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The Evidence for Violence Prevention Across the Lifespan and Around the World

Workshop Summary

Leigh Carroll, Megan M. Perez, and Rachel M. Taylor, *Rapporteurs*

Forum on Global Violence Prevention

Board on Global Health

INSTITUTE OF MEDICINE *AND*
NATIONAL RESEARCH COUNCIL
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The serpent has been a symbol of long life, healing, and knowledge among almost all cultures and religions since the beginning of recorded history. The serpent adopted as a logotype by the Institute of Medicine is a relief carving from ancient Greece, now held by the Staatliche Museen in Berlin.

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This workshop summary has been reviewed in draft form by individuals chosen for their diverse perspectives and technical expertise, in accordance with procedures approved by the National Research Council's Report Review Committee. The purpose of this independent review is to provide candid and critical comments that will assist the institution in making its published workshop summary as sound as possible and to ensure that the workshop summary meets institutional standards for objectivity, evidence, and responsiveness to the study charge. The review comments and draft manuscript remain confidential to protect the integrity of the process. We wish to thank the following individuals for their review of this workshop summary:

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AGNES TIWARI, University of Hong Kong
ELIZABETH WARD, University of the West Indies, Mona Campus

Although the reviewers listed above have provided many constructive comments and suggestions, they did not see the final draft of the workshop summary before its release. The review of this workshop summary was overseen by **Enriqueta C. Bond,** Burroughs Wellcome Fund. Appointed by the Institute of Medicine, she was responsible for making certain that an independent examination of this workshop summary was carried out in accordance with institutional procedures and that all review comments were carefully considered. Responsibility for the final content of this workshop summary rests entirely with the rapporteurs and the institution.

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Acknowledgments

The Forum on Global Violence Prevention was established to develop multisectoral collaboration among stakeholders. Violence prevention is a crossdisciplinary field that could benefit from increased dialogue among researchers, policy makers, funders, and practitioners. As awareness of the insidious and pervasive nature of violence grows, so too does the imperative to mitigate and prevent it. The Forum seeks to illuminate and explore evidence-based approaches to the prevention of violence.

A number of individuals contributed to the development of this workshop and report. These include a number of staff members from the Institute of Medicine and the National Academies: Pamela Bertelson, Daniel Bethea, Karen Campion, Leigh Carroll, Marton Cavani, Angela Christian, Kristen Danforth, Colin Fink, Chelsea Frakes, Meg Ginivan, Robin Guyse, Wendy Keenan, Patrick Kelley, Suzanne Landi, Eileen Milner, Jose Portillo, Patsy Powell, and Julie Wiltshire. The Forum staff, including Deepali Patel, Megan Perez, and Rachel Taylor, put forth considerable effort to ensure this workshop's success.

The planning committee contributed hours of service to develop and execute the agenda, with the support of the Forum staff. Reviewers also provided thoughtful remarks in reading the draft manuscript. Finally, these efforts would not be possible without the work of the Forum membership itself, an esteemed body of individuals dedicated to the concept that violence is preventable.

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Introduction[1]

Evidence shows that violence is not inevitable, but rather can be prevented through approaches that have demonstrated measurable impacts in the reduction of violence. Successful and promising violence prevention programs exist that target different types of violence, including self-directed, interpersonal, and collective violence; however, the existing evidence base does not necessarily inform practice or policy making. Furthermore, gaps in the evidence base exist, particularly in the context of interventions in low- and middle-income countries (LMICs).

Knowing how to access and apply evidence in ways that ensure programs are culturally appropriate and acceptable and implemented with high fidelity can help practitioners and policy makers apply it effectively. Furthermore, if stakeholder groups, including decision makers, practitioners, and affected communities, know the value of violence prevention programs that are grounded in evidence, they may more likely support the implementation and continued improvement of such programs.

On January 23-24, 2013, the Institute of Medicine and National Research Council's (IOM and NRC's) Forum on Global Violence Prevention convened a 2-day workshop to explore the value and application of the

[1] The planning committee's role was limited to planning the workshop. The workshop summary was prepared by the workshop rapporteurs as a factual summary of what occurred at the workshop. Statements, recommendations, and opinions expressed are those of individual presenters and participants and are not necessarily endorsed or verified by the Forum, the Institute of Medicine, or the National Research Council, and they should not be construed as reflecting any group consensus.

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evidence for violence prevention across the lifespan and around the world. Part of the Forum's mandate is to engage in multisectoral, multidirectional dialogue that explores crosscutting approaches to violence prevention. The Forum's orientation is through the public health approach, which focuses on prevention, particularly primary prevention, and is multidisciplinary in nature. To these ends, this workshop examined how existing evidence for violence prevention can continue to be expanded, disseminated, and implemented in ways that further the ultimate aims of improved individual well-being and safer communities. Many effective and promising violence prevention programs that contribute to the evidence base have been discussed in the context of previous Forum workshops.[2] This workshop was an opportunity to engage in a more comprehensive discussion of the value of the evidence base and its applicability across contexts.

CONTEXT

Broadly speaking, violence is a form of intentional injury, and is defined by the World Health Organization (WHO) as "the intentional use of physical force or power, threatened or actual, against oneself, another person or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment or deprivation." Of the 5 million deaths attributed to injury worldwide, 1.6 million are a direct result of violence. However, the greater burden of violence lies not in mortality, but in morbidity and disability (WHO, 2002).

In 1996, WHO adopted Resolution WHA49.25, declaring violence "a major and growing public health problem across the world," and calling on its member states to address this issue both individually and collectively. WHO recognized violence not only as a visible problem to be confronted on national and state levels, but also a pervasive problem on both the local and interpersonal levels. This paradigm shift toward recognition of violence as an insidious public health problem has significant implications: Violence as a public health problem has empirical and quantifiable risk factors and intervention points and, most importantly, can be prevented.

Violence prevention is a global issue, with the majority of the burden of violence-related mortality and morbidity occurring in LMICs (WHO, 2002). As a global health issue, as defined by Kaplan and colleagues (2009), violence prevention efforts need to be highly multidisciplinary and

[2] Previous Forum on Global Violence Prevention workshop summaries include *Preventing Violence Against Women and Children* (IOM and NRC, 2011); *Social and Economic Costs of Violence* (IOM and NRC, 2012a); *Communications and Technology for Violence Prevention* (IOM and NRC, 2012b); and *Contagion of Violence* (IOM and NRC, 2013). All Forum workshop summaries and additional information on previous workshops are available at http://www.iom.edu/globalviolenceprevention.

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inclusive beyond the traditional health fields; focus on both individual- and population-based prevention; promote equity across and within populations; and employ partnership and global cooperation.

Despite the global nature of violence and the burden borne by LMICs, the majority of evidence for violence prevention exists within the context of high-income countries, where resources are greater for both program implementation and evaluation. As several speakers noted during the workshop, implementation of evidence-based programs across cultural contexts often requires multiple considerations in adaptation to help ensure programs will be culturally appropriate and acceptable, implemented with fidelity, and effective. Effective adaptation and implementation can be particularly critical in resource-constrained settings.

DEFINITIONS

The terms "evidence" and "evidence-based" are used throughout this report; however, there is recognition that agreement in the field over the definition of such terms is lacking. Broadly speaking, evidence concerns facts (actual or asserted) that are known through experience or observation and intended for use in support of a conclusion and can inform decision making (WHO, 2013). The strength of evidence is considered to vary depending on the type of methods employed and how well the study was designed and executed. Some determinations that have been applied to defining the strength of evidence are included in Chapter 2. "Evidence-based" frequently describes the use or application of known evidence, such as evidence-based programs or evidence-based decision making.

Programs that have been shown to have evidence supporting their success in reducing violence-related outcomes often are labeled as "effective" or "promising." Evidence-based registries, such as Blueprints for Healthy Youth Development and CrimeSolutions.gov, have specific defined criteria for labeling of programs but, in general, effective programs are those that are "based on sound theory, have been evaluated in at least two, well-conducted studies, and have demonstrated significant, short-term and/or long-term preventive effects, depending on intent and design" (Purdy and Wilkens, 2011, p. 12). Effective programs are sometimes also referred to as "model" or "exemplar" programs. The categorization of "promising" is designated to programs that are deemed to have potential, but do not meet the "effective" categorization criteria for reasons such as limited evaluation to date or evaluations that have been conducted using methods that do not meet rigorous standards.

This report recognizes the lack of clear agreement within the field over the definitions of these terms and does not attempt to resolve them. Rather, as a summary report, terminology is applied based on the language used

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by the individual speakers and participants and the context that is most appropriate to the workshop discussions.

ORGANIZATION OF THE REPORT

This summary provides an account of the presentations given at the workshop. Opinions expressed within this summary are not those of the IOM, the NRC, the Forum on Global Violence Prevention, or their agents, but rather of the presenters themselves. As such, they do not reflect conclusions or recommendations of a formally appointed committee. This summary was authored by designated rapporteurs based on the workshop presentations and discussions and does not represent the views of the institution, nor does it constitute a full or exhaustive overview of the field.

To operationalize the Workshop Statement of Task (see Box 1-1), the planning committee applied a paradigm of knowledge management that served as the framework for the workshop. The workshop summary has

BOX 1-1
Workshop Statement of Task

Evidence-based approaches show that violence is not inevitable, and that it can be prevented. Successful violence prevention programs exist around the world, but a comprehensive framework is needed to systematically structure proven approaches to this problem. As the global community recognizes the connection between violence and failure to achieve health and development goals, a resource such as an evidence-based framework could more effectively inform policies and funding priorities locally, nationally, and globally.

The Institute of Medicine will convene a 2-day workshop to explore the evidentiary basis for violence prevention across the lifespan and around the world. The public workshop will be organized and conducted by an ad hoc committee to examine (1) What violence prevention interventions have been proven to reduce different types of violence (e.g., child and elder abuse, intimate partner and sexual violence, youth and collective violence, and self-directed violence)? (2) What are the outcomes indicative of success? (3) What are common approaches most lacking in evidentiary support? (4) How can proven effective interventions be integrated or otherwise linked with other prevention programs, especially those related to achieving the Millennium Development Goals?

The committee will develop the workshop agenda, select and invite speakers and discussants, and moderate the discussions. Experts will be drawn from the public and private sectors as well as from academic organizations to allow for multilateral, evidence-based discussions. Following the conclusion of the workshop, an individually authored summary of the event will be prepared by a designated rapporteur.

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been organized thematically to reflect this framing paradigm. The first part of this report consists of an introduction and four chapters, which provide a summary of the workshop. Chapter 2 summarizes the workshop presentations and discussions on the types of evidence and what can be learned from them. Chapter 3 focuses on efforts to and best practices in generating and integrating evidence. Chapter 4 covers the workshop discussions on the dissemination of evidence to different stakeholder communities; while Chapter 5 focuses on translating evidence into effective action, particularly across cultural contexts. The second part of this report consists of submitted papers from speakers regarding the substance of the work they presented. These papers were solicited from speakers in order to offer further information about their work and the field; not all speakers contributed papers. The appendixes contain additional information regarding the agenda and participants. Videos of all workshop presentations and discussions are available on the Forum on Global Violence Prevention's website (www.iom.edu/globalviolenceprevention).

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Part I

Workshop Overview

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2

The Need for Evidence

Calls for evidence for violence prevention grew in the 1980s and 1990s, and over the ensuing years, evidence has played a more prominent role in decision making and program design for violence prevention. Workshop speaker Lisbeth Schorr from the Center for the Study of Social Policy noted that early in President Obama's administration, the Office of Management and Budget started to increase the use of evidence in determining allocation of federal money. However, while increasing emphasis is being given to the evidence of violence prevention, workshop speaker Patrick Tolan from the University of Virginia noted there is limited consensus on the strength and type of evidence required to label programs as "evidence-based." Workshop speakers discussed different types of evidence and methodologies for collecting evidence, and why building evidence for violence prevention is significantly important.

WHAT IS EVIDENCE?

Broadly speaking, evidence concerns facts (actual or asserted) that are known through experience and observation and intended for use in support of a conclusion (Lomas et al., 2005). In the context of the workshop discussions and this summary report, evidence typically refers to studies and evaluations that have been carried out to test the effects of programs, interventions, or policies on specific outcomes. The strength of evidence is considered to vary depending on the type of methods employed and how well the study was designed and executed. Workshop speakers debated the strengths and weaknesses of different types of methods for collecting

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evidence for violence prevention. For measuring program effectiveness, workshop speaker Catherine Ward from the University of Cape Town suggested that randomized controlled trials (RCTs) are the gold standard, while other quasi-experimental studies are also highly informative. Creators of lists of best practices in violence prevention have established criteria for determining how to categorize programs that are based on the study methods used, the quality with which the methodology was executed, the number of studies conducted, and demonstrable positive effects. Although the standards vary among the different registries, in general, only evidence based on randomized or quasi-experimental designs is included.[1]

Workshop participant Peter Donnelly from the University of St. Andrews in Scotland added a note of caution, however, and suggested that the research community should refrain from automatically deferring to the RCT as the best method for generating evidence. He suggested that while an RCT can be highly effective for something like testing a new antibiotic, it is not necessarily the best way to understand complex public health interventions. Forum member and workshop speaker Michael Phillips from Shanghai Jiao Tong University School of Medicine expressed that the problem is not necessarily RCTs, but may be that the theoretical models on which they are based do not capture well the variables that affect phenomena in the violence prevention field.

Some workshop speakers warned against assuming that quantitative studies necessarily yield neutral results, given that the choice to study a particular indicator inherently gives increased value to that indicator and implies that its measurement will provide significant information. Many speakers discussed the importance of widening the knowledge base to include qualitative methods and data to inform the process of ascribing meaning to measurements and to provide a more comprehensive understanding of violence prevention. Schorr stressed that qualitative data are needed to inform decisions and give numbers meaning because 100 percent certainty is unattainable in the determination of complex, context-specific interventions. Workshop planning committee co-chair and Forum member James Mercy from the Centers for Disease Control and Prevention underscored the value of evidence gained from experiential knowledge that comes from on-the-ground practice and research. Workshop speaker Marta Santos Pais, Special Representative of the United Nations Secretary General on Violence Against Children, noted that victims themselves as well as their relatives and friends hold a wealth of potentially helpful information; however, finding and disseminating that information can be difficult.

[1] See Part II of this report for detailed information on evidence-based registries for violence prevention.

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BOX 2-1
The "Ideal" Evidence-Based Program

1. Addresses major risk/protective factors that can be changed and substantially affect the problem
2. Easy to implement with fidelity
3. Rationale for and methods of services/treatments are consistent with the values of those who will implement
4. Keyed to easily identified problems
5. Inexpensive or positive cost/benefit ratios
6. Can influence many lives or have life-saving types of effects on some lives

SOURCE: Tolan, 2013 (adapted from Shadish et al., 1991).

Drawing from his experience with the Blueprints for Healthy Youth Development, workshop speaker Patrick Tolan from the University of Virginia presented a list of characteristics of the ideal evidence-based program (see Box 2-1).

WHAT CAN WE LEARN FROM EVIDENCE?

Forum co-chair and workshop planning committee member Mark Rosenberg from the Task Force for Global Health suggested that the design of effective violence prevention interventions can be informed by four important questions. The questions are (1) What is the problem?, (2) What are the causes?, (3) What is effective?, and (4) How can it be scaled it up? Throughout the workshop, speakers elaborated on the ways in which evidence can be used to answer these questions.

The Magnitude of Violence

Surveillance studies, surveys, police reports, and other prevalence data can illuminate the magnitude of violence and its impacts. Forum co-chair and workshop speaker Jacquelyn Campbell from the Johns Hopkins School of Nursing referred to the December 2012 special issue of *Lancet* on the Global Burden of Disease Study, which showed how interpersonal violence and suicide rank against other causes of death in terms of mortality, and noted existing prevalence data that expose the problem and magnitude of violence.

Santos Pais discussed the potential for prevalence data to better expose the depth of violence—where it happens and whom it affects. She noted

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that the most vulnerable populations and their problems are sometimes hidden and unnoticed by the public, and more can be done to develop tools to more thoroughly collect information on how violence impacts them. For example, she pointed out the invisibility of vulnerable children—including children who are too young to speak or seek support, are disabled, in detention, or are in situations of economic or political instability or crisis—and noted that it is difficult for children themselves to report their cases and tell their stories. Such vulnerabilities result in a vast underreporting of violence against children, especially in countries with few resources dedicated to prevalence studies.

As an example of a country-wide effort to collect such data, Santos Pais pointed to the Tanzanian National Survey of Violence Against Children, which illuminates the pervasive and widespread nature of violence in the country (United Republic of Tanzania, 2011). It created a public conversation about violence in Tanzania and sparked greater investments in implementation efforts such as raising awareness; mobilizing public support; identifying areas for changes in legislation, policies, and services; and developing a communications strategy focused on reaching out to young people.

The Causes of Violence and Value of Prevention

Several speakers discussed the value of research that focuses on determining the root causes of violence victimization or perpetration. Mary Lou Leary from the Department of Justice suggested that criminal justice responses to violence are not enough, but rather more effort on preventing the root causes that stem from problems in schools, homes, financial situations, and the environment is needed. Mark Bellis from Liverpool John Moores University supported this suggestion and described the financial value of investing in interventions that focus on root causes of problems rather than addressing violence after it occurs. Such interventions may include the Nurse–Family Partnership or school-based social and emotional learning programs. Santos Pais noted that if people invest in prevention of violent household incidents early in a child's life, they can "break this cycle and, in fact, create an opportunity for non-violence to prevail." Jerry Reed from the Education Development Center added that understanding the root causes of different types of violence could expose linkages and relationships among different types that can lead to more comprehensive approaches to prevention.

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Effectiveness and Scalability of Interventions

Practitioners are faced with many challenges when implementing evidence-based programs in context-specific, often complex, environments. For a program to have population-level, long-term impacts, it often needs be scaled up and sustained. An emerging body of research on implementation science can help the violence prevention community build programs and services based on best practices. Information on context and culture can help practitioners determine how to best design their programs to address the needs of the target population when scaling up and implementing programs in new settings. (For more information on implementing interventions, see Chapter 5.)

WHY DO WE NEED EVIDENCE?

Workshop speakers provided several reasons why building, disseminating, and implementing evidence for violence prevention can contribute to a shared vision, efficiency for resource allocation, awareness of prevention, attention to social and cultural norms, and program improvement.

Establishing a Shared Vision

Rosenberg noted that violence prevention is not straightforward, and individuals and communities with a stake in the implementation of interventions have different priorities that influence their objectives. For example, when determining firearm access policies, communities have multiple objectives—trying to prevent firearm injuries and deaths while protecting individual rights. Evidence can help stakeholders to better understand the costs and benefits of certain interventions, and ultimately, as Santos Pais noted, help communities to develop a shared vision for violence prevention.

Resource and Program Efficiencies

Workshop speaker Neil Boothby from Columbia University noted that the violence prevention community has access to a limited amount of resources; thus, evidence can help determine the most efficient use of these resources. Santos Pais added that evidence can improve efficiencies in many aspects of program development, including planning, policy making, legislation, service provision, and ethical standards.

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Building Awareness That Prevention Is Possible

Santos Pais stressed the need to convey to the public a sense of urgency to respond to violence. She challenged the audience to collect and present evidence in a way that makes violence prevention irresistible for everyone. Reed mentioned the need to talk about suicide in a way that will help individuals understand it and how it can be prevented, and instill hope in those who are struggling. Workshop speaker Daniela Ligiero of the Office of the U.S. Global AIDS Coordinator emphasized this point, adding that people need to understand that something can be done about violence—it is not a hopeless challenge. Then, Santos Pais noted, they will believe in the need to address violence and can mobilize and take action against it in their communities.

Shifting Social and Cultural Norms

Access to information and evidence could help shift social and cultural norms within communities. Santos Pais pointed out that certain forms of violence are accepted in some cultures, but, with expanded access to information on the effects of violence on individual and community well-being, these cultural and community norms may begin to change. In addition, evidence can inform perpetrators about nonviolent responses to conflict that may not be as widely used in their communities. For example, Santos Pais noted that some parents who physically punish their children may not be aware of other effective disciplinary methods, especially if they were physically punished as children themselves. Thus, information on effectiveness of other types of interventions and how to use them successfully could directly reduce violence in these circumstances.

Continual Program Improvement

Ligiero noted that, after implementing interventions, evaluation of programs and their impact is important if programs are to evolve and improve and, ultimately, reduce violence.

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Key Messages Raised by Individual Speakers

- Although more evidence is needed to understand the effectiveness of interventions, evidence exists through prevalence data to call for action to prevent violence (Campbell).
- Evidence on root causes of violence can assist in the development of early interventions that can be more effective, comprehensive, and less costly (Bellis, Leary, Santos Pais, Reed).
- Understanding the effectiveness of violence prevention interventions may require multiple methods of data collection (Mercy, Schorr).
- Evidence can increase the effectiveness of interventions by contributing to a shared vision for program design and implementation, better resource allocation, increased awareness, shifts in social norms, and continued program improvement (Boothby, Ligiero, Santos Pais, Reed, Rosenberg).

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3

Generating and Integrating Evidence

While the case for generating evidence and the value of applying it to decision making was explored in Chapter 2, building the evidence base can be complicated by many factors. Workshop speakers discussed several barriers to building the evidence base as well as considerations for methodological design.

BARRIERS TO EVIDENCE COLLECTION

Individual speakers discussed several barriers that complicate efforts to collect and generate evidence for violence prevention:

- the complexity of violence,
- the need for political and societal support,
- the difficulty of coordination among sectors,
- limited resources and the diversion of resources from directly responding to violence,
- various research methods, and
- restricted support for funding and publishing.

The Complexity of Violence

Throughout the workshop, speakers noted that collecting evidence on which to build violence prevention interventions is a challenging endeavor. Workshop speakers Jennifer Matjasko from the Centers for Disease Control and Prevention and Harriet MacMillan of McMaster University noted that

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risk factors for violence develop at multiple social levels, including the individual, family and interpersonal, school and community, and institutional, and a variety of interventions are needed to address all of them. Jerry Reed from the Education Development Center pointed out that there is no single, easily measurable causative factor for violence; thus, no single intervention can solve the problem. Mary Lou Leary from the Department of Justice added that issues related to violence are not stagnant, but always evolving and demanding of continued assessment and new solutions.

Given the complexity of violence, efforts to prevent it can be complex and interact with each other and other factors in ways that may hinder straightforward understanding of effectiveness. Workshop speaker Lisbeth Schorr from the Center for the Study of Social Policy suggested that violence prevention solutions require (1) reforms of institutions, policies, and systems that are adapted to a variety of contextual issues; (2) thoughtful implementation; and (3) evolution in response to changes in context, advances in knowledge, and lessons learned. