to quantify (Corso & Fertig, 2010).

As detailed in Table 1 below, Fang et al. (2012) conducted an incidence-based approach to examine the average lifetime cost per CM victim and aggregate lifetime costs for all new cases of CM. Estimated from six years old to 17 years old, short-term health care costs of CM is $32,648 per victim, while long-term healthcare costs, calculated from age 18 to 64, is $10,530 per case. Individuals with a history of CM earn $5000 less per year than their peers (Currie & Widom, 2010) which results in a lifetime productivity loss (estimated from age 18 to 64) of $144,360 in earnings. In 2006, $25.7 billion was spent on child welfare across local, state, and federal levels investigating 3,578,000 CM cases. Adjusted for inflation in 2010, this resulted in child welfare costs of $7,728 per investigated child.

The cost associated with juvenile arrest per CM victim is $1,974. The cost to the justice system as the result of an adult arrest is $4,773 per CM victim. Maltreated children are more likely to receive special education services – approximately 24.2% of maltreated children receive special education in comparison to 13.7% with no history of maltreatment (Jonson-Reid, Drake, Kim, Porterfield, & Han, 2004). Children experiencing maltreatment use special education services for an average of nine years, resulting in a cost of $7,999 per victim. The average lifetime cost per victim is $97,952 for nonfatal CM, and $1,258,812 in lost productivity and $14,100 for medical costs for fatal CM. In the Army alone, new cases of nonfatal CM result in $84 million in lifetime economic burden (DAIM-ISS, 2013).

**Table 1. Economic Impact of CM (Incidence-based Approach)[11](2015 dollars)**

| Costs | Amount Per-Person |
|---|---|
| **Utilization of health and mental health care** | Short-term: $33,773<br>Long-term: $10,893<br>Fatal: $14,586 |
| **Loss of productivity** | Nonfatal: $144,586<br>Fatal: $1,302,181 |
| **Utilization of social welfare services** | $7,994 |
| **Utilization of criminal justice (e.g., police, courts)** | Juvenile: $2,042<br>Adult: $4,937 |
| **Reduction in quality of life** | $8,275 |

[10] Costs are overestimated as a result of miscalculation and methodological errors (e.g., aggregation of marginal and average costs, cost estimates are inflated). Corso & Fertig (2010) estimate that the PCAA Wang & Holton (2007) estimates of CM are inflated by at least 35%.

[11] Taken from Fang et al., 2012; however, costs shown in Table 1 were adjusted to 2015 dollars to correspond with ACS FAP costs and projected impact presented in this report.

| Costs | Amount Per-Person |
|---|---|
| **Total average lifetime costs per CM victim** | $101,327 per nonfatal CM |

*A prevalence-based approach of the economic impact of CM is included in Appendix B.

*Cost of IPV.* IPV impacts both men and women and some evidence suggests that men and women perpetrate at comparable rates (Archer, 2000; Capaldi, Knoble, Shortt, & Kim, 2012; Tjaden & Thoennes, 2000). However, women are more likely to experience more severe physical and psychological consequences. Women who have experienced IPV are more likely to have problems related to physical and mental health including, depression, substance use, and suicidality (National Center for Injury Prevention and Control, 2003). IPV is also associated with relationship discord and relationship dissolution (Smith Slep, Foran, Heyman, Snarr, 2011). Children can also be victims and experience negative outcomes if they are exposed to IPV (Holt, Buckley, & Whelan, 2008; Wolfe, Crooks, Lee, McIntyre-Smith, & Jaffe, 2003). Unlike child abuse and neglect, there is no federal mechanism to track rates of civilian spouse abuse for comparison to the military population. This, in part, is because each state has different laws and definitions of domestic abuse, which makes any aggregation of these incidents challenging.

In addition to the adverse individual-level outcomes of experiencing IPV, there are economic consequences to unaddressed IPV. Studies show that 5.3 million IPV incidents result in two million injuries and the loss of eight million days of paid work (National Center for Injury Prevention and Control, 2003). Moreover, victims of IPV are heavy users of medical and mental health services. A 2003 National Center for Injury Prevention and Control report estimated the various costs associated with IPV using 1995-1996 National Violence Against Women Survey data. The report made distinctions about the cost of treatment incurred from different types of IPV incidents (i.e., rape, physical assault, and stalking). According to the survey data, 322,230 rapes occur each year with 31% of these incidents requiring medical care with a mean medical care cost of $2,084 per victimization. In addition, 4,450,807 physical assaults occur each year and medical care is required in approximately 519,031 of these incidents resulting in a mean medical cost of $2,665. One-third of IPV rapes and a quarter of physical assaults result in seeking mental health services at a mean cost of $978 and $1,017 respectively. Stalking incidents result in 2.1 million mental health care visits at a mean cost of $71.87 per visit. The mean cost among IPV stalking victims who receive treatment is $690. In total, $4.1 billion is spent yearly on medical and mental health services as the result of IPV-related incidents.

Being the victim of IPV results in lost productivity and reduction in quality of life (Max et al., 2004). Lost work, both from paid work and household work, accounts for $858.6 million in loss from employment and household chores and is thought to account for a $0.9 billion loss in lifetime earnings for victims of IPV (National Center for Injury Prevention and Control, 2003). On average IPV rape victims lose approximately 8.2 days of paid work at a mean loss of $69 per day and 13.5 lost days from household chores. Victims of physical assault lost 7.2 days of paid work at a mean cost of $93 per day and 8.4 lost days from household chores at a mean cost of $24 a day. Stalking victims lost 10.1 days of paid work at a mean cost of $93 per day and 12.7 lost days from household chores resulting in a mean cost of $24 a day. The Present Value of Lifetime Earnings (PVLE) measures the expected values of lost earnings that victims of homicide as a result of IPV would have contributed had they lived a full life. The total PVLE is estimated at a total of $892.7 million or $713,000 per fatality.

Overall costs of IPV were $5.8 billion a year (1995 dollars). The largest proportion of this cost ($4.1 billion) is for health care services, primarily for physical assault. In addition, there is approximately $0.9 billion in lost productivity from nonfatal IPV and $0.9 billion in lifetime earnings lost from IPV victim fatalities (National Center for Injury Prevention and Control, 2003). Table 2 shows the total costs of IPV against women nationally based on this study, considering both health care as well as impact on productivity and earnings (amounts converted to 2015 dollars for this table).

**Table 2. Estimated Total Costs of Intimate Partner Violence Against U.S. Adult Women (2015 dollars)[12]**

| Costs | Estimated Total Costs |
|---|---|
| **Utilization of health care** | $6,312,819,000 |
| **Loss of productivity – Total** | $1,338,276,000 |
| **(Household chores)** | $203,850,000 |
| **(Paid work)** | $1,134,426,000 |
| **Present value of lifetime earnings** | $1,391,449,000 |

**Family Violence in the Military**

Research on family violence in military families is limited, with CM receiving greater attention in military research than IPV. IPV research in military populations is limited and most studies have not been methodologically rigorous. CM rates in the military appear to be lower than the rates in the general population (McCarroll, Ursano, Fan, & Newby, 2004; Milner, 2015; Minnesota REACH, 2016; Rentz et al., 2008). However, the rates of confirmed cases in military families appear to be increasing at a slightly quicker pace (Minnesota REACH, 2016). The current research suggests that rates of IPV are higher in the military and cases are more severe than in civilian populations (Rentz et al., 2006; Stamm, 2009; Trevillion et al., 2015). The most common form of IPV is physical abuse. Less common among military families is emotional and sexual abuse (Rentz et al., 2006). Although the data source only includes substantiated cases, McCarroll et al., (1999; 2004) analyzed Army Central Registry (ACR) data and determined that the rate of IPV is between 8 and 11 per 1,000 married couples.

These rates should be interpreted with caution as understanding and comparing rates of CM and IPV between civilian and military families is difficult for several reasons. First, agencies and states have varying definitions of CM and IPV. IPV, in particular, has suffered from a noted lack of consensus over its definition and to whom it applies. Some researchers and organizations define abuse more broadly while others define IPV more strictly (i.e., only acts that may cause physical harm). Second, some definitions of IPV have traditionally excluded unmarried, former partners, and same sex partners; moreover, civilian and military agencies have distinct processes for determining substantiation and procedures for reporting. For example, the increase of confirmed cases of CM is likely due to reporting changes in the military and the

[12] National Center for Injury Prevention and Control, 2003; costs shown in Table 2 were adjusted to 2015 to correspond with FAP costs and projected impact presented in this report.

implementation of standardized protocols for assessing suspected CM rather than true differences in rates. Finally, data on IPV is further complicated by a historic lack of national data collection mechanisms; and research with military populations have been overrepresented by samples with psychopathology (e.g. substance abuse and PTSD) (Jones, 2012; Marshall, Panuzio, & Taft, 2005).

In general, rates of family violence are difficult to determine due to the sensitive nature of the topic, and this results in underreporting of family violence. In particular, the IPV literature has noted a reluctance to report victimization in order to protect the perpetrator (i.e., "a culture of secrecy"). Furthermore, reporting for IPV may not be as robust as CM due to mandated reporting (Smith Slep & Heyman, 2008). To balance the need for victims to seek appropriate care in situations where they may be reluctant due to potential consequences (e.g., dismissal from the military, loss of earnings), the military allows for IPV reporting to be either restricted (i.e., confidential and does not result in investigation or Command notification) or unrestricted, which may lead to an investigation. This unique reporting system (i.e, restricted vs. unrestricted) does not always provide the military with accurate data that captures the incidence of IPV in the military population. In a sample of 205 servicewomen who experienced sexual assault (not necessarily within the context of IPV), only 25% reported the assault and unrestricted reporting was used most often (Mengeling, Booth, Torner, Sadler, 2014). Further, military families may report to civilian providers, but these cases may not be relayed back through military channels. CM cases that present to civilian medical providers are less likely to be reported to Army FAP (Wood et al., 2017). Moreover, belonging to the military is both a job and an identity. Therefore, reporting could mean the loss of employment and thus, loss of status as a military family (Jones, 2012; Stamm, 2009).

**FAP Prevention and Treatment**

As described, Army FAP activities and services include prevention and treatment components. Consequently, the Army and OSD fund the program and deliver independent services from two organizational structures: IMCOM, which governs the ACS prevention component, and MEDCOM, which governs the treatment component. ACS FAP efforts focus on preventing abuse by offering a variety of programs and services to improve family functioning and stop abuse before it happens. If abuse does occur, the MEDCOM side of FAP works with Commands, law enforcement and victim advocates to ensure the safety of the family, helps families overcome the effects of violence, and attempts to change destructive behavior patterns. While ACS FAP prevention targets families that have yet to experience maltreatment, due to its broad, and non-exclusive reach, by design, it may also provide programs and services to families that have already experienced reported or unreported, substantiated, or unsubstantiated maltreatment. Despite multiple funding streams for each component, the Army FAP is promoted as a singular program at the garrison-level to encourage the perception of the program as comprehensive in its offering of unified programs and services. Table 2 provides an overview of ACS FAP programs and services.

**Table 3. ACS FAP Programs & Services**

| PROGRAM/SERVICE TYPE | ACS FAP ACTIVITY |
|---|---|
| COMMUNITY OUTREACH | • Military and community public campaigns (e.g., social media, websites, resource library, flyers) for self-referrals<br>• AR mandated community awareness campaigns (e.g., CM and IPV)<br>• Memorandums of Agreement (e.g., partnerships with state governments, Children & Youth Services, District Attorney, church groups, parent/teacher associations, health fairs)<br>• Referrals to other ACS programs (e.g., Financial Readiness, Employment Readiness)<br>• Participation on community boards on and off garrison (e.g., Community Fatality Review Board, Suicide Prevention)<br>• Collaboration with sister agencies in other Military branches<br>• Installation toolkits |
| SUPPORT GROUPS | • Couples support groups<br>• Parent support groups<br>• Play groups<br>• Teenage parent support groups<br>• Single parent support groups<br>• Divorce support groups<br>• Step-parent support groups<br>• CM support groups<br>• IPV victim support groups |
| PSYCHO-EDUCATIONAL PROGRAMS & CLASSES | • Parenting classes/programs (e.g., general, expecting, pre-teen, and adolescent, single, step/blended; e.g., Newborn care I and II, Daddy Boot Camp, 1-2-3 Magic, and NPSP)<br>• Family life education (e.g., anger management, stress management, communication)<br>• Marital/relationship classes/programs (e.g., Strong Bonds)<br>• Young adult classes (e.g., safety, bullying)<br>• Safety education programs for children<br>• Safety education programs for spouses<br>• Suicide prevention (e.g., Ask Care Escort) |
| PROFESSIONAL TRAINING | • FAP Leadership training<br>• Installation medical professionals training (e.g., hospitals, dental)<br>• Installation staff training (e.g., Judge Advocate General, volunteers, chaplains)<br>• Sub-program training components (e.g., VAP, NPSP)<br>• Case Review Committee training<br>• Safety education for teachers and adults in the community<br>• New and annual Command briefings<br>• Annual troop briefings |

| | |
|---|---|
| PROFESSIONAL TRAINING | • Fatality review training<br>• Community and Installation law enforcement and legal personnel (e.g., Military Police)<br>• Family Advocacy Staff Training and advanced training for FAP staff and other professionals<br>• Administrative training on ACS FAP data to installation; key administrative tasks |
| ASSESSMENT | • VA conducts non-clinical lethality assessment<br>• NPSP staff conduct Family Needs Screener and Adverse Child Experience screener |
| CRISIS INTERVENTION SERVICES | • Coordination of respite care<br>• VA provides information and referral during crisis situations |

**The Prevention Continuum**

Army FAP takes a public health approach to the reduction of family violence; prevention strategies are designed to decrease risk factors and increase protective factors. The activities and services offered by Army FAP can be organized along the prevention continuum (i.e., divided into primary, secondary, and tertiary prevention programs and activities). ACS FAP is responsible for administering primary and secondary prevention. Unless mandated by Command, all programs and services offered by ACS FAP are voluntary. MEDCOM is primarily responsible for administering tertiary prevention (i.e., treatment). However, this does not mean that MEDCOM FAP staff avoid engaging in primary and secondary prevention efforts after abuse has occurred (e.g., Command briefing, troop training, communication and parenting classes and workshops).

