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Enhancing the National Dialogue on the Prevention of Intimate Partner Violence

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Abstract

Little systematic information exists about how community-based prevention efforts at the state and local levels contribute to our knowledge of intimate partner violence (IPV) prevention. The Centers for Disease Control and Prevention's (CDC) DELTA FOCUS program funds ten state domestic violence coalitions to engage in IPV primary prevention through approaches addressing the outer layers of the social ecology. This paper explored the ways in which DELTA FOCUS recipients have contributed to a national-level dialogue on IPV prevention. Previously undefined, the authors define national-level dialogue and retrospectively apply the CDC Science Impact Framework (SIF) to describe contributions DELTA FOCUS recipients made to it. Authors conducted document review and qualitative content analysis of recipient semi-annual progress reports from 2014 to 2016 ($N = 40$) using NVivo. A semi-structured coding scheme was applied across the five SIF domains: *Creating Awareness, Catalyzing Action, Effecting Change, Disseminating Science,* and *Shaping the Future*. All recipients sought to promote IPV prevention by communicating and sharing with non-CDC-funded state coalitions, national partners, and other IPV stakeholders information and resources accumulated through practice-based prevention efforts. Through implementing and disseminating their prevention work in myriad ways, DELTA FOCUS recipients are building practice-based evidence on community-based IPV prevention.

Keywords

Intimate partner violence; Community-based prevention; Practice-based evidence; Social ecology; Qualitative research

Introduction

Intimate partner violence (IPV) is a preventable public health problem that affects millions of women, men, and children each year. However, there is limited evidence on how to

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effectively prevent IPV, especially at the community level, and a need to share existing IPV prevention work broadly with the field. IPV is defined as any physical and sexual violence, stalking, or psychological aggression committed by a current or former intimate partner (Breiding, Basile, Smith, Black, & Mahendra, 2015). According to the The Centers for Disease Control and Prevention's (CDC) National Intimate Partner and Sexual Violence Survey, 37.3% of women and 30.9% of men have experienced contact sexual violence, physical violence, or stalking by an intimate partner in their lifetime (Smith et al., 2017), and about 47% of men and women reported experiencing psychological aggression in their lifetime (Smith et al., 2017). Furthermore, the risk of experiencing IPV often begins early in adolescence, with 7% of women and approximately 4% of men indicating that they first experienced IPV (rape, physical violence, or stalking) before the age of 18 (Smith et al., 2017). Importantly, the burden of IPV is not distributed equally across groups, with many racial/ethnic and sexual minority populations reporting higher prevalence rates (Smith et al., 2017; Walters, Chen, & Breiding, 2013).

Data from the CDC's National Intimate Partner and Sexual Violence Survey also suggest that IPV is associated with a myriad of negative consequences among survivors, with 27% of women and 11% of men reporting a negative impact (Smith et al., 2017). Victims of partner violence can experience a range of adverse health outcomes, including physical and mental health problems (Black, 2011; Breiding, Black, & Ryan, 2008; Coker, Smith, Bethea, King, & McKeown, 2000; Karakurt, Patel, Whiting, & Koyut€urk, 2017; Kastello et al., 2015; Ulloa & Hammett, 2016), poor maternal health and pregnancy outcomes (Karakurt et al., 2017; Leone et al., 2010), and increased likelihood of engaging in risky behaviors (Breiding et al., 2008; CDC, 2008). Survivors also report that experiencing IPV negatively affects their ability to attend work/school, receive required medical care and legal assistance, and obtain housing services (Smith et al., 2017).

IPV Prevention in the Field

Despite its prevalence and related negative outcomes, there is relatively limited information on IPV prevention. The CDC National Center for Injury Prevention and Control Division of Violence Prevention prioritized primary prevention activities to reduce IPV across the lifespan. As part of these efforts, the Domestic Violence Prevention Enhancement and Leadership Through Alliances (DELTA) program was first initiated in 2002. The DELTA program, and its sister program DELTA PREP, provided funding to a total of 33 state domestic violence coalitions to promote and integrate primary prevention principles and practices into the coalitions and selected local coordinated community responses (CCRs). State coalitions are organizations that receive grant funds under the Family Violence Prevention Services Act (FVPSA statute 42 USC § 10414; 2010). FVPSA directs coalitions to provide services, community education, and technical assistance to organizations that provide services to victims of IPV and their children regarding the implementation and operation of shelters and related services (Armstead, Cox, Finkelstein, & Rosenbach, 2012). Grown out of the battered women's movement and the need for response to IPV, state coalitions had historically focused more on responding to cases of IPV and providing services to survivors and their families (Armstead et al., 2012). Thus, the DELTA program

provided one of the first opportunities for coalitions to focus systematically on building capacity for IPV prevention efforts.

Building on the previous iterations of the DELTA program, DELTA FOCUS (Domestic Violence Prevention Enhancements and Leadership Through Alliances, Focusing on Outcomes for Communities United with States) was funded by CDC in 2013 for 5 years, ending in 2018, through a competitive cooperative agreement. The program funds ten state coalitions to implement and evaluate primary prevention approaches for IPV, particularly approaches that aim to address structural determinants of health at the community and societal levels of the social ecological model, such as equitable access to safe neighborhoods and housing (CDC, 2017b). Through DELTA FOCUS, each coalition supports one or two selected CCRs to implement strategies at the local level. CCRs are created in a variety of ways (Salazar, Emshoff, Baker, & Crowley, 2007) but are generally formed to address fragmentation in the service response to victims of IPV in the local area by including a variety of community service agencies in an ecological response (Allen, 2006; Shorey, Tirone, & Stuart, 2014).

Although the burden of IPV presents a significant public health issue, our understanding of the underlying risk and protective factors for IPV and evidence on how to effectively prevent IPV is still limited (CDC, 2015). This is especially salient for community- and population-level approaches (Lundgren & Amin, 2015; Whitaker, Murphy, Eckhardt, Hodges, & Cowart, 2013). A limited number of IPV prevention strategies have been rigorously evaluated, and there is variability in the nature and quality of evidence for those strategies (Niolon et al., 2017). There is even less information about prevention activities that specifically emerge from CCRs and state coalitions. In particular, research on coordinated community responses has often focused on individual components that are designed to respond to IPV, such as advocacy, counseling, child services, and criminal justice system interaction (Shorey et al., 2014) as well as the activities in which councils engage to move those components forward, such as sharing information, providing training, discussing issues, and identifying weaknesses in the system's response to IPV (Allen, Watt, & Hess, 2008). Evaluation of state coalition efforts to prevent IPV has largely been focused on building prevention capacity and identifying the number of prevention activities in which the coalitions engaged (Freire et al., 2015). Enhancing the evidence base on IPV prevention requires efforts to both work effectively to prevent IPV in the field and also build the prevention-focused evidence base (Niolon et al., 2017). Therefore, it is of great importance to communicate and share with the field information and resources that are accumulated through practice-based prevention efforts.

In support of this effort, one of the goals of the DELTA FOCUS program was to encourage coalitions to contribute to a national-level dialogue on IPV prevention. For the purpose of this project, a national-level dialogue was defined as dissemination and sharing of practice-based programs, activities, and resources—that were often implemented and evaluated at the state or local level—with a wide audience of groups related to IPV prevention. Recipients participated in opportunities for sharing information with non-CDC-funded state coalitions across the country, national partners (i.e., National Coalition Against Domestic Violence, National Network to End Domestic Violence, and California Coalition Against Sexual

Assault/PreventConnect), and other IPV stakeholders locally, regionally, and nationally. This included compiling and disseminating tools, evaluation findings, and lessons learned via a variety of communication channels, such as listservs, webinars, and regional and national conferences (CDC, 2017b) that reach practitioners and researchers in many areas around the country. The coalitions were not required to share all of the work they did through DELTA FOCUS and there was no requirement that their work would have a national-level impact.

By sharing tools, results, and findings through these mechanisms and others, DELTA FOCUS hoped to help build practice-based evidence in the field. In addition, due to the focus on contributing to a dialogue on IPV prevention, the DELTA FOCUS program offered the first opportunity for coalitions to systematically share lessons learned through the implementation of IPV prevention practices, especially lessons from practices concentrated at the community and societal levels. This aligned with CDC Division of Violence Prevention's strategic vision, which calls for identifying effective and efficient methods for exchanging and disseminating information, including communication and dissemination strategies, in order to increase the impact of violence prevention efforts (CDC, 2016). While not a requirement of their funding, recipients' efforts to disseminate their work also had the potential to lead to action in those external organizations. However, there was no predetermined way to categorize what the recipients were doing related to the national dialogue requirement of the funding opportunity. Consequently, it became important to assess and categorize how recipients were sharing information with the IPV prevention field.

The Science Impact Framework

We adapted the CDC Science Impact Framework (SIF), an approach that was developed to demonstrate and measure the impacts of science, as an organizing framework to assess recipients' contributions to a national dialogue around IPV. It is a framework intended to examine the influence of non-research public health efforts on long-term public health outcomes (CDC, 2017a). The ultimate goal of the framework is to identify indicators of short-term events and actions that may ultimately lead to the public health goals of improving health and reducing morbidity and mortality (CDC, 2017a). In this investigation, we adapted the SIF by applying the domains and key indicators to conceptualize and assess actions that contribute to the public health impact of the *programmatic* efforts. While DELTA FOCUS recipients' work cannot be categorized as science, their work represents non-research efforts that are designed to ultimately impact public health outcomes, and thus this work fits well within the design and intention of the SIF. In this paper, we have maintained the developers' language used to describe the framework even though the adaptation applies the framework to programmatic rather than scientific activity.

The SIF is based on the historical tracing method by following the paths from the science to an outcome or starting with an outcome and tracking backward to identify the science that was the catalyst (Ruegg & Jordan, 2007). The SIF illustrates five domains of influence: *Disseminating Science, Creating Awareness, Catalyzing Action, Effecting Change,* and *Shaping the Future* (Fig. 1). The framework assumes that the demonstration of impact does not have to be linear or chronological, but does anticipate that impact in any domain could lead to impact in another domain (CDC, 2017c). Because it can be difficult to establish that

an outcome can be attributed to an input, the SIF emphasizes establishing the contribution, rather than attribution, of the input to an impact. The developers of the SIF acknowledged that an activity does not need to have influence in each domain. Further, it can take time for the impact of non-research public health efforts to be realized, so an important component of the framework is its ability to identify *short-term indicators* that may be predictive of long-term impact (CDC, 2017a). To apply the SIF, the developers of the framework identified key measurable indicators within each domain. For example, presentations at professional conferences is an indicator of disseminating science while securing new funding for an activity is an indicator of catalyzing action. The developers of the SIF intended for the indicators to be flexible and the indicators they identified were not exhaustive; they acknowledged that researchers or evaluators could develop other indicators to meet the needs of an individual study. In this investigation, we adapted the SIF and used it as a categorical organizing framework to examine recipients' contributions in each domain as short-term indicators that may contribute to preventing IPV.

Purpose of the Study

Given the limited evidence on the effective prevention of IPV, a gap exists in sharing IPV prevention work widely with the field. By requiring recipients to contribute to a national dialogue on IPV prevention, the DELTA FOCUS program offers a unique opportunity to intentionally share examples of IPV prevention efforts with coalitions and other IPV prevention practitioners; however, there was no predetermined way to categorize these efforts. We adapted the SIF to classify the ways in which the work is reaching these groups. Thus, the purpose of this investigation is to use the adapted SIF to categorize the ways in which, to date, DELTA FOCUS contributes to a national dialogue on IPV prevention.

Methods and Analysis

Data Sources

The analysis team, which consisted of three reviewers, conducted analyses of recipients' contributions to national IPV prevention dialogue through a qualitative approach. The team conducted document review and content analysis of the ten DELTA FOCUS coalitions' twice-yearly progress reports for four 6-month periods: March 2014 – September 2016 (N = 40 reports), which spanned from the second 6 months of the second year of the DELTA FOCUS program through the first 6 months of the program's fourth year. The team selected this period because this was the point at which recipients began to report on the ways they were sharing their DELTA FOCUS work. The content of the progress reports was collected through the CDC's Chronic Disease Management Information System, which contains fields for recipients to provide substantial narrative description of their IPV prevention approaches. In their progress reports, recipients reported on progress toward and adherence to DELTA FOCUS Funding Opportunity Announcement performance measures, including the requirement to support opportunities for sharing prevention information with a wide range of IPV stakeholders. Recipients were instructed to provide qualitative descriptions including details of their approach objectives, progress toward implementation and evaluation goals, significant accomplishments associated with each prevention approach, approach barriers, approach facilitators, plans to overcome barriers, and unanticipated outcomes of their

prevention approaches. Because there was a diversity of prevention capacity and local context among recipients, CDC allowed flexibility in which approaches were implemented and how they were adapted to meet each state's needs (Armstead et al., 2018). Recipients' reports related to their national dialogue efforts included both prevention activities that the recipient engaged in directly and activities in which the recipient supported external groups or organizations through providing information, access to resources, and other supports. It is important to note that some of the recipients' efforts related to direct services were not captured in this analysis.

Analytic Approach

Our analytic approach involved two general steps: identifying recipient contributions toward a national dialogue and determining the ways in which recipients contribute. To identify recipient contributions, the analysis team first operationally defined contributions to national dialogue as: instances in which DELTA FOCUS recipients report that they engaged, reached, influenced the practice of, or had an impact on, external entities (i.e., non-DELTA FOCUS funded individuals, organizations, or initiatives). The analysis team adopted the five domains of the SIF and each domain's measurable indicators as an organizing framework, but modified a few of the measurable indicators to reflect the ways that the novel IPV prevention practices developed through DELTA FOCUS are impacting the IPV prevention field on a broader scale. As an example, one of the measurable indicators of *Catalyzing Action* within the SIF is *Office Practice and Point of Care Changes.* However, the types of organizational actions initiated by DELTA FOCUS recipients led to a wide range of changes in organizational practices (e.g., changes in university campus climate assessment practices). Therefore, we adapted this indicator as *Changing External Organizations' Practices* to capture the full breadth of recipients' impact on other organizations. We made similar adaptations to other indicators when needed to reflect the programmatic nature of the recipients' work. For each domain of the SIF, we examined multiple indicators (CDC, 2017c). A full list of indicators and their descriptions is provided in Appendix A.

Using this framework, we developed an NVivo 10 database that reflected the SIF domains and measurable indicators and used this database to code the content of the progress reports. Coding involved an eclectic approach that included *provisional, simultaneous*, and *magnitude* coding techniques (Saldaña, 2015). We used the domains and measurable indicators to construct a *provisional* list of themes to describe contributions to national dialogue and coded content from progress reports to the most relevant themes. We coded content to all applicable domains and measurable indicators, which is consistent with a *simultaneous* coding approach. Using a *magnitude* coding approach, we also assessed the prevalence of each domain of contribution across recipients.

Procedure

Two team members separately reviewed the progress reports to identify recipient contributions and coded contributions to all applicable SIF domains and measurable indicators. After a cursory review of the progress reports, the analysis team held discussions to modify the measurable indicators to align more closely with recipients' actual contributions to national dialogue. Then, each reviewer analyzed all 40 progress reports

using the modified coding framework. Reviewers considered the measurable indicators in the context of the SIF domain. For instance, content was coded as “disseminating feedback and evaluation findings” under the SIF domain if the grantees disseminated findings for the purposes of creating IPV prevention awareness. If the goal of disseminating such findings was to contribute to or advance IPV prevention science, the contribution was coded under “disseminating science, data, and evaluation findings.” A full list of the adapted measurable indicators and their associated descriptions can be found in Appendix A.

Once both reviewers completed their separate analyses, the team constructed a matrix to determine where there were discrepancies in coding (i.e., one reviewer coded content to a measurable indicator, but the other did not) and held structured discussions to resolve discrepancies in designations across reviewers. After resolving coding discrepancies, measurement of inter-rater reliability—which was calculated by averaging the *Cohen’s kappa coefficient* across codes—reflected high levels of agreement across reviewers (unweighted $\kappa = .88$). A third reviewer then checked the content coded to each theme for consistency with the theme’s final definition. Finally, all members of the analysis team extracted salient examples within each domain of the ways recipients support IPV prevention dialogue and practice. After this resolution process, we calculated the number of recipients reporting themes related to each domain and measurable indicator.

Results

Overall, results of this analysis found that all DELTA FOCUS recipients reported that their work has contributed to national IPV prevention dialogue. The most common domains where recipients reported having an external impact on prevention dialogue were *Creating Awareness* and *Catalyzing Action*. Within those categories, the most commonly reported indicators of impact include examples of how recipients are sharing information with, forming partnerships with, and influencing external (non-DELTA FOCUS funded) organizations. Organized by SIF domains and measurable indicators, the sections that follow describe specific recipient contributions to the IPV prevention dialogue. Each section includes salient examples of the indicators of impact within each domain, example quotes from recipient progress reports, and how impacts link to other domains.

Creating Awareness

Recipients described ways that their work *Created Awareness* about IPV prevention practice (Table 1), including prevention practice at the outer layers of the social ecological model. Moreover, recipients reported more contributions related to *Creating Awareness* than any other SIF domain.

Recipients reported a variety of ways that their work *provided stakeholder resources, curriculum, and training.* For example, one recipient described specific stakeholder resources that they used to increase awareness around the relationship between pregnancy and risk for partner violence, which contributed to a state-level panel recommending universal prenatal domestic violence screening for pregnant women in the state. They created resource materials and held trainings on these practice recommendations, framing IPV as a gender health disparity and highlighting data from the state’s pregnancy risk surveillance system.

This recipient reported that despite the state-level practice recommendations, “domestic violence counseling was the least common type of prenatal counseling received by pregnant women in [the state]” and “staff and policymakers alike have been surprised by this data and the minimal attention [paid to this issue].” This contribution provides a salient example of how recipients’ contributions to *Creating Awareness* have also led to *Effecting Change* in other organizations and groups.

Sharing information with external organizations was also a common approach to promoting dialogue and practice. Information sharing occurs both informally (e.g., through informally discussing best practices related to outer-layer IPV prevention with partner agencies) and more formally through *presenting for professional meetings, events, and conferences* and *sharing information through professional societies* and associations. For example, one recipient reported that they presented at the National Sexual Assault Conference on their work to identify and effectively communicate the connections among a broad range of public health problems, including IPV and teen dating violence (TDV), through a shared risk and protective factors framework. This recipient’s reports also described the dissemination of a toolkit to promote activities that “engage multi-sectorial partners in collaborative action to conceptualize, implement, and evaluate prevention activities designed to modify shared risk and protective factors at the higher level of the social ecology” to a wide range of national partners (e.g., the National Network to End Domestic Violence) and through multiple dissemination channels.

Recipients also reported *providing subject matter expertise to external organizations* and *responding to external queries for information*. For example, one coalition participated in radio interviews for a statewide broad-cast about TDV, and used the opportunity to describe the scope of the problem as well as the warning signs and impacts of abuse. Another coalition responded to requests from external college campus-based organizations to share resources, materials, and best practices regarding violence risks for lesbian, gay, bisexual, transgender, and queer (and/or questioning; LGBTQ) students, with a focus on trans-identified individuals, and ways to improve community response to addressing risk factors for these students. This coalition reported that the training, materials, and ongoing conversations they provided led to *Catalyzing Action* in these organizations because the organizations then developed and refined new tools, practices, and guidance around assessing and addressing health risks for LGBTQ populations.

Nearly all recipients reported promoting prevention awareness and practice through *disseminating feedback and evaluation* fi*ndings* for the purposes of creating awareness among partners and stakeholders. One recipient, for example, shared the results of a campus climate questionnaire with regional campus stakeholders who are now using the results to inform their approach to IPV and sexual violence. Thus, this recipient also *Effected Change* and *Catalyzed Action* in those external campus stakeholders. Another recipient disseminated findings from interviews with local programs and literature review through a prevention-focused website, which provides a database of resources, strategies, and local programs related to violence prevention. This website has achieved a broad reach at state and national levels; for instance, this recipient reported that they have presented on the website for numerous state-level agencies such as “the state Sexual Violence Prevention Team, which

includes representatives from various state health department branches, local gender-based violence prevention contractors, and local recipients of Rape Prevention and Education funding." Moreover, this site has received thousands of unique visitors and national attention through social media promotion by CDC.

Catalyzing Action

Recipients reported activities that contributed to an IPV prevention dialogue through *Catalyzing Action* (Table 1). All recipients reported influencing and c*hanging external organizations*' *practices*. To illustrate, one recipient secured an agreement with the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) to add questions related to IPV prevention on WIC's client evaluation form. As WIC utilizes the revised form, the recipient also *Effected Change* in the partner organization. Another recipient reported that multiple organizational partners across the state used messaging, policy analysis, and education resources that they developed around preventing TDV. According to the results this recipient reported from a survey they distributed to their cross-sector partners, multiple "respondents said that they changed the way they communicate about adolescent dating abuse… including putting more emphasis on the role of schools and an emphasis on more positive framing of the issue… [they also reported] sharing or using in communications with youth and sharing with colleagues within their organization…. [some also] said they had conversations with their school or school district staff and administrators about adolescent dating abuse prevention policies."

All recipients also reported *building or strengthening partnerships or collaborations,* including facilitating partnerships between other organizations, resulting in an expanding network of organizations engaged in prevention practice and dialogue nationally. For example, one recipient partnered with other organizations to provide a series of trainings that led to the opportunity to distribute a toolbox of prevention resources to multiple federal partners, including the U.S. Navy, Department of Defense, and Sexual Assault Prevention and Response Resource Officers stationed internationally.

The majority of recipients also reported *funding external organizations*' *prevention work*. For example, one state coalition reported receiving two new grants that would enable them to substantially extend DELTA FOCUS work with their partners. According to this recipient's reports, they were able to leverage their DELTA FOCUS approaches to "gain additional resources for in IPV prevention at the outer layers of the social ecological model. Examples include [grants that provided] 35 thousand dollars of unrestricted funds and in-kind media and volunteer support… [and] 10 thousand dollars to support adult leadership development and community engagement in [an underserved neighborhood]." Another recipient reported using their experience with DELTA FOCUS to co-author a successful grant proposal to study paid family leave models with a partner organization; the proposal included information on risk and protective factors for violence and their relationship to paid family leave.

Effecting Change

Recipients reported activities that contributed to *Effecting Change* in IPV prevention dialogue (Table 1). *Building public health capacity,* especially external organizations' capacity for IPV prevention, is central to DELTA FOCUS recipients' work, and many recipients offer regular trainings specifically to that end. In addition to reaching a very wide range of sectors that directly or indirectly influence public health (e.g., schools, healthcare providers, social justice advocates), some recipients described that that their capacity building efforts extend beyond their resident states and communities. Recipients also reported results that reflect their successes in building external organizations' evaluation capacity. For instance, one state coalition indicated that all five IPV service agencies participating in local capacity building projects were engaged in prevention activities at the outer levels of the social ecological model. Specifically this recipient's reports indicate that:

> [One agency] is partnering with businesses to implement comprehensive prevention policies and is using social norms strategy with their school—based partners. [Another Agency] has convened a community prevention coalition and members are working to assess their community's needs and strengths around structural determinants of health. [A third agency] continues to work with youth service agencies to implement and evaluate organizational policies for the prevention of teen dating abuse and sexual harassment. [The fourth agency] is working with community partners including their men's prevention team to promote safe, stable and nurturing relationships and environments across their community [and the fifth agency] has convened a community prevention coalition focused on modifying risk factors related to child maltreatment.

Another recipient reported success in creating several workforce development initiatives specific to training prevention practitioners. They partnered with a state university to facilitate course sections on prevention and public health concepts; facilitated placements for a student practicum experience for students to gain IPV prevention work experience; and developed and offered a prevention certification for IPV practitioners, which was designed to raise standards and improve the consistency of prevention training for IPV service providers. According to this recipient's reports, students who participated in these programs reported a greater understanding of public health, found related internships, and demonstrated an intention to bring a public health lens to their work in the future; for instance, one student shared learning about "IPV through a health equity lens [and will] definitely carry this forward."

Furthermore, most recipients reported that their involvement with DELTA FOCUS helped them *increase the scale of prevention work*. For instance, one coalition reported building expertise in campus IPV and sexual violence assessment through their DELTA FOCUS work; they were then awarded a state contract to conduct climate assessments with 87 institutions of higher education. In addition to increasing the scale of their own prevention work to extend to new partners and sectors, many recipients have also expanded the reach of IPV prevention practice by providing funding for other organizations to engage in prevention work. For example, one recipient provided a mini-grant to support work with a

city-level housing agency that addresses shared risk and protective factors for violence. Receiving the mini-grant also served to *Catalyze Action* in that city housing agency.

According to their reports, another recipient administered funding to support engaging men in IPV prevention initiatives, stating that: "We were able to work with additional communities to create social norms campaigns [through a mini-grant program]. The mini-grants award communities up to $5,000 to support partnerships between male leaders and community organizations to promote safe and respectful relationships. The aim of the mini-grants is to help communities engage men to change the norms around violence in their community."

Recipients also described their contributions to *securing new funding for IPV prevention work* and *effecting legal and policy change.*[1] For instance, one coalition reported that they used knowledge gained through DELTA FOCUS to inform strategic messaging about evidence-based IPV prevention, which was shared with all of their partners in the state. The messaging helped to inform legislators as they developed a state-level bill to establish a domestic violence prevention fund, which will provide ongoing financial support for evidence-informed primary prevention programs aimed at preventing TDV and IPV. Specifically, this recipients reported that the "Governor signed the ceremonial passage of the budget funding… for 200 thousand dollars [which will provide] funding opportunities to community-based organizations in [the state] to work on intimate violence prevention with a focus on the social determinants of health." The funding established by this bill has the potential to *Shape the Future* for individuals at risk of TDV and IPV in that state.

Other coalitions reported *contributing to formal guidelines and recommendations*, which led to changes in organizational policy or support for implementing IPV-related policy within several different sectors, such as schools, campuses, community agencies, and hospitals. One recipient implemented a prevention approach that encourages fathers to bond with their newborn babies through early skin-to-skin contact, reasoning that promoting this practice early would help prevent unhealthy family relationships—a known risk factor for IPV (Wilkins, Tsao, Hertz, Davis, & Klevens, 2014). To encourage this practice at both organizational and community levels, they collaborated with two regional hospitals that successfully established policies, trainings, and procedures that encourage the skin-to-skin practice.

Another coalition also reported an instance in which they shared evidence-based information about IPV they had received through participation in DELTA FOCUS with a community agency that provides employment to people living with disabilities, a population that is vulnerable to high rates of sexual abuse and IPV. The agency independently used that information to enact an organizational policy that allowed individuals to report and receive assistance on the job. This coalition also reported that their state-specific fact sheets and other information about gender equity, a protective factor for IPV and TDV, was disseminated widely to their partners. That information was used in creating, "a new set of

[1]All recipient activities were conducted in accordance with all applicable federal laws and regulations. For more information, please see: https://www.cdc.gov/grants/additionalrequirements/ar-12.html

statewide policy recommendations and guidelines for the inclusion and support of LGBTQ students at K-12 schools [that was] intersectional of gender equity, human rights, and [addressed] social determinants of health [such as] access to educational opportunities, quality of education, literacy, social support, social norms and attitudes, exposure to violence, and social cohesion." The state board of education used this information in its work to develop guidelines to support LGBTQ students, who are at higher risk for TDV victimization. These guidelines and policy changes occurred as a result of *Catalyzing Action* in both the agency serving individuals living with disabilities and the school district, and may *Shape the Future* as they are implemented over time.

Recipients have also worked to effect change in IPV prevention dialogue and practice through *contributing to case studies and anecdotes*. For instance, three recipients participated in the development of case stories to share lessons learned from implementing and evaluating their prevention approaches that will be featured on IPV-focused websites with national reach to facilitate broad dissemination to prevention practitioners. According to one recipient, participation in the development of these stories has enabled them to "showcase and highlight the truly cutting-edge work" on a broader scale. This recipient also reported that they were "inspired by all of the energy and interest surrounding the work and [hope] to leverage this public exposure into expanding and strengthening collaborations, partnerships and [support the] sustainability of the work."

To a limited degree, recipients are also reporting early evidence of behavioral change that may lead to cultural and social changes within communities. For instance, one coalition reported that more than 80% of 33 regional communities that participated in a DELTA FOCUS approach are using skills learned through one of their trainings to promote respectful behavior through the implementation of youth-led community mini-grant projects. Finally, consistent with *contributing to registries and surveillance,* one recipient was invited to contribute to planning meetings for their state's participation in the CDC's National Violent Death Reporting System, and to discuss the importance of including IPV-related data. This change can *Shape the Future* of this reporting system for the recipient's state.

Disseminating Science, Data, and Evaluation Findings

Recipients reported activities that contributed to the IPV prevention dialogue through *Disseminating Science, Data, and Evaluation Findings* to external audiences (Table 1). The methods recipients used mirrored their methods for *Creating Awareness*; however, themes in this domain specifically describe the ways that they are disseminating data and evaluation findings.

Many recipient activities focused on promoting and *disseminating science through external presentations, training, and coursework,* including scientific concepts, documents, and products that are foundational to community and societal-level IPV prevention. For example, four recipients reported disseminating the findings from the CDC's publication *Connecting the Dots: An Overview of the Links Among Multiple Forms of Violence* (Wilkins et al., 2014) to a wide array of cross-sector audiences. In addition, recipients also reported incorporating studies such as the *Adverse Childhood Experiences Study* (Felitti et al., 1998) and the *Search Institute's 40 Developmental Assets* (The Search Institute, 2016) into their

trainings, coursework, and presentations for external audiences. One recipient reported that their work to disseminate and apply the *Connecting the Dots* framework is receiving local, state, and national attention: "Due to our use of 'Connecting the Dots' in our presentations to state, local, and national partners, our [prevention capacity building] trainings, and our joint program planning with mini-grant recipients, [we were] asked by the CDC to participate in the development of a case study about [our work] on shared risk and protection…. The final products will be shared on [a national website]." Other recipients offered presentations to share evaluation tools that they developed to evaluate their DELTA FOCUS work with broader audiences, including presentations at statewide and national conferences. For example, one coalition presented a codebook that defined concepts used to measure intersectionality within organizational messages, policies, practices, and procedures for a state-level evaluation conference. Another recipient described the development of an instrument to measure social norms related to masculinity at the American Public Health Association's Annual Meeting.

Coalitions also participated in dissemination activities by *responding to requests to contribute to scientific output*. This includes providing subject matter expertise and participation in other organizations' research, assessment, and evaluation efforts as well as others' efforts to promote scientific approaches and products. For instance, one state coalition was invited to participate in a statewide data group, focused on developing state-level indicators to measure health equity. This recipient reported that, "*participating on this committee continues to help [us] be at the table where new learning and important data and policy-related decisions are being made that will impact social determinants of health-focused work across the state.*"

Another coalition was invited to present at a community research exchange on applying a trauma-informed approach to community engagement and building prevention science. This exchange brought together representatives from a state health system, a state university, a major state hospital system, and a medical school. According to this recipient's reports, the organization that convened this exchange "*[provides] seed funding for new research initiatives in clinical and translational medicine, community health and big data analytics, and enabling recruitment of new researchers that work across institutions.*" Participating in this exchange offered the coalition an opportunity to encourage the use of a trauma-informed framework in such research.

Additionally, a few recipients have used other methods such as peer-reviewed publications and general communication methods that incorporated data, science-based frameworks, and evaluation findings to inform IPV prevention dialogue and practice. For instance, the recipient that presented on trauma-informed frameworks for the community research exchange reported that leadership from the state academy of medicine and state public health association, who publish the state public health journal, also attended. After the exchange, the coalition was invited to "have a substantial role in their publication on violence as a public health issue. [In response, they] submitted 5 articles, all of which were accepted, and 3 of which disseminated DELTA [FOCUS] results." Another recipient participated in an interview on their DELTA FOCUS work that was published in the National Clearing-house on Families and Youth and developed and disseminated public

service announcements related to the *Search Institute's 40 Developmental Assets* (The Search Institute, 2016).

Shaping the Future

Recipients described their contributions to *Shaping the Future* of prevention practice (Table 1). Most recipients reported contributing to the implementation of new *public health programs and initiatives* by non-DELTA FOCUS funded individuals or organizations. For instance, one coalition reported that the successful implementation of their media campaign resulted in five local programs initiating youth councils focused specifically on preventing TDV. The development of these new youth councils also indicate that the recipient's work *Created Awareness, Catalyzed Action,* and *Effected Change* in those programs. Another grantee indicated that they plan to use their work to *inform future hypotheses*. Specifically, they plan to partner with research universities to study the relationship between father–child bonding and how this may reduce the risk for IPV associated with unhealthy family relationships. They hypothesized, and hope to explore the extent to which, "This practice will increase fathers' emotional connections with their infants, and their sense of their ability to care for them. With this foundation, we anticipate that fathers will be more engaged in providing care for their children, increasing the protections provided by a strong attachment with an additional caring parent. Additional participation from dads could reduce the parenting burden experienced by mothers and in this way, could improve the relationship between co-parents as well as improving the relationships between fathers and their children."

Discussion

Implementing and evaluating IPV prevention approaches at the community and societal levels of the social ecological model is a relatively new approach for coalitions who have traditionally focused their work on IPV intervention and response. As a condition of their funding award, CDC's DELTA FOCUS recipients contributed to a national-level dialogue to contribute to the goal of building practice-based evidence for the field of IPV prevention. In their progress reports to CDC, recipients described the types of interventions that were being implemented, whether those approaches were working, how the work was shared with other organizations regionally and nationally, and how the approaches and tools could be adapted for other contexts, including for other recipients and prevention practitioners in external organizations (Armstead et al., 2017). The current investigation explored the ways in which DELTA FOCUS recipients contributed to a dialogue on IPV prevention through the lens of the SIF, a relatively new CDC framework. Analyzed using an adaptation of the SIF, our investigation found that all DELTA FOCUS recipients reported that their work has influenced IPV prevention dialogue or practice in multiple ways. The individual activities were often implemented at the community and state levels, but the work was disseminated beyond these boundaries, contributing to a wider conversation on IPV prevention.

In particular, our analysis found that nearly all recipients shared resources with external stakeholders, which may provide a foundation on which those stakeholders can foster changes within their own organizations. Recipients also worked directly with partners to

effect change in those agencies' organizational policies related to IPV prevention. They shared policy analysis and resources for organizational policy change with partner agencies across multiple sectors that are well-positioned to support IPV prevention efforts (e.g., education and health care) as well as helped to effect policy change in organizations not traditionally aligned with IPV prevention efforts. These efforts may help to develop and support local and national conversations around organizational policy change, an area that in is need of attention for IPV prevention (Whitaker et al., 2013). Our study of prevention-focused efforts also extends a growing body of research in IPV response that has found coordinated responses to IPV are successful in pursuing organizational or institutionalized changes (Allen, Javdani, Lehrner, & Walden, 2012; Allen, Larsen, Javdani, & Lehrner, 2012).

Our analysis also found that recipients widely shared their experience and knowledge to assist other organizations in their prevention efforts with groups disproportionately affected by violence. As the field of IPV prevention continues to grow, there is an ongoing need for prevention programs and practices to be tested with diverse populations (Niolon et al., 2017), including approaches that do not currently have a robust evidence base. Recipients' efforts in this area include both assisting in statewide efforts to develop measures of health equity that will help states better address the systematic differences in the conditions that put individuals at higher risk for IPV and other forms of violence, and sharing those efforts with other coalitions and prevention groups around the country so that they may benefit. This kind of process extends the research by Klevens, Baker, Shelley, and Ingram (2008), who found that the goals, priorities, and dissemination of information for IPV *response and services* were most often driven by community needs. Because many IPV *prevention* approaches with at-risk groups are largely still emergent, sharing prevention work both regionally and nationally is beginning to fill a gap in IPV research and practice. However, additional programmatic work and research are needed, including tailoring programs as needed for specific populations and more rigorous evaluation of approaches that appear promising based on pilot data.

Implications for Adapting the Science Impact Framework for Programmatic Work

There are many considerations for others interested in adapting the SIF as an organizing framework for programmatic efforts with potential to contribute to public health impact. An important and initial consideration is that the SIF uses scientific language that emphasizes impact. This language becomes problematic when using the framework descriptively for efforts that have not yet demonstrated an impact. Additionally, not all categorizations demonstrated explicit connections between the activities and domains. However, these limitations of impact language and explicit connections do not diminish the adaptation of the SIF as an organizing framework to describe and categorize recipients' programmatic efforts. In this adaptation, recipients' activities are short-term indicators of longer term impact, which is an important part of the framework's intention (CDC, 2017a). Therefore, this point-in-time analysis could be reapplied and extended beyond description and categorization to document the future impact of the recipients' programmatic efforts. This is especially salient because much of the work described is still ongoing. Thus, adaptations of the SIF, such as the one we developed, may have utility as a program management tool to demonstrate the

impact of federal investments in programmatic projects, especially if consideration of the framework occurs during the program and evaluation planning and monitoring stages of the program and the analysis is repeated.

Another consideration of applying the SIF to programmatic work is the decision to describe contributions within the domains in which they would have the greatest influence. In some cases, the contribution of a single activity could have been classified to multiple domains, as there is substantial overlap in the themes and indicators reflecting contributions to practice. However, our analysis strategy, including coding by multiple researchers and arriving at consensus for the placement of disputed contributions, was designed to mitigate some of these effects. Still, the domains that were easier fits for documenting non-research, programmatic activity were *Creating Awareness* and *Shaping the Future*. It was more challenging to assign contributions to the categories of *Effecting Change* and *Disseminating Science* due to the type of work most often conducted by the recipients and the limitations placed on the use of federal funding for programmatic activities.

Implications for the Field of IPV Prevention

For the field of IPV prevention to move forward, primary prevention work must be both conducted and disseminated. CDC Division of Violence Prevention's strategic vision calls for disseminating programs and messages that contribute to preventing multiple forms of violence, including IPV (CDC, 2016). Fostering collaboration and exchange is an important method to reach intended audiences and achieve maximum impact of prevention efforts (CDC, 2016, p. 9). The use of multi-layered communication and dissemination methods facilitate additional capacity among external partners to engage in IPV prevention activities, especially for community- and societal-level approaches that are often challenging to implement and evaluate.

Intimate partner violence is a multi-faceted public health and social issue, and its prevention is complex. Thus, the involvement of many sectors—including but not limited to public health, social services, education, housing, health care, and criminal justice—is critical to moving prevention efforts forward (Niolon et al., 2017; Spivak et al., 2014). To ensure that prevention efforts are as comprehensive as possible, it is important for these sectors to not only be involved but to actively collaborate on program and policy development, implementation, and evaluation efforts (Niolon et al., 2017). Dissemination of lessons from collaborations such as those described in this paper is important to the IPV prevention field both for future research and evaluation studies of collaborative efforts to prevent IPV and to provide foundations for future programmatic work, particularly in a resource-constrained environment with evolving priorities.

Strengths and Limitations

There are several limitations to this analysis. First, as a secondary analysis, the data source is limited to only what recipients reported (including both successes and failures) and thus the results of this analysis are not generalizable outside of the recipients in this investigation. However, while the activities are not generalizable and are limited to self-report, they are often verifiable by requesting electronic or printed copies of conference programs,

brochures, reports, and website addresses. Not all recipients explicitly labeled their contributions to the national dialogue as such, and there was considerable variability in the depth of detail recipients provided about their contributions. Where this was the case, we used that limited detail to categorize the contributions based on their reported activities. This may have led to under-reporting of some contributions for some recipients. In addition, there is substantial overlap in the themes and indicators reflecting contributions to practice and, in some cases, a single contribution could have been classified to multiple categories. This could potentially inflate the appearance of the number of contributions. However, our analysis strategy, including coding by multiple researchers and arriving at consensus for the placement of disputed contributions, was designed to mitigate some of these effects.

Despite the limitations, this investigation has multiple strengths. First, we adapted the SIF and applied it innovatively to programmatic efforts. This allowed us to illustrate effective public health program implementation. The adaptation of the framework also provides an opportunity for improvement in program management to further public health science and practice (Frieden, 2010), especially in describing short-term indicators of contributions that have the potential to impact public health. Our adaptation of the SIF may prove useful to other researchers and program evaluators who are seeking a framework to categorize programmatic efforts, such as contributing to a dialogue around IPV prevention, that have less well-defined parameters.

There are also specific strengths related to the field of IPV prevention. Through sharing their work, DELTA FOCUS recipients are benefiting the broader IPV field and may provide other coalitions and IPV practitioners with the opportunity to consider new approaches that may be feasible with and adaptable for their populations. In addition, broad dissemination and collaborative efforts may help raise awareness among stakeholders in other key sectors, who may not be directly involved in IPV prevention work, of the need for such work. This investigation adds to the literature on IPV prevention by categorizing how practice-based prevention efforts are being shared with the field, an effort which, to our knowledge, has not been undertaken to date.

Conclusion

Primary prevention approaches for IPV, including TDV, are key to ending partner violence in adolescence and adulthood (Niolon et al., 2017). While the focus of the IPV field continues to broaden to include primary prevention in addition to intervention and response approaches, there is currently limited research to inform IPV prevention practice compared to other areas of violence prevention, especially at the outer layers of the social ecology (Jennings et al., 2017). However, while more research is needed, particularly to strengthen the evidence base around community and societal-level factors that impact IPV and TDV, it is important for practitioners to continue their efforts to effectively prevent IPV within communities. Given this need to work toward the prevention of IPV while simultaneously building the prevention-focused evidence base, the efforts of the DELTA FOCUS recipients to share their prevention work with other domestic violence practitioners across the country, state and local health departments, and other stakeholders may hold substantial value for the field.

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Appendix A: Adapted science impact framework indicators and descriptions

Name	Description
Creating awareness	**Contributions to creating awareness about prevention practice.**
Providing stakeholder resources, curriculum, training	Contributions to resources, curriculum, or training that promote prevention awareness.
Responding to external queries for information	Responses to external invitations for Recipients to contribute to other individuals, organizations, or initiatives' efforts that create prevention awareness.
Providing subject matter expertise to external organizations	Contributions to other individuals' or organizations' initiatives to create prevention awareness through the provision of subject matter expertise.
Presenting for professional meetings, events, and conferences	Contributions to meetings, events, and conferences aimed at creating prevention awareness.
Disseminating media, social media, or electronic communications	Contributions to creating prevention awareness through media coverage, social media, and electronic communication channels (e.g., newsletters and listservs) that reaches external (non-DELTA FOCUS funded) audiences
Sharing information with external organizations	Contributions to creating prevention awareness that involve information sharing with other non-DELTA FOCUS organizations.
Disseminating feedback and evaluation findings	Contributions to creating prevention awareness through the dissemination of feedback, data, or evaluation findings (e.g., surveys, focus groups).
Sharing information through professional societies	Contributions to information sharing through presentations for professional societies/associations.
Winning awards	Contributions to creating prevention awareness through the receipt of external awards or recognition.
Creating publications for external audiences	Contributions to prevention awareness through publications for external audiences.
Providing Continuing Education	Contributions to creating prevention awareness through providing continuing education courses or certifications.
Building or strengthening partnerships and collaborations	Contributions to prevention action through the development of new partnerships (or the strengthening/maintenance of existing partnerships) to support prevention action.
Changing organizational practices	Contributions to prevention action through influencing changes in external organizations' procedures or practices.
Funding external organizations' prevention work	Contributions to prevention action through funding external organizations' prevention practice.
Securing sponsorship and non-monetary resources	Contributions to prevention action through procurement of sponsorship (non-monetary resources) from external individuals or organizations.
Forming or sponsoring community groups	Contributions to prevention action through the creation or sponsorship of new community action groups.

Name	Description
Creating new technology	Contributions to prevention action through the creation of new technology.
Participating in research and development	Contributions to research and development that resulted in the creation and/or dissemination of new prevention products or innovations.
Effecting change	**Contributions to effecting change in national dialogue or prevention practice.**
Building public health capacity	Contributions to the development of the prevention workforce.
Increasing the scale of prevention work	Contributions to an increase in the scope or scale of an existing initiative.
Securing new funding for prevention work	Contributions to the procurement of new funding to support IPV prevention in their own organization.
Effecting legal or policy change[a]	Distribution of materials that contributed to legal and policy changes (e.g., organizational policy, state legislation, local laws, etc.).
Contributing to anecdotes and case studies	Contributions to the development of anecdotes or case studies designed to inform, influence, or change prevention practice.
Contributing to formal guidelines and recommendations	Contributions to the development of new formal guidelines or recommendations.
Effecting cultural and social change	Contributions to social or cultural change.
Contributing to registries or surveillance	Contributions to the creation of registries or surveillance.
Effecting Behavioral Change	Contributions to individual or population-level behavior change.
Disseminating science, data, and evaluation findings	**Contributions to the dissemination of scientific data, concepts, products, and evaluation findings.**
Disseminating science through external presentations	Contributions to presentations that incorporate and disseminate scientific products, concepts, or data (includes evaluation findings).
Disseminating science through offering training or coursework	Contributions to training and coursework that are used to disseminate scientific concepts or products.
Responding to requests to contribute to scientific output	Contributions to efforts that further scientific output (e.g., invitations to participate in science or evaluation-related publications or presentations).
Disseminating science through professional meetings	Contributions to scientific or evaluation-related presentations at meetings and conferences that are hosted by professional organizations or societies.
Disseminating science through publications	Contributions to peer-reviewed, scientific publications (based on science-based products, scientific studies, or evaluation findings).
Disseminating science through general communications (Social Media, Web, Print)	Contributions to the dissemination of science or evaluation findings through general communication or dissemination channels.
Shaping the future	**Contributions to the future of prevention dialogue or practice.**
Shaping the future through implementation of public health programs & initiatives	Contributions to the implementation of new public health program, tools, and/or initiatives by non-DELTA FOCUS funded individuals or organizations.
Shaping the future through new hypotheses	Contributions to the formation of new hypothesis that will inform future research or improve prevention practice.

[a] Recipients did not use DELTA FOCUS funds to lobby for legislation. Rather, legislators may have been influenced by widely distributed materials that were informed by DELTA FOCUS work.

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Highlights

- There is limited evidence on how to effectively prevent IPV, especially at the community level.
- There is also a need to share existing IPV prevention work broadly with the field.
- CDC's DELTA FOCUS recipients contribute to a national-level IPV prevention dialogue.
- DELTA FOCUS recipients took a leadership role with cross-sector prevention stakeholders.
- Lessons learned may inform how programmatic investments are used in the field of IPV prevention.

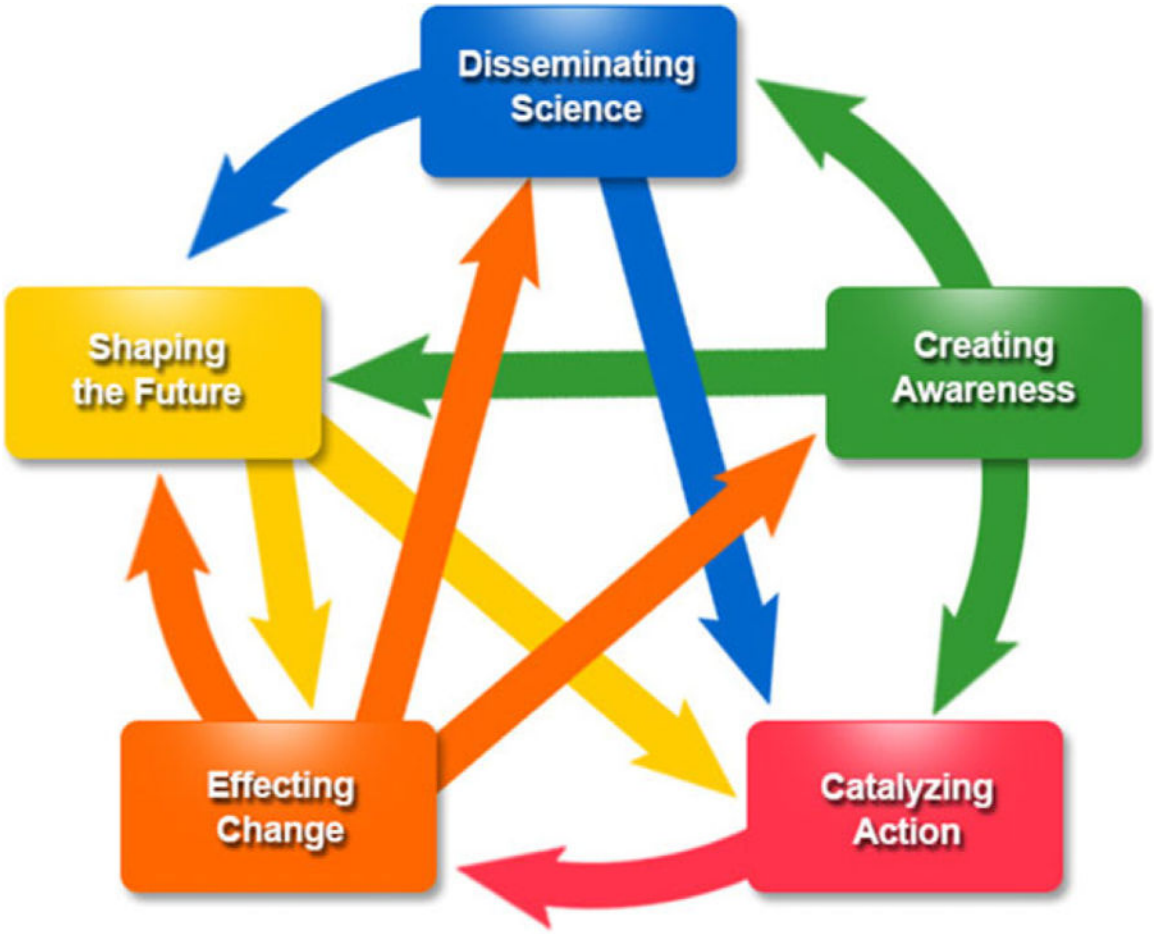

Fig. 1.
Science impact framework five domains of influence (CDC, 2017C)

Table 1

Prevalence of themes in the science impact framework across recipients

Domain	Theme	Number of recipients[a]
Creating awareness	Providing stakeholder resources, curriculum, training	10
	Responding to external queries for information	10
	Providing subject matter expertise to external organizations	10
	Presenting for professional meetings, events, and conferences	10
	Disseminating media, social media, or electronic communications	10
	Sharing information with external organizations	10
	Disseminating feedback and evaluation findings	9
	Sharing information through professional societies	7
	Winning awards	4
	Creating publications for external audiences	3
	Providing continuing education	2
Catalyzing action	Building or strengthening partnerships and collaborations	10
	Changing external organizations' practices	10
	Funding external organizations' prevention work	9
	Securing sponsorship and non-monetary resources	8
	Forming or sponsoring community groups	5
	Creating new technology	1
	Participating in research and development	1
Effecting change	Building public health capacity	10
	Increasing the scale of prevention work	8
	Securing new funding for prevention work	7
	Effecting legal or policy change[b]	6
	Contributing to anecdotes and case studies	5
	Contributing to formal guidelines and recommendations	3
	Effecting cultural and social change	1
	Contributing to registries or surveillance	1

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Domain	Theme	Number of recipients[a]
	Effecting behavioral change	1
Disseminating science, data, and evaluation findings	Disseminating science through external presentations	7
	Disseminating science through offering training or coursework	6
	Responding to requests to contribute to scientific output	5
	Disseminating science through professional meetings	3
	Disseminating science through publications	2
	Disseminating science through general communications (social media, web, print)	2
Shaping the future	Shaping the future through implementation of public health programs & initiatives	6
	Shaping the future through new hypotheses	1

[a]Recipients may have reported more than one activity related to each theme.

[b]Recipients did not use DELTA FOCUS funds to lobby for legislation. Rather, legislators may have been influenced by widely distributed materials that were informed by DELTA FOCUS work.