Building the Evidence for Domestic Violence Services and Interventions: Intermediate Health and Patient-Centered Outcomes

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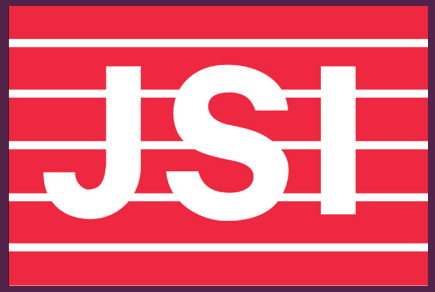

Prepared by JSI for Blue Shield of California Foundation

JSI RESEARCH & TRAINING INSTITUTE, INC.

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Executive Summary

Domestic Violence (DV) is a widely prevalent and well-recognized public health issue with adverse physical and mental health outcomes for DV survivors, their children, and communities.[1,2,3,4,5,6] A growing body of evidence indicates that DV is a key driver of health care utilization and costs.[7,8,9,10] Yet, DV is seldom a consideration in health care decision-making, in part due to limited rigorous and conclusive evidence on the effectiveness of DV services and interventions in improving health and lowering health care costs.

A strong body of evidence is critical to ensure the sustainability of DV services and interventions. However, building the evidence base for DV is complex, and it is challenging to establish causality between service receipt and reductions in health care costs due in part to the difficulties of longitudinal follow-up with DV survivors.

To support strengthening the evidence base for DV, Blue Shield California Foundation (BSCF) engaged JSI Research & Training Institute, Inc. (JSI) to conduct a literature review to answer the questions: **What intermediate outcomes lie along the pathway from DV services to health care utilization and costs? Specifically, are there outcomes that are meaningful from multiple perspectives (e.g., patients/clients, communities, public and private sector payers), and readily measurable to demonstrate the impact of DV services and interventions?**

We conducted a review to identify relevant peer-reviewed literature published between 2006 and 2017. A total of 33 articles were included. Key findings include:

- There are a range of intermediate health and patient-centered outcomes that lie along the pathway from services and interventions to health care utilization and costs.
- Outcomes can be broadly classified into nine categories: DV incidence, recurrence and victimization; mental health; safety planning; process and practice changes; use of community resources; quality of life; health risk behaviors; and pregnancy and birth-related outcomes. These outcomes can be readily measured using a menu of existing and validated tools.
- Although DV incidence, recurrence, and victimization were the most commonly measured outcomes across reviewed studies, the most favorable impact of DV services and interventions were in intermediate health outcomes (e.g., improvement in birth-related and mental health outcomes) and patient-centered outcomes (e.g., self-reported safety planning and self-efficacy).
- Even with relatively small sample sizes and limited follow-up, about half of the studies included in our review demonstrated favorable impact in at least one outcome area.

In addition to our review of peer-reviewed literature, we conducted an environmental scan of leading organizations in the DV field to identify outcomes used in real-world program evaluations. Key findings from that scan include:

- Real-world program evaluations used similar intermediate health and patient-centered outcomes to evaluate their programs.
- Compared to peer-reviewed literature, real-world program evaluations placed greater emphasis on process outcomes (e.g., practice, policy, and systems-level change); identifying a smaller number of outcomes that could be applicable in multiple settings; engaging survivors in outcome identification; and paying attention to context and capacity in outcomes selection.

We developed an Evaluation Planning Tool (see page 23) to provide guidance to programs on employing findings, data, and tools presented in this report to improve evaluation and documentation of the value and effectiveness of their DV services and interventions.

Our review establishes that there is a promising set of outcomes that are more readily measurable, reflect the potential impact of the types of DV services and interventions being offered, and are less susceptible to the challenges of longitudinal follow-up with DV survivors. Building on the existing literature to form a solid and persuasive evidence base is critical to elevate DV in policy- and practice-change discussions and secure additional resources to mitigate, address, and prevent DV.

Introduction

Domestic Violence (DV) is well-recognized as a widely prevalent public health issue, with more than three decades of evidence documenting its impact. DV has immediate, short, and long-term health effects related to injuries; chronic health; sexual and reproductive health; mental health; substance abuse; and health risk behaviors.[2,4,5,6,11] A recent but growing body of evidence further indicates that exposure to DV significantly increases health care utilization and costs.[7,8,9,10] Yet, DV is seldom a consideration in health care decision-making.

Lessons learned from other sectors underscore the importance of a strong body of evidence in order to sustain initiatives through supporting practice change, policy, and funding shifts.[12,13,14,15] In the case of DV, while there is substantial evidence on risk factors, prevalence, and adverse health effects, there is limited rigorous and conclusive evidence on the impact of DV services and interventions on health care utilization and cost.

Figure 1 presents a conceptual framework of the pathway from risk factors to incidence to services/interventions to impact. There are many complexities in establishing causality between receipt of services and interventions to reductions in health care utilization and cost.[16] Challenges include:

- Limited resources for performance measurement and evaluation.
- Lack of trust between sectors (e.g., DV and health providers, researchers) that limits data sharing.
- Unique legal and safety concerns in data collection and data sharing between sectors.
- Loss to follow-up that limits establishment of causality between service receipt and health care utilization and cost.
- Difficulties in isolating outcome measures that are most meaningful and susceptible to impact. DV interventions tend to be multi-faceted, addressing a broad range of social, psychological, economic, and health concerns, making it difficult to isolate outcomes that best capture program impact and demonstrate effectiveness.

To sustain DV services and interventions long-term, we need stronger evidence of their impact. Specifically, we need evidence that demonstrates what works along the pathway from receipt of DV services to improvement in health outcomes and reductions in health care costs (see Figure 1). While it is challenging to establish causality between receipt of interventions and reduction in health care costs, understanding the intermediate health and patient-centered benefits that accrue along this pathway may be meaningful. Return on program investment (ROI) remains an important consideration in setting health care priorities. However, increasing attention on social determinants of health (including DV) means that health care payers and funders are seeking more evidence to better understand the scale of DV, the breadth of services being offered, and their potential impact in order to better allocate resources and build capacity.[17]

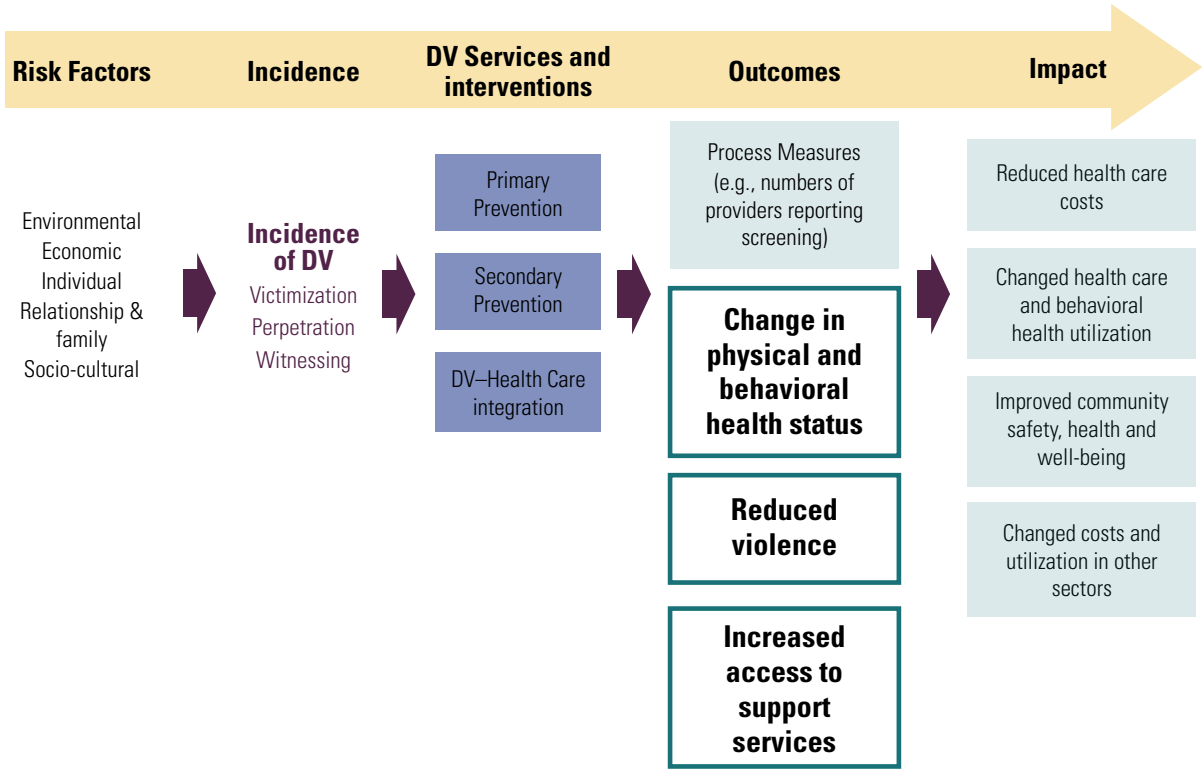
To support strengthening the evidence base for DV, Blue Shield California Foundation (BSCF) engaged JSI to conduct a literature review of intermediate health and patient-centered outcomes that are used to evaluate DV services and interventions. The goals of our review were to:

1. Identify outcomes that lie along the pathway from DV services and interventions to health care utilization and cost.
2. Identify outcomes that BSCF-funded DV-health care partnerships and other community and/or clinic-based services and interventions can readily measure within their current resource and capacity constraints.

This report summarizes findings from our literature review. It includes:

- A synthesis of intermediate outcomes assessed in the peer-reviewed literature and real-world program evaluation.
- An Evaluation Planning Tool that programs can use to guide internal discussions on employing the findings, tools, and data presented in this report to routinely monitory and document the value and effectiveness of their services.
- Case studies demonstrating how real-world evaluations have used intermediate outcomes to show impact.

Figure 1. The Pathway from DV Risk to Intervention Impact



Methods

We conducted a systematic review to identify relevant literature on the evaluation of DV services and interventions with a focus on intermediate health and patient-centered outcomes.

We searched the literature using the following methods:

1. Targeted searches using specific search terms of electronic databases of peer-reviewed literature (PubMed, Medline, and Google Scholar).
2. Cross-referencing of reference lists of systematic reviews of DV interventions and of other select publications.
3. Online searches of leading organizations for reports documenting how programs are measuring the effectiveness of their services in community settings.

Searches were conducted based on all possible combinations of a set of search terms pertinent to DV interventions and evaluation. Search terms included: domestic violence, intimate partner violence, gender-based violence, evaluation, effectiveness, longitudinal, outcomes, impact, randomized controlled trials (RCTs), patient-safety, well-being, and self-sufficiency. The search was restricted to articles and reports published between 2006 and 2017 and among English-speaking populations. Given the focus of the review, we did not include studies where the intervention entailed only provider training, nor did we report on the quality of the evidence or exclude studies if their methods were less rigorous.

Inclusion Criteria for Peer-Reviewed Articles

- Published between 2006 - 2017
- Intervention or program targeting survivors of domestic violence
- Study measured and documented intermediate health and other patient-centered outcomes
- Description of study design. Could include experimental or quasi-experimental study design
- Studies conducted among English-speaking populations

Study Characteristics

A total of 33 studies were included in the review. The majority (82%) evaluated services and interventions implemented in health care settings (e.g., primary care clinics, emergency departments, prenatal care settings, and outpatient facilities), and the rest evaluated services implemented through home visiting programs. The types of services and interventions being evaluated ranged from screening and assessment to more complex interventions including:

- On-site DV advocate
- Case management
- Integrated health, behavioral health, and safety interventions
- Counseling focused on empowerment, social/emotional issues, and tailored to client's risks
- Referrals, linkages to community resources, and safety planning assistance

The box below describes the studies included in our review in further detail.

OTHER STUDY DETAILS

The majority of studies were conducted in the United States. The rest were conducted in the United Kingdom, Canada, Australia, or New Zealand.

All studies focused on women ages 18 to 64.

Half of studies recruited participants from primary care clinics. A third were conducted among women receiving maternal or reproductive health services. The remainder recruited participants receiving DV support services such as shelter and justice services.

The majority (80%) employed an experimental or quasi-experimental design and included a control or comparison group.

Most studies included repeated outcome measurement. The length of follow-up ranged from three to 24 months.

Findings from Peer-Reviewed Literature

Studies investigated a variety of intermediate outcomes relating to health and patient/client well-being. These outcomes can be broadly classified into nine categories. Table 1 lists the nine outcome categories and the frequency of occurrence of these categories in the peer-reviewed literature. A summary of findings for each outcome category follows. Details about the tools used to measure each outcome category can be found in Appendix B.

TABLE 1. NUMBER OF STUDIES REPORTING EACH OUTCOME

1. DV incidence, recurrence, or victimization	29
2. Mental health conditions	14
3. Safety Planning	11
4. Process and practice change measures	9
5. Use of DV-specific or community-based services	8
6. Quality of Life	7
7. Health risk behaviors	5
8. Pregnancy and birth-related outcomes	4
9. Self-efficacy	4

1. DV INCIDENCE, RECURRENCE, OR VICTIMIZATION

A total of 29 studies measured the impact of DV services and interventions on DV incidence, recurrence, and victimization.[18-46] Most studies used validated screening tools, often starting with a brief tool at baseline followed by a more nuanced tool at follow-up assessments, once client-provider relationships had been strengthened (see example Screening & Assessment Tool from the National Violence Against Women Survey at right). Some studies used novel surveys and electronic health records to track baseline DV and recurrence over time.[27,47] Physical violence was most commonly assessed, while sexual, emotional, verbal and psychological forms of violence were studied to a lesser extent.

Most studies compared groups of clients/patients receiving different types of interventions. For example, measuring the shift in DV incidence/recurrence among clients who received a wallet-size referral card compared to those who received nurse case management, or among clients who received self-administered screening followed by provider notifications regarding their patient's positive disclosure compared to clients who received only self-administered screening.[20,38] Fewer than half of the studies found reductions in DV over time or differential DV recurrence between groups receiving different types of interventions. Several studies found that DV recurrence declined regardless of whether patients/clients received the intervention.[38] A few studies, however, did demonstrate meaningful reductions in DV incidence and recurrence after receipt of the intervention.[21] (See the next page for examples of studies with favorable intervention effects).

SCREENING & ASSESSMENT TOOL FROM THE NATIONAL VIOLENCE AGAINST WOMEN SURVEY

How many of your romantic or sexual partners have ever…

- slapped or kicked you?
- pushed or shoved you?
- hit you with a fist or something hard?
- slammed you against something?
- tried to hurt you by choking or suffocating you?
- beaten you?
- used a knife or gun on you?

How many people have ever used physical force or threats to physically harm you to make you…

- have vaginal sex?
- receive anal sex?
- make you perform or receive oral sex?

How many of your romantic or sexual partners have ever…

- {if female: tried to get you pregnant when you did not want to become pregnant; if male: tried to get pregnant when you did not want them to get pregnant} or tried to stop you from using birth control?
- refused to use a condom when you wanted them to use one?

EXAMPLES OF DECREASE IN DV ASSOCIATED WITH INTERVENTIONS

1. Domestic Violence Enhanced Perinatal Home Visits

The Domestic Violence Enhanced Home Visitation Program (DOVE project) was a randomized control trial of 239 women experiencing perinatal DV. [24] It was conducted from 2006 to 2012 across multiple US urban and rural settings.

Intervention: Women in the DOVE intervention group received a structured abuse assessment followed by six individually-tailored home visitor-delivered empowerment sessions. Women in the control group received usual home visiting care. The primary outcome measure was DV that was measured using the Conflicts Tactics Scale 2 at baseline and select intervals from one month post-intervention through 24 months postpartum.

Key Finding: Women in the DOVE treatment group reported a larger and statistically significant decrease in DV over time as compared to women in the control group.

2. In-Clinic DV Advocate Intervention

A quasi-experimental evaluation design was used to assess the impact of having an on-site DV advocate at the clinic for immediate consult following a positive DV assessment.[33]

Intervention: Clinics were allocated to intervention or control. Women assessing DV positive at intervention clinics were encouraged to meet the DV advocate who was available during clinic hours to provide needs assessment, safety planning, and facilitated linkages and referrals to community services. Women assessing DV positive at control clinics received the business card of their healthcare provider with the coalition hotline number. The primary outcome measure was prevalence of DV, measured using the 17-item Danger Assessment Score at baseline and up to 24-months follow-up.

Key Finding: DV scores among women in the intervention group trended towards greater decline compared to women in the control group. A decline in DV scores was most likely to occur within the first six months after receipt of intervention and among those experiencing DV at baseline.

2. MENTAL HEALTH CONDITIONS

Fourteen studies measured mental health outcomes, including depression, anxiety, PTSD, stress, suicidal ideation, and psychological distress.[21,22,24-26,28,33-35,37,43,46,48,49] Ten out of thirteen studies measuring depression as an outcome found no difference in depression symptoms from baseline to follow-up or between intervention and control participants, while three studies documented a decrease in depression prevalence.[33,48,49]

Six studies measured PTSD but none found significant reductions over time and/or differences between intervention and control groups.[21, 22, 28,35,37,49]

Five studies measured anxiety.[25,28,43,48,49] One documented significant improvements, specifically a large decline in the prevalence of anxiety within the first four months of accessing the intervention (safe shelter and justice services), subsequently plateauing and remaining steady until 12 months follow-up (50% at baseline to 13.5% at 12 months follow-up).[49]

EXAMPLE OF DECREASE IN DEPRESSION ASSOCIATED WITH AN INTERVENTION

In a study in Australia, family planning doctors and their female patients were randomized to receive an intervention.[48]

Intervention: Key components of the intervention included: provider training, notification of patients' screening DV positive, and 1-6 counseling sessions for DV positive women focused on relationship and emotional issues. Prevalence of depression was measured using the Hospital Anxiety and Depression Scale.

Key Finding: Prevalence of depression was significantly lower among intervention patients as compared to controls at 6- and 12-months follow-up (39% intervention vs. 57% control at 12 months follow-up).

3. SAFETY PLANNING PRACTICES

Eleven studies examined intervention effects on safety planning practices.[22,23,29,31,36-39,41,46,48] Interventions included tailored web-based safety information and safety decision aids/plans; ED screening, risk assessment, supporting messaging and referrals; nurse mentors collaborating with designated DV liaison workers to support patients; and self-administered patient health and well-being checklists followed by provider-delivered safety planning information and guidelines.[23,46,48] Seven studies assessed changes in participant safety practices using adaptations of the Safety Behavior Checklist (see example at right), a checklist of behaviors recommended by advocates to improve survivors' safety.[22,31,36-38,41,48] Other outcome measures included client reports of practicing harm reduction and safe sex strategies (e.g., having fewer partners, avoiding sex when high or drunk).[27,36]

Intervention effects varied. Outcome measures included:

- Increased opportunities to discuss and plan for safety with providers[29]
- Increased self-reports of practicing safe-sex[36]
- Two- to four-fold increase in self-reported safety planning rates two years post-intervention comparing intervention patients to controls[23]
- Increased self-reported safety behaviors among women receiving internet-based safety planning support vs. controls receiving typical safety information available online[46]

ADAPTED SAFETY BEHAVIOR CHECKLIST[38]

Ask the woman to answer if she has ever done any of the following. She can respond yes, no, or N/A.	Yes	No	N/A
Hid money			
Hid extra set of house or car keys			
Established emergency code with family/friends			
Kept aside copies of financial papers			
Kept aside valuables			
Hid a bag with extra clothing			
Have important phone numbers handy			

4. PROCESS AND PRACTICE CHANGE MEASURES

Nine studies examined a range of measures relating to process and practice change outcomes.[18,23,27,29,30,32,39,42,48] Measures included:

- Patient disclosure rates
- Patient acceptance of provider-initiated intervention
- Patient perceptions on helpfulness of interventions
- Patient reports that providers inquired about DV and expressed concern for their safety
- Provider self-reported practices relating to conducting safety assessments, making referrals, and providing assistance in safety planning

Most studies found favorable shifts. Examples include:

- In one study, participants were randomized to receive an interactive multimedia intervention followed by provider inquiry. Results indicated that at baseline and one-month follow-up visit, intervention patients were more likely to report patient-provider discussions of DV compared to patients receiving 'usual care' (90% vs. 26%).[42]
- Three studies tracked the number of referrals to DV agencies as a primary intervention outcome.[18,23,29] One of these studies found a favorable effect.[18] Provider practices were randomized to the intervention, which included provider training in screening, assessment and referrals. The main outcome measure was number of referrals to a specialist DV agency as recorded in electronic medical records; intervention practices made 223 referrals compared to 12 referrals made by control practices.

5. UTILIZATION OF DV-SPECIFIC OR COMMUNITY-BASED SUPPORT SERVICES

Eight studies measured whether receipt of an intervention led to the use of DV-specific or community-based services.[20,27, 31,33,37-39,41] Use of services was captured through self-report. For example, in a three-arm RCT, at one-year follow-up participants were asked whether they remembered receiving a list of local violence prevention resources, had shared it, had contacted any of the services, or had called or visited any of the agencies on the list.[20] In other studies, participants were asked to review a novel checklist of resources (see example at right) or respond to the set of help-seeking questions from the National Violence Against Women survey and indicate which, if any, services they had used.[31,37,38,41]

Four studies found increased knowledge and/or use of DV-specific resources.[27,33,37,39] Outcome measures included:

- Improved knowledge of resources
- Increased reports of interacting with a DV advocate
- Increased reports of calls to hotlines
- Increased reports of following-up on community referrals
- Increased reports of reaching out to the police, lawyers, court systems for protective orders

ADAPTED RESOURCES CHECKLIST[20]

Have you ever used any of the following?

- Health care
- Legal services
- Battered women's groups
- Church/clergy
- Police
- Social services
- Drug and alcohol treatment agencies
- Mental health services
- Shelters and other community-based services for abused women

6. QUALITY OF LIFE

Seven studies examined client/patient perceptions of quality of life; none found any differences at follow-up.[20-22,34,41,45,48] A range of tools exist to measure quality of life, and common measures include: patient perceptions of general quality of life, health, interference of mental health with daily activities, mobility, self-care, pain/discomfort, vitality, social functioning, and psychological distress. For example:

- A quasi-experimental study conducted in the UK among five community mental health team providers and their patients (n=34) found improvements in patient perceptions in general quality of life at 3-months follow-up, but no change in health-related quality of life.[22] The intervention involved training community mental health teams' and providing patients with referrals to domestic violence advocacy agencies. Two quality of life measures were used: The Manchester Short Assessment of Quality of Life (MANSA) and the Euro-QoL (EQ-5D).

7. HEALTH RISK BEHAVIORS

Five studies measured intervention effects on health risk behaviors such as alcohol and substance abuse, smoking, and/or environmental exposure to smoke.[19,21,30,40,43] All studies used validated tools and conducted repeated measurements. Only one study found significant intervention effects:

- A study was conducted among women less than 26-weeks pregnant and receiving care in one of five participating clinics in a major US urban metropolitan area.[30] Women were randomized into intervention or controls groups. Providers in the intervention group received a summary "cueing sheet" alerting them of patients' health risk behaviors and suggested counseling statements. Results showed that intervention participants were more likely than control group participants to report discussing tobacco use with providers.

8. SELF-EFFICACY

A total of five studies examined intervention effects on patients/client's sense of self-efficacy, social connectedness, and inclusion as secondary outcomes.[22,25,27,34,45] Only two studies found differences over time or between intervention and control groups:

- One study assessed the effectiveness of an intervention delivered by family planning providers focused on mitigating reproductive coercion.[27] Compared to control group participants, intervention patients demonstrated greater self-efficacy in using harm reduction behaviors, described as confidence in implementing behaviors to reduce the impact of reproductive coercion and DV.
- Another study used a pre/post design to evaluate an eight-session counseling program, based on the Stages of Change model, offered to clients of a DV service provision agency (n=19).[45] Sixty percent of the participants reported improvements in self-efficacy of ending or staying out of abusive relationships.

9. PREGNANCY AND BIRTH OUTCOMES

A total of four studies examined intervention effects on pregnancy and birth-related outcomes.[19,27,40,50] Measures included: low birth weight, very low birth weight, preterm birth, very preterm birth, mean gestational age, unintended pregnancy, unprotected sex and pregnancy coercion.

Two of these studies analyzed data from a randomized control trial among African American women (n=1044) to evaluate the efficacy of a cognitive-behavioral intervention delivered during prenatal and post-partum care over 4 to 8 sessions.[19,50] The intervention adapted existing evidence-based interventions and included risk assessment; counseling on safety behaviors and prevention options; provision of information of types of abuse and community resources; suggestions to deal with depression and tobacco exposure; and strategies to reduce risk of DV. The intervention was tailored to the participant's stage of readiness for change and risk profile. Participants were interviewed at baseline and at three subsequent time points, including a final post-partum interview. Favorable results included:

- Fewer very preterm births (1.5% intervention vs. 6.6% controls, p=.03)
- Increased mean gestational age (38.2 ± 3.3 versus 36.9 ± 15.9, p=.02)
- Among participants experiencing DV during pregnancy and post-partum, significantly lower rates of very low birth weight (.8% intervention vs. 4.6% controls, P=.052).[19]

OTHER PROCESS AND QUALITY MEASURES

This section lists other less commonly observed outcomes that emerged in our review and/or through engaging CA DV leaders, DVHCP partners, and other BSCF-funded partners working on DV prevention and mitigation.

Client/Patient level:

- Number of clients with health insurance
- Number of clients with an established health home
- Perpetration of child abuse
- Child development indicators
- Income stability; interference of DV to participate in employment
- Housing stability
- Days lost from work, school, or household activities
- Risks for assault (threats of assault, lethal harm)
- Risks of self-harm (suicidal ideation)
- Self-efficacy of taking care of health and overall well-being
- Number of completed visits
- Health services received

Systems-level:

- Trainings conducted
- DV/health assessments conducted
- Referrals made (by DV agency to health center and vice versa)
- DV cases documented in electronic medical records
- Types and strengths of relationships built across sectors
- Cultural competency among staff
- Communication within/across agencies
- Feedback loops between agencies to identify gaps and areas for continued quality improvement
- Data sharing across agencies
- Coordinated delivery of services

Findings from a Review of Real-World Program Evaluations

In addition to a review of the peer reviewed literature, we conducted an environmental scan of leading organizations in the DV field to identify outcomes used in real-world program evaluations. Broadly, we found consistency between outcomes used in the peer-reviewed literature and real-world evaluations. A few noteworthy distinctions include:

- Real-world program evaluations more commonly used process measures such as fidelity of program implementation, practice changes, and policy- and systems-level changes.
- Real-world program evaluation reports used fewer outcomes, that were applicable across a range of settings, and that were less vulnerable to the challenges of following clients over time.
- Several programs emphasized the importance of having an advisory group of DV survivors to assist with outcomes identification in order to ensure cultural/context appropriateness and to capture shifts in outcomes that clients perceive as most critical to their recovery.
- Program evaluation reports emphasized the importance of recognizing that programs vary greatly in their approach, context, and capacity, and, as such, there is no one-size-fits-all approach for program evaluations.

Table 2 summarizes outcome measures commonly used in real-world evaluation reports and documentation of promising practices. Case studies highlighting how select programs have employed intermediate, process, health, and patient-centered outcomes to evaluate their programs can be found in Appendix C.

Based on our review, we created an Evaluation Planning Tool that programs can use to guide internal discussions on employing the findings, tools, and data presented in this report to routinely monitory and document the value and effectiveness of their services.

TABLE 2. OUTCOMES COMMONLY USED IN REAL-WORLD PROGRAM EVALUATIONS

Outcome Domain	Sample Measures Used in Evaluations
DV incidence/ recurrence	■ Number of times experienced intimate partner violence
Mental health	■ Prevalence of depression, PTSD, anxiety, parenting stress
Quality of life	■ Quality of life ■ Perceptions of social support
Safety planning	■ Number of survivors who met self-defined goals ■ Number of survivors who developed a personalized safety plan for themselves and their children
Self-efficacy	■ Perceptions of support and empowerment ■ Understanding of safety and legal options ■ Understanding of DV and its effects
DV agency referral/ utilization	■ Service utilization ■ Ability to obtain community resources
Organizational process measures	■ Number of women served in DV program ■ Client experiences, perceptions, and level of satisfaction with program intervention ■ Staff implementation experience ■ Types of services provided
Policy and Community/ Systems-Level changes	■ Extent to which provider knowledge, attitudes, and practices have shifted ■ Extent to which DV-related policy changes are implemented statewide ■ Community responses to DV ■ Community violence rates
Cultural competency	■ Patient report feeling as if their culture was considered during service delivery ■ Provision of culturally-specific services in their own language

Evaluation Planning Tool

Evaluation Framework

The figure below provides a framework for identifying realistic and meaningful outcome measures. This framework is based on the premise that there are different outcome measures of interest over time, ranging from process and practice measures in the short-term to intermediate health, behavior, and safety measures to long-term impact measures including reduction in DV, utilization and costs in healthcare and other sectors, and improved community safety.

SHORT TERM → **LONG TERM**

Process and Practice Measures

- Trust and relationship-building
- Communication and referral protocols established
- Trainings provided by DV agency to health and other partners
- Trainings provided by health agency to DV and other partners
- Provider knowledge about DV and resources increased
- Provider knowledge about health impacts of DV and available resources increased
- DV/health assessments conducted
- Referrals made from DV agency to health center (and vice versa)
- Initiation of health insurance process
- Number of clients with health insurance
- Number of clients with an established health home
- Referral visits completed
- Health services received

Intermediate Outcomes

- Organizational policy changes (e.g., universal education)
- Funding for DV and health initiatives
- Staff capacity and expertise to support clients/patients experiencing DV
- Coordinated delivery of services
- Establishment of data linkages and data sharing
- Intermediate health outcomes (e.g., pregnancy and birth outcomes, mental health, health-risk behaviors)
- Safety planning practices
- Increase in self-efficacy
- Utilization of community resources
- Utilization of behavioral health services

Impact

- DV recurrence, incidence, and perpetration
- ED/inpatient utilization
- Health care costs
- Utilization and costs in non-health sectors
- Improved community safety, health, and well-being

Evaluation Planning Tool

The purpose of this Evaluation Planning Tool is to provide guidance to programs on how to employ the findings and tools presented in this report to improve evaluation and documentation of the value and effectiveness of their services. There is no one-size-fits all approach for evaluation, but rather a menu of tools and options to choose from. Programs should consider their context, capacity, and resources, and identify outcome measures that are most realistic, meaningful, and susceptible to impact. This tool is meant to support internal conversations about evaluation; more specifically, what intermediate health and/or patient-centered outcomes can programs routinely measure working within current resource and capacity constraints.

Evaluation Planning Questions	Responses for your program
Who are the consumers of the evaluation data?	Check all that apply and enter others relevant for your program: ☐ Funders ☐ Other partners ☐ Program specific examples: - _____ - _____
What is their appetite for data?	Reflect on the following questions, and enter in your responses in the space below: ■ What form of data are they looking for? ■ Do different data consumers care about learning different things? ■ Will they process the information in different ways and how should we communicate the data? Check all that apply and enter others relevant for your program: ☐ Personal narratives ☐ Stories ☐ Quantified scale of the problem ☐ Description and scale of services provided ☐ Health care outcomes ☐ Safety outcomes ☐ Quality measures ☐ Program specific examples: - _____ - _____ - _____

Evaluation Planning Questions	Responses for your program	
What is the balance between rigor and feasibility of implementation?	Do we need to adopt rigorous evaluation methods? Yes/No_____ Do we need a control/comparison group? Yes/No_____ Is it sufficient to measure shifts over time (or pre/post data)? Yes/No_____ How frequently should we collect data? _____	
How does our current data collection compare against what we would like to be collecting?	**Which of the 9 outcome categories are relevant for our program? Check all that apply:** ☐ DV incidence, recurrence, or victimization ☐ Mental health conditions ☐ Process and practice change measures ☐ Safety planning practices ☐ Utilization of DV-specific or community-based support services ☐ Quality of life ☐ Health risk behaviors ☐ Self-efficacy ☐ Pregnancy and birth outcomes ☐ Others: _____	**In which of these outcome categories do we/or our partners collect data? Check all that apply:** ☐ DV incidence, recurrence, or victimization ☐ Mental health conditions ☐ Process and practice change measures ☐ Safety planning practices ☐ Utilization of DV-specific or community-based support services ☐ Quality of life ☐ Health risk behaviors ☐ Self-efficacy ☐ Pregnancy and birth outcomes ☐ Others: _____
What do we notice comparing desired outcome categories vs. current outcome categories that we are focusing on?	Use this space to note any synergies and areas for improvement. For example, our programs respond to clients' mental health conditions but we do not capture the processes or outcomes relating to mental health. Is there an opportunity to collect these data?	
What data collection tools do we currently use?	List tools currently used (e.g., tracking database, patient/client linkages, EHR, paper forms, etc.) ■ _____ ■ _____ ■ _____	

Evaluation Planning Questions	Responses for your program	
Which of the tools in this report might be relevant for our programs? ***Remember you do not have to use the entire tool, but can selectively use questions relevant for your program and that align with your data consumers' appetite for information.***	List tools from this report you want to further explore (see Appendix B for list of tools): ■ _____ ■ _____ ■ _____	
What factors do we need to consider for data collection and evaluation?	List factors to consider before beginning: ■ Privacy: Do we have a private space to collect these data? ■ Data storage: Do we have the infrastructure to safely store the data? ■ Staff training and capacity: Does our staff have the time and capacity to collect data? ■ Other human/financial/technical considerations:_____	
Who needs to be involved in data creation? What do our data creators need?	**List the types of staff who need to be involved in data collection** (e.g., case manager, data analyst): ■ _____ ■ _____ ■ _____	**List what staff need to collect data.** This could relate to training, skills, resources, databases, MOUs for data linkages etc. ■ _____ ■ _____ ■ _____
What actions can we take to collect data in the desired outcome categories and build the evidence for the impact of our services and interventions? ***For example, these could be changes at the staff, program, policy, or partnership levels.***	**What immediate steps can we take?** List changes needed to employ new tools and/or focus on new outcome categories: ■ _____ ■ _____ ■ _____	**What steps can we take later on?** List changes needed to employ new tools and/or focus on new outcome categories: ■ _____ ■ _____ ■ _____

Conclusion

The evidence is clear: there is a promising set of outcomes that lie along the pathway from DV services and interventions to health care utilization and costs. These outcomes are more readily measurable, reflect the potential impact of DV services and interventions, and are less susceptible to the difficulties of longitudinal follow-up with DV survivors. The consistency in outcomes used in peer-reviewed literature and real-world evaluations is promising, and validates the importance of building on current evidence to form a solid and persuasive evidence base that is critical to elevating DV in policy and practice-change discussions and securing expanding resources to mitigate, address, and prevent DV.

Even with relatively small sample sizes and limited follow-up, about half of the studies included in our review showed impact in at least one health or patient-centered outcomes area. We found that over the short- to medium-term, services and interventions were most likely to have an impact on intermediate outcomes rather than DV recurrence, victimization, and perpetration. This underscores the multi-faceted nature of DV and the importance of long-term evaluation to assess the ROI of DV services and interventions.

While the prevalence of DV and its adverse impact on health is well established, demonstrating the impact of DV services and interventions on health care utilization and costs remains complex and challenging. Our review shows that meaningful intermediate outcomes exist and can be readily measured to elevate DV in health care decision-making.

Appendix A. Detailed Methods

We conducted a systematic review of the peer-reviewed and gray literature to identify evaluations of DV interventions with a focus on process and intermediate health and patient-centered outcomes. Searches were conducted based on multiple combinations of a set of search terms pertinent to DV interventions and evaluations. Search terms included: domestic violence, intimate partner violence, gender-based violence, evaluation, effectiveness, longitudinal, outcomes, impact, randomized controlled trials, trials, patient-safety, well-being, self-sufficiency, and, to a limited extent provider training and satisfaction. To be included in the review, articles and reports had to:

- Evaluate an intervention or program targeting DV survivors
- Empirically examine intermediate health or patient-centered outcomes
- Be published between 2006-2017
- Be conducted among English-speaking populations

Titles and abstracts identified in the initial search were reviewed and abstracts that did not meet the inclusion criteria were excluded. The full text of all articles identified as potentially relevant was obtained and the articles were reviewed by two reviewers. Any disagreements about inclusion were resolved through consensus. Reviewers abstracted relevant information from the selected articles. Briefly, the following information was abstracted for all included literature: title, year of publication, main focus area, study design, methods, presence of comparison group, key findings, outcomes, tools, and study limitations.

While we initially prioritized studies conducted in the US, our search revealed many studies conducted in similar settings in other English-speaking countries. Given that the purpose of this review was to identify a broad range of outcome measures in the literature and from multiple perspectives, we intentionally broadened our inclusion criteria to include these studies in the review.

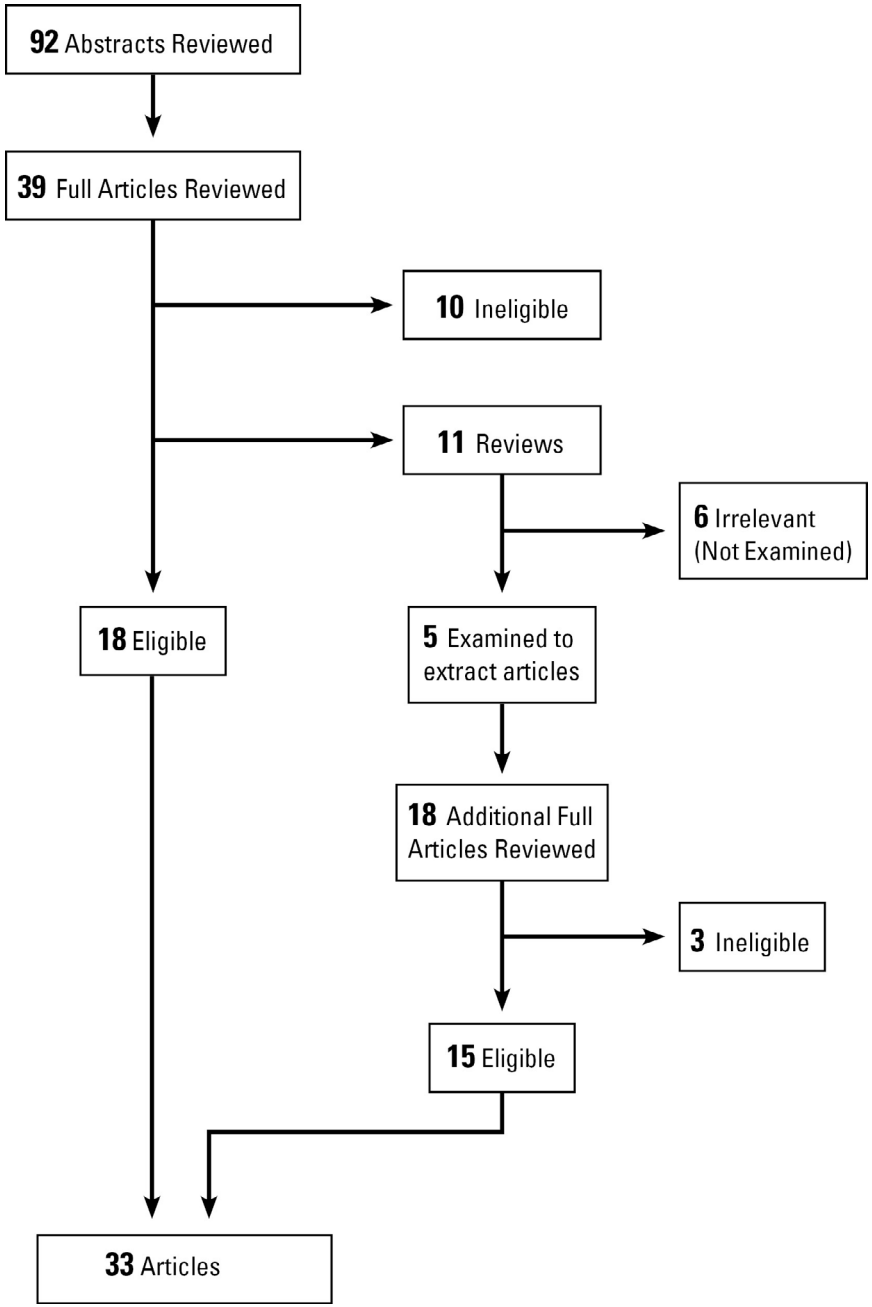
The flow chart (Figure 2) shows the search and abstraction process yielding a total of 33 articles that were included in the review. The initial search yielded 92 articles that were potentially relevant for inclusion. The majority of these articles did not meet the inclusion criteria for this review, and/or were not relevant for the literature review question. After removing studies that failed to meet the inclusion criteria, a total of 39 full articles were reviewed by two authors. 29 of these studies were found to be relevant, including 18 independent studies and 11 systematic reviews. Cross-referencing of reference lists of the systematic reviews resulted in identification of an additional 15 independent studies.

Additionally, we conducted a scan of leading organizations (e.g., National Resource Center on Domestic Violence; Robert Wood Johnson Foundation; Futures Without Violence, Prevention Institute; National Center on DV, Trauma and Mental Health; and The Centers for Disease Control and Prevention) for evaluation reports, promising practices, and briefs to examine and document how programs and practices are measuring the effectiveness of DV services and interventions in community settings.

Limitations

Although assessment of methodological rigor was not the focus of this review, it is important to note that most studies had one or more limitations: small sample sizes, lack of generalizability due to inadequate representation of people from different cultural and geographic background, lack of an appropriate comparison group, risk of pre-testing bias, brief follow-up time periods, and analytical approaches that failed to account for confounding factors. Limited real-world programs are evaluated due in part to resource constraints. These limitations aside, the body of evidence included in this review provides important insights. An underlying theme is that even if not statistically significant, meaningful differences in health and patient-centered measures, as well as organizational policy, practice, and systems-level changes do gradually emerge over time as a result of interventions.

Figure 2. Articles Reviewed



Appendix B. Assessment Tools

Domains	Assessment Tools	
DV Incidence	■ Abuse Assessment Screen ■ Composite Abuse Scale ■ Conflict Tactics Scale 2 ■ Partner Abuse Scale[37] ■ Partner Violence Screen	■ Severity of Violence Against Women Scales ■ Women Abuse Screen Tool (WAST) ■ Women's Experience with Battering Scale ■ 17-Item Danger Assessment Score
Depression	■ Beck Depression Inventory (BDI - II) ■ Brief Symptom Inventory ■ Center for Epidemiologic Studies Depression Scale ■ Edinburgh Postnatal Depression Scale ■ Hamilton Rating Scale for Depression	■ Hospital Anxiety and Depression Scale ■ Patient Health Questionnaire (PHQ9)
PTSD	■ Davidson Trauma Scale ■ Post-traumatic stress disorder (PTSD) 7-item symptom scale[49] ■ Psychiatric Status Ratings[35] ■ SPAN (Startle, Physiological Arousal, Anger, and Numbness) ■ Weathers' Post-traumatic Stress Disorder Check List[28]	
Anxiety	■ 7-item Generalized Anxiety Disorder questionnaire	
Using Safety-Promoting Behaviors	■ Safety behavior checklist[38] ■ Stages of Change Scale[37]	
Use of DV-specific or community-based services	■ Community Resource Assessment[38]	
General health and physical, social, and mental functioning / Quality of Life	■ SF-36 ■ SF-12 ■ WHO Quality of Life-BREF	■ Manchester Short Assessment of Quality of Life[22] ■ Euro QoL (EQ-5D)
Social Support	■ Oslo Social Support Scale	

Appendix C. Case Studies

- CASE STUDY 1: Washington Domestic Violence Housing First (DVHF) Project
- CASE STUDY 2: Enlace Comunitario Domestic Violence Prevention Project
- CASE STUDY 3: DELTA PREP Project
- CASE STUDY 4: National Center on Domestic Violence, Trauma & Mental Health Multi-Site Initiative

CASE STUDY: WASHINGTON DOMESTIC VIOLENCE HOUSING FIRST (DVHF) PROJECT

In 2009, four DV organizations in Washington state were funded to pilot the Domestic Violence Housing First (DVHF) model.[51] The model employs survivor-driven mobile advocacy, flexible financial assistance, community engagement and housing stability to get survivors of DV into stable housing as quickly as possible and then provide the necessary support as they rebuild their lives. Services and financial help are tailored to the survivor's specific needs, which may include childcare assistance, transportation, rental assistance, or career training. In addition, advocates provide a low, medium, or high touch depending on the survivor's needs and preferences.

GOAL

The goal of the DVHF program is to increase access to permanent and affordable housing among survivors of DV.

OUTCOMES

- Number of survivors and children served
- Types of services provided to survivors and their children
- Number of survivors with access to permanent housing
- Number of survivors with housing stability (housing retention)
- Self-reported perceptions of safety, self-efficacy and dignity
- Number of survivors with improved individual and child quality of life metrics
- Number of survivors with improved individual and child well-being metrics
- Increased collaboration among staff within the same agency
- Community partners' increased awareness of DV dynamics and survivors' housing needs
- Increased and enhanced partnerships across agencies and entities
- Mechanisms of flexible funding structure and administration
- System-level collaboration with and referrals to community partners

FINDINGS

The evaluation was conducted by an external team. Data was collected from staff quarterly or semi-annually through online surveys and focus groups. Additionally, data was collected from survivors through patient intake and follow-up surveys, focus groups, individual interviews (for those not comfortable participating in a focus group), and a self-administered survivor feedback survey.

- A total of 681 survivors were served by the program
- 96% of survivors retained their housing 18 months after entering the DVHF program
- 84% of survey respondents strongly agreed that DVHF increased their safety
- Improved housing stability among participants allowed for 76% of survivors to rely on minimal services from the agencies and to be able to provide their children with normalcy and routine
- 99% of survivors agreed that their advocate helped restore their sense of dignity
- "Flexible, survivor-driven services supported culturally specific approaches to advocacy, which better met the needs of survivors"
- DVHF agencies developed or enhanced strong partnerships with other services within their agencies, as well as with other domestic violence, sexual assault, and housing programs.

CASE STUDY: ENLACE COMUNITARIO DOMESTIC VIOLENCE PREVENTION PROJECT

From 2011 to 2014, Robert Wood Johnson Foundation (RWJF) funded Enlace Comunitario, a social justice organization, to conduct DV prevention training with Latino immigrant men in central New Mexico.[52] Enlace staff developed two prevention curricula designed to engage Latino men to prevent DV against women and girls. A smaller group of men were then trained over 12 weeks to serve as *promotores* to give presentations about DV prevention to other men in their communities. In addition, a bilingual video was created that challenged social norms perpetuating violence against women and a two-month anti-violence media campaign.

GOAL

The goal of the program was to engage Latino immigrant men in the prevention of DV by approaching the men as allies rather than adversaries in this effort.

OUTCOMES

Participants in the Enlace training took pre- and post-surveys measuring changes in:

- Number of promotores trained
- Number of participants who completed course(s)
- Knowledge and understanding of the root causes of DV
- Understanding that women and men should have equality in relationships
- Confidence to help prevent rape and partner abuse in their community
- Knowledge of self-esteem
- Knowledge of communications
- Knowledge of conflict resolution
- Knowledge of sexuality
- Knowledge of effective parenting techniques

FINDINGS

Initially, program staff had trouble recruiting Latino men who would commit to serving as a *promotores* for the 12-month commitment period, however, some changed their minds in the course of doing the training program. By Year 2 of the program (2014), eight men were trained as *promotores*.

- A total of 149 men completed the 5-week Entre Amigos course and in doing so, "demonstrated improved understanding of the root causes of domestic violence and the acquisition of skills to take charge in anti-violence work." After the course, all participants stated that they believed they could help prevent rape and partner abuse in their community and that they understood that women and men should have equality in relationships. Before the course, 50% of participants believed that DV victims are at fault for provoking the violence compared to only 8% at the end of the course.
- Among the 88 men and women who completed the *Relaciones Saludables* (Healthy Relating) course, participants said that it helped them communicate with their children and improved their knowledge of self-esteem, conflict resolution, and sexuality.
- Participants and Enlace staff also worked together to create 1) a media campaign to educate Latino men about DV that included print materials, radio PSAs, and billboards with the tagline "Cada hombre puede ser fuerte sin ser violento" ("Men can be strong without being violent"); and 2) a bilingual video challenging social norms around that perpetrate violence against women.

CASE STUDY: DELTA PREP PROJECT

From 2007 to 2012, the CDC collaborated with Robert Wood Johnson Foundation to implement the Domestic Violence Prevention Enhancements and Leadership Through Alliances (DELTA) Prep Project to build capacity for preventing DV among 19 state-level coalitions.[53] Program training helped coalitions shift their mindsets from addressing DV/IPV to preventing it. Training was provided by CDC staff and consultants and included technical assistance, webinars, and in-person workshops. Promising practices, lessons learned, and specific tools from the participating coalitions were gathered in the DELTA Prep Toolkit for organizations looking to prevent DV and IPV.

GOAL

The goal of the DELTA project was to build capacity for preventing DV among 19 state-level coalitions addressing DV in their communities. Coalitions worked to:

- Incorporate prevention into their organization's mission
- Develop action steps related to primary prevention activities
- Incorporate primary prevention within the coalition's structures, practices, partnerships, and state and community capacity-building efforts

OUTCOMES

The measures for organizational capacity were structural, functional, or practice changes, including:

- Number of coalitions codifying prevention priorities into governance documents
- Number of coalitions reorganizing boards
- Number of coalitions adding a prevention coordinator position and/or prevention department
- Number of coalitions including prevention in policy agendas and communications
- Number of coalitions seeking resources for prevention activities
- Number of coalitions supporting member programs in building capacity for prevention
- Number of coalitions building partnerships for collaboration on prevention
- Number of coalitions incorporating prevention into cross-training, staff and board members orientations, job descriptions, and meeting agendas

FINDINGS

An external evaluation team conducted a cross-site evaluation, collecting data from the 19 participating organization at three points in time: before, during, and six months after the project. Information was collected through coalition applications, an online database, interviews, and feedback memos.

- Eighteen of the 19 participating coalitions were able to increase their organizational capacity to prevent DV by implementing structural, functional, and practice changes. Among these coalitions, a total of 309 structural, functional, and practice changes were documented. All implemented some structural or functional changes, while 14 implemented practice changes.
- Seventeen coalitions implemented changes as catalysts for primary prevention of DV in their state, including:
  - Eight aligned their prevention priorities with the state sexual assault coalitions to partner on prevention activities
  - Nine implemented a prevention program with one or more partners
  - Eight established a state-level committee to work on prevention
  - Twelve supported intimate partner violence prevention awareness campaigns
  - Follow-up interviews indicated that these changes have been sustainable over time.

CASE STUDY: NATIONAL CENTER ON DOMESTIC VIOLENCE, TRAUMA & MENTAL HEALTH MULTI-SITE INITIATIVE

Since 2005, The National Center on Domestic Violence, Trauma & Mental Health has provided training and technical assistance to DV coalitions and their members.[54] Eight DV coalitions were funded as part a three-year multi-site initiative to support capacity-building and collaboration in the field. The statewide DV coalitions in Connecticut, West Virginia, Pennsylvania, Illinois, Delaware, Kansas, Idaho, Alabama, New Hampshire, were included in addition to Transformation Detroit.

GOALS

The goals of the multi-site initiative were to:

- Build internal capacity for DV work at the coalition level through shared learning, skills-building, and policy change.
- Strengthen and facilitate multi-disciplinary collaborations between DV, mental health, and substance abuse providers at the state and local level.

OUTCOMES

- Number of staff hired
- Number of trainings held and number of people trained
- Number of communications by organizations (e.g. social media, blogs)
- Number of policies/guidelines changed and/or implemented (e.g., criteria for shelter admission, types of staff support such as leave policies and supervision, rules for shelter)
- Number of practice changes (e.g., changes in intake, increase in self--rating of ability to address survivors' mental health needs, increase in mental health referrals)
- Number of collaboration changes
- Perceived knowledge, awareness, comfort and skill among practitioners
- Number of collaborative agreements formed

FINDINGS

The initiative was evaluated through follow-up surveys at the end of the 3-year grant period, which indicated substantial changes at the coalition and program levels. Most coalitions worked on increasing community-level collaboration with behavioral health stakeholders and internal capacity-building to support DV member programs.

State-Level Cross-Sector Collaboration aimed to raise awareness of the intersection of trauma, mental health, substance use, and DV and improve the capacity of their state to address these issues. Achievements included:

- Statewide trainings to build capacity of DV programs
- Statewide needs assessment to identify unmet needs, service delivery gaps, and barriers for survivors
- Partnerships formed with child welfare, Head Start, children's mental health providers, etc.
- Convened and facilitated cross-sector meetings to discuss DV

Coalition Capacity-Building & Support for Member Programs included statewide coalitions building their own capacity to provide training to member programs, as well as making changes to training, policies, and culture of their organizations. Achievements included:

- Skills-building trainings for member programs across the state
- Formation of workgroups with staff from various member programs
- Producing and distributing training materials
- Hiring mental health counselors with DV background to provide TA to members
- Developing social media channels or blogs to share DV information with the public

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