*Primary Prevention.* These activities and services are open to Service members and their families in order to improve healthy individual, couple, or family well-being (i.e., universal prevention). Participation in classes, groups and workshops is typically voluntary. A sample list of primary prevention activities is provided in Table 3 below.

*Secondary Prevention.* These activities and services are offered to individuals, couples, and families considered to be at risk (e.g., single parents, teenage parents). Examples of secondary prevention include support groups for at risk populations. For many of the secondary prevention efforts, individuals are typically self-referred or referred by their Command. Some Service members may be required to take a particular class as part of mandated treatment plan. In this instance, although the Service member may have been involved in a reported incident of family violence and required to complete a class administered by ACS FAP, the actual progress and treatment of the offender is tracked by MEDCOM FAP (i.e., treatment).

*Tertiary Prevention.* These activities take place after the violence has occurred (Bowen, 1984). Examples of tertiary prevention, or treatment services, include support groups for abuse victims and counseling and ongoing case management for individuals and families. Provision of medical or psychological treatment falls within the purview of MEDCOM FAP and will not be further discussed in this report.

The focus of ACS FAP is to execute programs and services within the primary prevention domain; those that seek to strengthen Army families by enhancing parenting, the couple relationship, and life skills, and by promoting awareness about CM and IPV in individuals, families, and the military community. As such, this economic assessment will focus in this primary prevention arena. Table 3 below provides a sample of ACS FAP's primary prevention activities.

**Table 4. ACS FAP Sample Primary Prevention Programs and Services[13]**

| Primary Prevention Activity | Example | Target | Participation | Availability |
|---|---|---|---|---|
| **Family Life Education** | Parenting, communication, anger, and stress management classes | Service members and families | Voluntary or referred | Availability and frequency determined by need at garrison |
| **Briefings** | New Commander briefing, annual troop briefing | New Commander and key staff, all troops on annual basis | Mandatory | Must be administered within 90 days of assuming Command |
| **Outreach to Community Support** | Training for Military Police or local law enforcement | Service providers associated with FAP prevention and treatment | Voluntary or referred | Availability and frequency determined by need at garrison |
| **Public Awareness/Prevention Campaigns** | CM and IPV* public awareness campaigns | Entire garrison population; on and off base; Army community at large | Voluntary | Two campaigns required yearly by AR (can partner with off-post resources) |

*IPV and CM campaigns fall within the administration of the VAP and NPSP, respectively.

### ACS FAP Prevention Implementation

As a high-risk program, ACS FAP services are prioritized; however, the size of the garrison and its target population will impact the number of resources ACS FAP has available for participants. For instance, each sub-program may have dedicated staff, or one ACS FAP Program Manager could manage all of ACS FAP's programs. ACS FAP and its sub-programs provide services and referrals within the larger ACS FAP umbrella (e.g., those that attend ACS FAP parenting classes may also be referred for NPSP home visitors). Perpetrators of substantiated IPV incidents may be referred to attend classes administered by ACS FAP (e.g., anger or stress management classes) for psycho educational purposes. Moreover, ACS FAP works closely with MEDCOM FAP, the Judge Advocate General (JAG), and Military Police (MP) within and outside the confines of the gate.

The impact of resources off-installation is also significant in terms of referrals for participants in need that may live outside of the gate, and thus extends the reach of ACS FAP. Memorandums of Agreement (MOAs) play an important role for many ACS FAPs by offering an additional source

[13] See ACS FAP Logic Model in Appendix A for outcomes associated with ACS FAP activities.

of community resources and support for those in need (e.g., shelters for victims of IPV, crisis hotlines, Child Protective Service). ACS FAP may also work closely with local law enforcement; families that live outside the gate can be difficult to reach, and, while reporting of potential CM or IPV is mandatory inside the gate, organizations outside of the gate are not mandated to report incidents of abuse to FAP. Furthermore, social, economic, and cultural issues in the surrounding community can influence family problems within and outside of the gate. ACS FAP staff are involved in forming and maintaining important relationships with a variety of off-post resources within the larger social support service networks available in each region. Further, some installations serve populations covering very large geographic areas where laws vary by county and state; ACS FAP staff must be knowledgeable about these differences.

ACS FAP staff must be prepared to manage any number of situations. For example, they may receive daily calls from parents needing child care or needing formula for infants or other smaller crisis situations. Staff must be available and able to provide information and referrals to families to help them find the appropriate resources. As other programs (e.g., Sexual Harassment Assault Response and Prevention [SHARP]) receive funding cuts, ACS FAP may be forced to assume an increasingly larger role (White, Butler, & Perkins, 2016).

*ACS FAP's Target Population.* ACS FAP services are, theoretically, only available to Active Duty Service members and family members. DoD civilians are encouraged to access ACS FAP for crisis intervention and information and referral; however, ACS FAP services are not commonly denied to those in need (White, Butler, & Perkins, 2016). The National Guard and Reserve may receive limited services; if a Guard or Reserve Service member is not activated by Title 10 (i.e., Active Duty status during their proscribed one weekend a month or during an Active Duty assignment) they are not considered eligible for the full spectrum of ACS FAP services (i.e. cases will not be entered in to the Army Central Registry). However, there are no restrictions on eligibility to participate in ACS FAP education, and receive crisis intervention, information and referral services.

As with most ACS programs, the needs of the prevalent population at each installation dictate the types of programs and services offered within ACS FAP. For installations serving the junior enlisted, young Soldiers are typically reporting to their first or second assignments. These Soldiers may not yet be familiar with Army values, and training may play a key role in shaping their views on FAP-related issues (e.g., parenting and relationships). Among the senior enlisted and officers, different issues can surface. This population may be more reluctant to share family problems due to their rank, and subsequent career related implications. Subsequently, there may be more individual family or one-on-one counseling employed rather than referrals to parenting classes where the risk of exposure to peers or subordinates is higher.

### Evidence-Based, Family Violence Prevention Programs

In practice, civilian social services often separate out CM and IPV cases. CM cases are typically investigated by child welfare agencies and IPV events are often in the hands of shelters and other advocacy organizations. Army FAP is an exception to the usual model as it combines all aspects of CM and IPV cases under one umbrella (Heyman & Smith Slep, 2001). This integrative approach has the potential to be helpful as CM and IPV can often co-occur (Edelson, 2001; Hartley, 2002).

In regards to Army FAP, there is limited research on the benefits of the program. What research has been conducted targets MEDCOM FAP treatment efforts (e.g., Brewster, 2002, Linkh et al., 2008) – that aim to prevent the reoccurrence of abuse or maltreatment (i.e., recidivism) in the case of the offender and reduce the harm caused to the victim. Tertiary efforts (i.e., treatment), while very common and costly in family violence intervention, overshadow the need for a sustained focus on primary prevention activities to prevent family violence. Primary prevention efforts, rather than tertiary, are most likely to have the greatest impact on family violence (Smith Slep & Heyman, 2008; Wolfe & Jaffe, 1999).

*What works in CM prevention?* The prevention of CM is linked to addressing risk factors (e.g., poor parenting knowledge and efficacy) and enhancing protective factors (e.g., realistic expectations about child development, access to and use of resources, social support) simultaneously across multiple levels (i.e., individual, family, and community)[14]. Primary and secondary prevention efforts to prevent CM in the civilian literature involve efforts at the child-level, parent/couple-level, and the community-level. Efforts typically are targeted toward two different avenues - prevention of becoming a victim and prevention of offending. Child-level efforts include child education, primarily to prevent sexual abuse. Parent/couple-level efforts include home visitation programs, parent education programs, infant head trauma prevention programs, and couple/relationship education programs. There are also a number of promising prevention efforts at the community-level including mass media/social norms campaigns and education for community members, specifically those working with children.

*What works in IPV prevention?* Although there are number of promising interventions to address aspects that contribute to IPV (e.g., couple relationship satisfaction, and communication), there are no known effective interventions that directly target IPV as an outcome (MacMillan et al., 2009). However, there are strategies that have not yet been evaluated, or have been evaluated, but not yet disseminated. Much of the focus on the prevention of IPV has focused with mixed success on strengthening couple functioning and satisfaction through relationship education. A secondary focus has been on dating education as the seeds of IPV show up in dating relationships as early as middle school (Foshee et al., 1996; Smith Slep & Heyman, 2008). Like CM, primary prevention efforts have the most promise in preventing IPV rather than trying to prevent its reoccurrence. IPV interventions should also focus on developing and delivering low-cost interventions that can be disseminated widely to reach those that need them most (Braithwaite & Fincham, 2014).

The section below represents general family violence prevention strategies that have been used in civilian prevention at the child-level, parent and family-level, and community-level. We note that Army FAP's diverse components, installation-specific programs and services, and varying implementation strategies make direct comparisons to civilian programming implausible. A program evaluation or program component analysis would be necessary to understand how Army FAP programs and services mirror evidence-based civilian programs. Rather, civilian programs that have some evidence of effectiveness as prevention efforts are discussed. Although the mentioned efforts have varying levels of success as strategies, the program summaries offered here are to demonstrate that the needle can be moved with effective family violence prevention efforts.

*Child-Level Efforts.* CM prevention efforts have mainly focused on educating children to prevent victimization, particularly in regards to sexual abuse. These prevention efforts are typically delivered in school-based settings and focus on teaching children definitions of abuse, how to

[14] For a detailed review of risk and protective factors associated with family violence, see Appendix C.

recognize abuse, strategies to avoid abuse, and how to report abuse (Cale, Burton, & LeClerc, 2017). Promising CM prevention programs targeted to children have several key ingredients including activities that allow children to actively engage with the content (e.g., role play and skill practice); use of a variety of teaching methods (e.g., knowledge relay, videos, and discussion); wide coverage of important concepts, especially positive skill development (e.g., communication, problem-solving); and content that is incorporated as part of the regular school day (Brassard & Fiorvanti, 2015). Longer programs (i.e., programs with four or more sessions) with trained facilitators (regardless of type - teacher, mental health professional) also had better outcomes (MacIntyre & Carr, 2000; Davis & Gidycz, 2000). Parent engagement was also an important component of promising programs to prevent abuse. Involvement increased the likelihood of achieving positive program outcomes as it served to reinforce program content and increased parent-child communication regarding abuse (Kenny et al., 2008). Furthermore, while the evidence is mixed, child age does not necessarily relate to program benefit. Studies demonstrate that content can be delivered at a young age so long as the material is age-appropriate (Brassard & Fiorvanti, 2015; Kenny et al., 2008).

However, the research is not clear to what extent child-focused education programs prevent child abuse (Rheingold et al., 2015; Brassard & Fiorvanti, 2015). Children participating in school-based prevention programs are more likely to have a substantiated case of child abuse, yet this is most likely because these children are more likely to recognize and report abuse (MacIntyre & Carr, 1999). Child abuse prevention efforts may also be associated with some potentially negative consequences (e.g., increased anxiety and fear, false reports of abuse, and harm to the child if they resist - Cale, Burton, & LeClerc, 2017; Wurtele, 2009). To avoid these potential negatives, child education efforts should focus on empowering children by building protective factors, such as self-confidence and self-esteem rather than try to prevent victimization (Cale, Burton, & LeClerc, 2017).

One example of a promising strategy is the school-based, Safe Child Program. The Safe Child Program is for students in preschool through 3rd grade and is designed to teach children life skills to prevent abuse by people that they know and strangers. The program is delivered over ten weekly sessions each 20 minutes in length for preschoolers and kindergartens and in five longer sessions for first through third graders. The program aligns with the key ingredients of promising prevention programs. Safe Child focuses on how children can protect themselves through various methods including, role play, scenarios, and skill building both during the school program and at home. The program is easy to implement as the manual is scripted and the facilitator training is included with the materials. Safe Child also has components tailored to various program audiences (e.g., children, parents, teachers) (Brassard & Fiorvanti, 2015).

While the authors did not test outcomes related to abuse from known individuals, results from a randomized controlled trial demonstrated that those who participated in the Safe Child Program were more likely to resist a request from a stranger to leave the school building. In addition, higher pre-test self-esteem scores and higher post-test awareness of risk scores were predictive of students' decreased risk to comply with the stranger's request. These effects were maintained during a six-month follow up and findings were replicated with the control group who later received the program (Fryer et al., 1987a; Fryer et al., 1987b).

*Parent/Family Level Efforts.* The core focus of preventing perpetration of CM is through the promotion of positive parenting practices. Parent education programs have been the primary method for improving parent's self-efficacy and competence, thus reducing risk factors for CM. Parent education programs vary widely in their structure and setting (e.g., universal group-

based, selective/indicated home visitation[15]). Universal programming may afford the greatest reduction potential and widest reach to prevent family violence as these efforts are community-based and decrease the stigma associated with prevention efforts offered to at-risk families (Altafim & Linhares, 2016; Byrne, Rodrigo, & Maiquez, 2014; Heinrichs, Kliem, & Halhweg, 2014). Parenting programs focus on promoting safe and healthy child-caregiver relationships, teaching effective parenting practices, increasing knowledge of child development, and encouraging positive discipline strategies (Mikton & Butchart, 2009). Although parent education programs reduce risk factors for CM, these programs may not directly reduce CM (MacMillan et al., 2009). This finding could be an artifact of measurement as parenting programs tend to focus on assessing increases in parental skills and relationships rather than the direct measurement of CM as an outcome (Altafin & Linhares, 2016).

One example of a parenting program with promising outcomes is the Positive Parenting Program, also known as Triple P. Triple P is a comprehensive community-based population-level parenting program aimed at reducing family risk factors for CM and risk factors for child behavioral and emotional problems. Triple P is designed to be delivered across a variety of community settings including schools, child care, family support services, and other community organizations. Triple P has five levels that increase in intensity (i.e., universal, selected, primary care, standard and group, and enhanced) and narrow the segment of the population participating in the intervention. Triple P has demonstrated reductions in poor parenting behaviors and has sustained its outcomes up to 4-years post-intervention (Heinrichs, et al., 2014). A population-based study in the U.S., by Prinz et al. (2009) found positive outcomes in counties that implemented Triple P on rates of substantiated CM, rates of out-of-home child placements, and rates of hospitalizations and emergency room visits related to CM. Furthermore, they determined that in a community with 100,000 children under eight years old, these outcomes would result in 688 fewer cases of CM, 240 fewer out-of-home placements, and 60 fewer children requiring hospitalization or emergency room visits (Prinz et al., 2009).

Data from a population-level trial in South Carolina provides information on costs for building a public health infrastructure in order to deliver a multi-level parenting intervention like Triple P. Costs were estimated based on a hypothetical community of 100,000 families with young children on all levels of Triple P. The total costs for Triple P Level 1 which is primarily a media campaign is $74,580.34 (Foster et al., 2008). The total costs of training providers irrespective of Triple P level totaled $2.2 million dollars (Foster et al., 2008). The authors concluded that because the costs of abuse and neglect cost the taxpayer approximately $100,000 per child (Corso & Lutzker, 2006), the Triple P program start-up costs could be recovered after 1 year by reducing the number of families experiencing abuse and neglect by 10 families out of the hypothetical 100,000 families in total. Using the cost data provided in the population trial, the Washington State Institute for Public Policy (2016) also compiled benefit-cost estimates for Triple P and noted that the total benefits of Triple P are $1,120 per participant and net program cost is $150 per participant resulting in a benefits minus costs estimate of $970 per participant. In addition, the Triple P program has a 63% chance of providing benefits that are greater than the costs.

Other means of preventing CM through primary prevention programming have included infant head trauma education for parents. Interventions that target new parents and provide education on shaken baby syndrome and help parents cope with crying have demonstrated

[15] The New Parent Support Program (NPSP) is a sub-program of ACS FAP that provides in-home visitation programs for new parents. While this report does not detail the practices employed by this sub-program, more information can be found by contacting the Clearinghouse for Military Family Readiness at Penn State.

success in reducing the incidence of infant head trauma (Barr, Trent, & Cross, 2006; Dias et al., 2005).

*Relationship Education.* The prevention of IPV has focused on strengthening couple functioning and satisfaction through relationship education. Couple relationship education (CRE) programs have the potential to prevent relationship distress and enhance already positively functioning relationships. Often CRE programs rely on general skill-based methods in communication and conflict management, education around relationship expectations and standards, and relationship awareness. CRE programs have the most robust outcomes for at-risk individuals (e.g., Halford et al., 2015; Markman & Ritchie, 2015; Stanley et al., 2014). However, as is often the case with these types of programs, it is often low-risk couples that are more likely to participate in CRE programs.

One example of a relationship education program is the Marriage Check-Up. The goal of Marriage Check-up is to increase relationship satisfaction and improve the couple relationship. Marriage Check-up is a brief intervention designed for all couples (i.e., non-distressed and at-risk or distressed couples). Marriage Checkup has three components – an IPV questionnaire, an in-person session, and a feedback session conducted by a trained psychologist or doctoral student. The Marriage Check-up program has produced comparable outcomes to traditional therapies in improving couple relationship functioning (Cordova et al., 2014; Doss et al., 2016). These modalities may make therapy more palatable and accessible and act as a referral mechanism to more traditional therapy for distressed couples (Fleming & Cordova, 2012).

*Life Skills Education.* Although not explicitly studied, individual prevention programming efforts to address stress, anger, and other life skills (e.g., communication) may be promising to prevent CM and IPV as they address direct risk and protective factors associated with family maltreatment (Sanders, Pidgeon, Gravestock, Connors, & Brown, 2004). Typically, individual life skills are often components included in effective preventative programing to support parenting and relationships (MacLeod & Nelson, 2000).

*Community-Level Efforts.* Only a small number of prevention programs at the community-level have been evaluated. The most prevalent effort in the prevention of CM is child abuse prevention classes for teachers, child care providers, and other professionals. These types of programs allow for increased awareness among adults who work with children in a professional capacity (Rheingold, Zajac, & Patton, 2012; Rodriguez & Richardson, 2007). These individuals may be in a unique position to reduce CM through developing organizational policies that prevent internal possibilities of maltreatment (e.g., employee screening), identification, and intervention in potential cases of CM (Rheingold, Zajac, & Patton, 2012).

Although it has not been studied specifically in the context of family maltreatment, mass media or social norms campaigns in conjunction with availability of services have demonstrated promise to produce positive changes in negative health outcomes or behaviors (e.g., smoking, drinking) (Wakefield, Loken, & Hornik, 2010). This approach can be used to change community attitudes about violence and help scaffold individual's resources to confront or intervene in situations where violence may be present (Berkowitz, 2010). Community-level interventions have the potential to touch more people and reduce individual risk (Smith Slep & Heyman, 2008).

This mirrors findings on community-level efforts on availability of social services, specifically in regards to availability of prevention programming. One study noted that the risk for CM

decreased as county spending on prevention programs for CM increased (Maguire-Jack & Negash 2016; Maguire-Jack, 2014). Furthermore, there is evidence that the availability of social services (e.g., health care, housing, adoption, preschools, substance abuse) decreases rates of maltreatment referral rates (Freisthler, 2013; Klein, 2011; Maguire-Jack & Negash, 2016; Maguire-Jack, 2014; Morton, 2013).

**Potential for ACS FAP Positive ROI by Prevention of CM**

ACS FAP is a success **if** services lead to reduced rates of CM among Army families. Notable changes in these rates will also lead to averted costs that would otherwise be required from the Army, society or the families themselves. As detailed above, prior research has determined the average costs associated with cases of CM. In this section, we consider potential cost savings based on this research combined with population information across installations. Specifically, based on information provided from the Army SED published by the DMDC, we approximated that 378,830 dependents age 17 or younger reside across Army installations.[16] We rely on rates of CM cited in prior research based on averages in the general population. We also note that costs averted by prevention of CM represent services and resources delivered across a lifetime. We do not distinguish costs more or less proximal to the timing of ACS FAP services. For simplicity, we consider overall costs of ACS FAP for one fiscal year, based on the report *An Overview of Costs of the Army Community Service Programs: Information from Overall Expenditures in 2015* (Jones, Crowley, White, & Perkins, 2016).

Given this framing, we consider potential economic benefits for a varying level of program impact. Reduction in CM rates may be relatively small yet still generate great cost savings in addition to avoiding morbidity and suffering for families. Based on per-person costs estimated in prior research (Fang, Brown, Florence, & Mercy, 2012), average savings to **prevent one** case of CM would be $235,402 (2015 dollars), across the following areas: child healthcare, adult medical costs, lost productivity, child welfare, criminal justice, and special education needs.

This research suggests a 10% rate of CM in the general population. Here, we assumed a 5% rate to reflect research suggesting that overall rates are lower, approximately half, in the military (Milner, 2015). From the per-unit costs of CM cited, the average total costs to children of Service members could total over $4.4 billion (5% rate of CM, or roughly 18,942 Army children age 17 or younger). Given these figures, a reduction in just .2% (i.e., down to 4.8% in cases due to successful prevention) would save over $178 million aggregate costs across service sectors. If the rate were reduced to 4% in the Army population (i.e., a change in a full percentage point or 20% reduction overall), the cost savings would exceed $891 million across the affected children's lifetimes. A 20% reduction may seem hard to achieve; however, it is worth speculating given the importance of reducing CM rates and the enormous costs associated with new cases that could feasibly be prevented through effective prevention services.

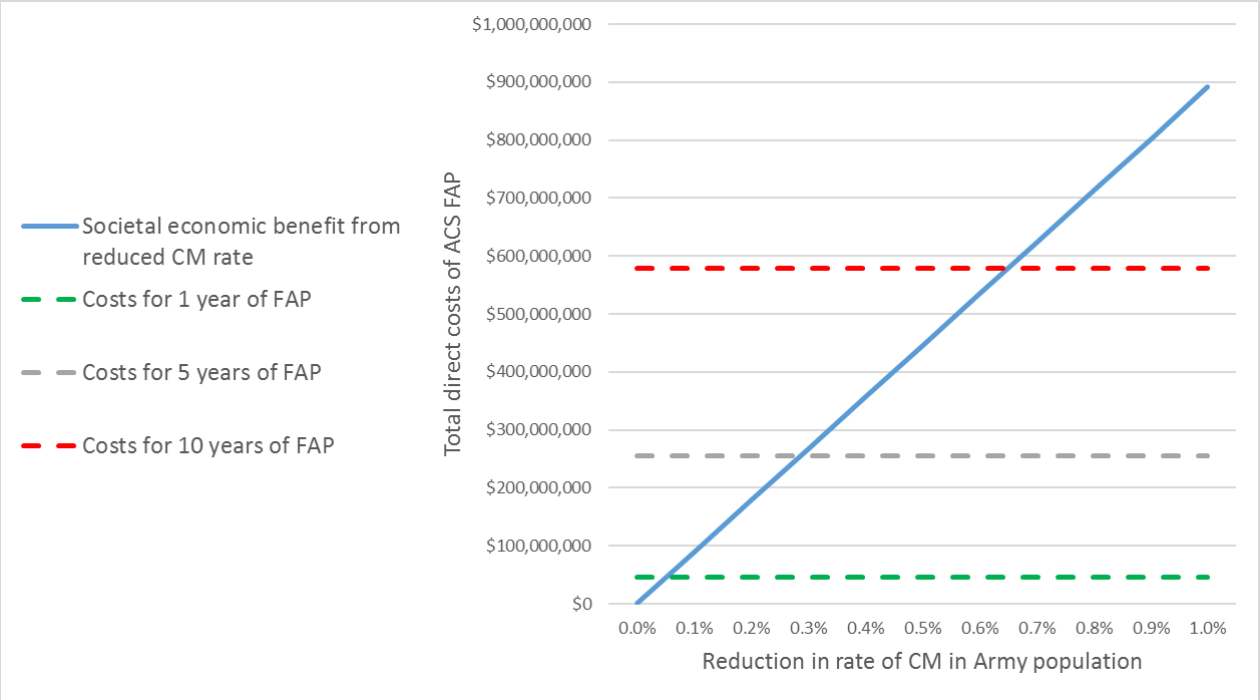
To address the broad outcomes targeted by ACS FAP in the prevention of family violence, the costs required are necessarily larger than those spent on other ACS programs. Budget information from fiscal year 2015 indicated over $46 million was spent on ACS FAP, including both QACS and OSD funding. Relative to the costs of CM, these resources may represent a sound investment. When discussing population-level change, we must also consider the number of

[16] For this analysis, we used information provided in the September 2015 SED document, to correspond with cost information presented here.

years needed to induce change. That is, FAP services may not prevent a case of CM from one year of services; thus, we consider longer-term programming when considering population-level impact on CM rates.

Moreover, the costs of CM alone help bring some perspective to costs required for ACS FAP implementation. Considering the scenario further, a reduction of .2% in CM would make ACS FAP cost-effective if this reduction occurred within three or less years of implementation. Based on 2015 budget information this represents roughly $145 million of direct costs for ACS FAP over the three years.[17] Based on current population numbers, this would represent preventing roughly 758 cases of CM among Army families within this period. If the targeted .2% reduction took more than three years to achieve, the savings generated would be lessened incrementally. A larger reduction of .5% in CM (to a rate of 4.5%) hypothetically would represent economic savings that would exceed over eight years of ACS FAP funding. Figure 1 shows how cost savings increase as the program is more effective by reducing CM in the population. For illustration, in Figure 1, we insert three lines representing different amounts to fund FAP across different time periods: a single year, five years and 10 years. Overall, any reduction in cases of CM would provide an economic return that may cover some substantial percentage of program costs. **NOTE, this is hypothetical as we have no data demonstrating the effectiveness of ACS FAP programs and services.**

**Figure 1. Projected Societal Economic Benefit from Reduction in CM Cases Among Army Families**




Prevention of CM is challenging given the complicated factors involved. However, the scenario presented above is conservative in some regard given other potential outcomes related to

[17] Amounts are based on 2015 costs of FAP; a 5% adjustment for inflation was factored in to reflect inflated costs across more than one year if several years of program services were required to achieve impact on population CM rates.

family violence from effective ACS FAP services that are not included. For instance, we do not factor in the costs linked to death related to CM. Fang et al. (2012) note that the economic costs related to CM exceed $1.4 million per fatality (2015 dollars), related to healthcare costs and lost productivity. Second, the estimates shown in Figure 1 do not include economic benefits related to broader indicators of healthier child development. For instance, other economic studies examining the link between effective programs and reduction in CM have incorporated the monetary benefits from greater success in school (e.g., greater likelihood of high school graduation, higher test scores, less reliance on special education and other school services). Healthier development is also linked to a greater likelihood to avoid problems with substance abuse, depression, teen pregnancy, and crime (WSIPP, 2013). Often these are outcomes that would be measurable many years after CM has occurred, and can be shown to be linked to such trauma despite manifesting many years later. With proven program effectiveness, such outcomes could be included in a cost-benefit evaluation for successful prevention of CM, whether directly measured or estimated through projection models that link early prevention with better outcomes in child development.

**Potential for ACS FAP Positive ROI by Prevention of IPV**

The projection shown in Figure 1 leaves out potential costs savings due to IPV prevention. Cost information in research is based on incident-level data for IPV, and unlike the lifetime, or population-level data available for CM, the incident-level IPV data does not allow for analogous projections to be made. Thus, an approximation of the reduction in the number of IPV incidents is especially difficult to assess without data on program effectiveness. In addition, combining such cost projections with CM costs is difficult given the overlap in CM and IPV cases in families where some costs (e.g., due to productivity losses) may not be additive. Thus, speculating on the combined costs related to both CM and IPV is not appropriate here. However, given the relevance of the costs of IPV to ACS FAP preventive services, we feel it is important to consider potential economic impact separately. A large body of research has examined such costs mostly regarding medical and mental health expenses as well as lost productivity due to trauma. Costs related to IPV are represented relative to the number of incidents and the type of violent act. In many cases where ACS FAP has a positive impact on CM, we also can assume an impact on the monetized outcomes related to IPV.

Recent research on costs related to IPV enables projections based on a theoretical reduction in the number of IPV incidents among Army couples, distinct from any program impact on CM. A useful representation comes from research on costs of IPV against women, carried out by Max et al. (2004). Using this cost data, we approximated the number of spouses in the Army in 2015 to be 229,659, and used a similar procedure for dependents (i.e., combining available population numbers from the 2015 SED data with projected numbers of spouses for installations without available population information). Max et al. determined an average cost related to IPV physical assault (male to female) of roughly $1,509 (2015 dollars), including amounts for health and mental health services needs and productivity losses (e.g., paid work or household work). We also rely on research estimating the number per thousand couples that will commit IPV; *assuming* a mid-point—10 per thousand—or roughly 2,297 couples that would be involved in IPV (McCarroll et al., 1999; McCarroll et al., 2004). This would imply over 22,000 incidents of IPV if such couples committed an average of 10 incidents[18] in a given period. We assume that successful ACS FAP services could prevent IPV from ever occurring in certain couples, and

[18] Prior research does not provide good estimates for the average number of incidents of IPV annually among couples where domestic violence occurs; therefore, we used a hypothetical figure here to illustrate potential costs from IPV victimizations.

reduce the number of incidents in others. A projection based on a hypothetical incident-level impact from FAP can provide some understanding of the potential for economic savings that would result in addition to other obvious family benefits. For instance, if such a reduction translated into five fewer incidents of IPV among couples who commit IPV (on average), this would represent an economic savings of over $ 17 million among Army couples, or over a third of the costs of ACS FAP for a given year.

Given the difficulty in jointly considering IPV outcomes, these amounts do not include costs related to other violent incidents such as extreme IPV events (e.g., rape and murder) that are known to be very costly. For instance, Max et al. indicate an average cost of $1,570 per incident of rape, related to health/mental health costs and productivity losses. Average costs for incidents of stalking ($1,074) and IPV resulting in death ($1.1 million) are also not included here. Further, we do not consider costs of IPV toward males, even though research notes that such costs exist (Arias & Corso, 2005). Further, costs related to IPV extend beyond medical and productivity related for individuals, and we do not consider costs related to divorce or emotional suffering that cannot be monetized. We also do not factor in economic burden for children indirectly affected by IPV in the home (i.e., regardless of CM). If IPV can be prevented altogether through effective programming, the economic benefits extend across many sectors and family members. The potential costs prevented that we present here are based on a reduction in the number of incidents, but preventing IPV completely in couples would have more extensive benefits related to relationship quality and family functioning (i.e. Service member readiness and retention). Clearly, there are enormous costs linked to CM and IPV, and thus effective prevention efforts are critical to help support happiness and well-being among families while potentially saving money for both the Army and society. The findings presented in this report are intentionally conservative, given they rely on speculation for program impact on different but associated family violence outcomes. Further data on ACS FAP effectiveness for multiple targeted outcomes can help inform economic models that increase the comprehensiveness and rigor of projection models.

**Summary**

The costs linked to family violence are immense and each case can affect multiple lives. On average, a single case of CM will lead to over $230,000 in costs to individuals, families and society across many categories (e.g., child healthcare, adult medical costs, lost productivity, child welfare, criminal justice, special education needs). Even a small reduction in the rate of CM in the Army population would generate savings that could exceed the costs to implement ACS FAP. For example, a .2% reduction in the rate of CM due to effective ACS FAP programs and services would lead to cost savings for the military and society that exceed the costs to fund the program for three years (based on 2015 direct costs), and potentially generate a positive ROI based on this outcome alone. Costs associated with IPV are also large; single incidents of IPV can lead to long-term costs related to health and mental health service needs and productivity losses. As noted, jointly considering the cost savings from any other family violence outcomes prevented is extremely difficult. Nevertheless, we can assume that impacts on other outcomes would lead to additional economic benefits. Untreated and un-prevented cases of family violence have implications for the military population that impact well-being and ultimately, functioning and readiness. Therefore, addressing CM and IPV is critical to preventing further violence and reversing long-term negative impacts. But the circumstances for effectively addressing these problems are complicated; often individual cases of CM or IPV are undetected, unseen, and underreported. Effective programming has the potential to reduce

the rates of family violence, while also being cost-effective given the large cost implications from unaddressed problems. **However, there is no evidence that current efforts within ACS FAP are effective; therefore, we cannot say whether these cost savings are realized.** If future evaluation demonstrated that ACS FAP is effective in positively impacting its targeted outcomes, a clear case could be made for continued and priority funding given the potential realized by a positive ROI for the Army and society at large.

## Recommendations

*Recommendations for Program Improvement*

- Ensure existing psychoeducation programs and classes in use have demonstrated evidence of effectiveness; replace those without evidence with evidence-based or evidence-informed programs.
  - Focus programs on high risk families.
  - Focus programs to address high-risk times for military families (e.g., relocation, deployment, and family reunification).
  - Expand child care services to encourage families to attend events that provide ACS FAP related education.
  - Implement evidence-based, universal parenting programs, such as Triple P or the online version of the Take Root program.
  - Implement evidence-based universal programs focusing on relationship well-being (e.g., Marriage Check-Up, Couple Coping Enhancement Training).
  - Offer online/web-based or hybrid programming to reach a greater number of families and serve as a gateway for more intensive services.
- Implement additional marketing recruitment efforts.
- Utilize social media for recruitment and ongoing connection.
- Employ a marketing campaign targeting social norms.

*Recommendations for Program Evaluation*

- Conduct a rigorous process and outcome evaluation of ACS FAP and its sub-programs.
  - ACS FAP and sub-programs need to be assessed for consistency in implementation.
  - If the outcome evaluation of ACS FAP and its sub-programs indicates positive impacts, assess data for a cost-benefit analysis.
  - If the outcome evaluation of ACS FAP or its sub-programs indicates no impacts or negative impact, refine or decommission programs.
- Conduct a comprehensive review of administrative data of service utilization to identify patterns and resource requirements for different ACS FAP services.
- Conduct an overhaul of the CTS (i.e., program usage data) to improve the system comprehensiveness and utility in tracking process and outcome data related to ACS FAP and its sub-programs.
  - Implement enhancements to allow for better cost tracking and capture linkage among ACS FAP and its sub-programs.

- Develop a system for database interface of ACS FAP client tracking and MEDCOM FAP client tracking to provide ongoing, long-term follow-up outcome evaluations pertaining to the entire prevention and treatment continuum.

## Appendix A: ACS FAP Logic Model

| | |
|---|---|
| *Program:* | ACS Family Advocacy Program |
| *Proponent:* | OACSIM |
| *Component:* | Active Duty |
| *Participants:* | Active Duty Soldiers, Children of Soldiers, Department of the Army Civilians, Other, Retirees, Spouses/Partners of Service Members |
| | Commanders, Senior NCOs (E7-E9) |
| *Inputs:* | Equipment, Materials, Money, Partners, Research Based, Staff, Technology, Time |

| *Activities:* | *Care Continuum:* | *Short Term Outcome:* | *Intermediate Outcome:* | *Long Term Outcome:* | *MOEs:* |
|---|---|---|---|---|---|
| Commander briefings | | Increased % of CRC meetings attended by commanders who have been briefed | increased commanders endorsement of victim and offender treatment plans | Reduced % of families who recidivate | Family Violence |
| | | | Increased % of victims and offenders who complete treatment plans | | Family Violence |
| Home visitation (New Parent Support Program) | | Increase parents knowledge of healthy parenting practices | Demonstrate knowledge of child development in their parenting behaviors | Reduction in Child Maltreatment | Family Violence |
| | | Increase parents knowledge about positive disipline strategies | | | |
| Case Management | | Increase early identification of family problems | | | Family Violence, Marital/Relationship |
| Family Life Education | | Increased knowledge of how to meet childs needs for health and safety | Increase use of family life education skills | Increase in Healthy Child Development | Behavioral Health |
| Outreach to community support services | | Increased understanding of the importance of community bonding and attachment | Increase engagement in community and prevention service activities | Increased Community Engagement | Social Support |

**Appendix B: Economic Impact of CM using Prevalence-based Approach**

| Costs | 2007 Estimates (Wang and Holton, 2007) | Adjusted Estimates (Corso & Fertig, 2010) |
|---|---|---|
| **Utilization of health and mental health care** | Short term: $7.7 billion<br>Long-term: $67.9 million | Short-term: $1.4 billion<br>Long-term: $29 million |
| **Productivity** | $33 billion | $2 billion |
| **Utilization of social welfare services** | Child welfare: $25.4 billion<br>Special education: $2.4 billion | Child welfare: $2.3 billion-$25.4 billion<br>Special education: $1.4 billion |
| **Criminal justice (e.g., police, courts)** | $35.2 billion | $3.2 billion – $92.6 billion |
| **Quality of life** | | $69.5 billion |
| **Total indirect costs** | $70. 6 billion | $38.3 billion |
| **Total costs** | $103.7 billion | $65.1 billion |

## Appendix C: Risk and Protective Factors for Family Violence

Risk factors increase the likelihood that favorable outcomes will not be achieved and increase the likelihood of negative outcomes. Protective factors help to minimize the risk of reaching negative outcomes, decrease the likelihood of problem behavior, and increase the likelihood of attaining positive outcomes. Military families share the same general risk and protective factors as civilian families, and they also face unique, military-specific challenges. However, the military provides buffers to alleviate challenges unique to the military lifestyle, meaning that additional protective factors also exist.

*CM Risk Factors*. Characteristics of individuals and families are linked to CM. For example, poor parenting knowledge, efficacy, parental stress, and unrealistic expectations for child development all contribute to the potential for CM (Lee, 2013; Slack et al., 2011). In addition, parental characteristics (e.g., young maternal age, low socioeconomic status, and mental health) may also be linked to negative outcomes (Fortson et al., 2016; Lanier, Maguire-Jack, Walsh, Drake, & Hubel, 2014). In addition, military families may face additional stressors (e.g., relocation, extended separations, and deployment) which when coupled with maladaptive coping behaviors is a risk factor for CM (Porter, 2013; Taylor et al., 2016). Moreover, low social support is a risk factor for CM. Military families may perceive lower levels of social support as they are typically isolated from their families of origin and their traditional support networks (e.g., immediate and extended family) (Davis, Hanson, Zamir, Gewirtz, & DeGarmo, 2015; Hisle-Gorman et al., 2015; Saltzman et al., 2011).

*CM Protective Factors*. Building parental knowledge, efficacy, and realistic expectations of child development can be protective factors. In addition, improving social support and helping individuals access and use resources (e.g., mental health services) may reduce CM (Douglas & Mohn, 2014; Li, Godinet, & Arnsberger, 2011; Maguire-Jack & Negash, 2016). Military families have built-in economic supports (e.g., at least one employed parent, housing allowance, medical care) and military programs and policies designed to support families [e.g., FAP, child care]) (Chamberlain et al., 2003; Gibbs et al., 2008; McCarroll, et al., 2004; Milner, 2015; Rentz et al., 2006).

*IPV Risk Factors.* Individual characteristics (e.g., young age, low socioeconomic status, mental health issues) are risk factors that may contribute to the likelihood of IPV (Capaldi, Knoble, Shortt, & Kim, 2012; O'Donnell, Smith, & Madison, 2002; Smith Slep, Foran, Heyman, & Snarr, 2010; Trevillion et al., 2015). In addition, a number or relationship characteristics can contribute to a risk for IPV including, marital status (i.e., newly married, divorced or separated) and relationship dissatisfaction and discord (Hyman, Forte, Mont, Romans, & Cohen, 2006; Schmaling et al., 2006; Stamm, 2009).

Being a female Service member married to a civilian spouse, a dual military couple (Aronson, Perkins, & Olson, 2014), and a lower rank Service member are also risk factors for IPV (Foran, Smith Slep, Heyman, USAF FAP, 2011). Also, Service members who experienced abuse prior to their time in the service were also more likely to have an IPV incident (Aronson, Perkins, & Olson, 2014; Taft, Schumm, Marshel, Panuzio, & Holtzworth-Munroe, 2008). Military culture, itself, may be a risk factor as it promotes the use of violence to resolve a conflict (Adelman 2003; Jones, 2012; Trevillion et al., 2015). Assignment to combat and combat-related PTSD and traumatic brain incidents (TBI) may also contribute to IPV (Cesur & Sabia, 2016; Gerlock, 2004; Orcutt, King & King, 2003; McCarroll, Ursano, Fan, & Newby, 2004; Sayers, Farrow, Ross, & Oslin, 2009; Taft, Vogt, Marshall, Panuzio & Niles, 2007; Tinney & Gerlock, 2014).

*IPV Protective Factors.* Protective factors include social support (Huang et al., 2010; Smith Slep, Foran, Heyman, & Snarr, 2010), marital status (i.e., married or never married) (Slashinski et al., 2003; Sorenson & Telles, 1991), and sex-role egalitarianism (Forgey & Badger, 2010). While protective factors related to IPV have not been adequately studied in the context of the military, they are likely similar to CM protective factors which include economic supports (e.g., at least one employed parent, housing allowance, and medical care) and military programs and policies designed to support families (e.g., FAP, relationship education) (Chamberlain et al., 2003; Gibbs et al., 2008; McCarroll, et al., 2004; Milner, 2015; Rentz et al., 2006).

**CM & IPV Risk Factors[19]**

| Risk Factors | CM | IPV |
|---|---|---|
| Poor parenting knowledge | X | |
| Poor parental efficacy | X | |
| Unrealistic expectations of child development | X | |
| Young parental age | X | X |
| Low socioeconomic status | X | X |
| Mental health issues | X | X |
| Stressors associated with Military life (e.g., relocation, deployment) | X | X |
| Low social support (e.g., isolation from traditional support networks) | X | X |
| Marital status (e.g., newly married, divorced, separated) | X | X |
| Relationship dissatisfaction | | X |
| Female gender | | X |
| Dual military couple | | X |
| Lower ranking Service member | | X |
| Military culture influence (e.g., use of violence to resolve conflict) | | X |
| Lower leadership support for Service member and spouse | | X |
| Post-Traumatic Stress Disorder | | X |
| Traumatic Brain Injury | | X |

**CM & IPV Protective Factors[20]**

| Protective Factors | CM | IPV |
|---|---|---|
| Parental knowledge | X | |
| Parental efficacy | X | |
| Realistic expectations of child development | X | |
| Access to and use of resources (e.g., mental health resources) | X | |
| Military related economic support (e.g., one parent employed, housing allowance, medical care) | X | X |
| Military policies and programs designed to support families (e.g., FAP) | X | X |
| Sex role egalitarianism | | X |
| Marital status (e.g., married or never married) | | X |
| Social support | X | X |

[19] Not a complete list of all CM & IPV risk factors.
[20] Not a complete list of all CM & IPV protective factors.

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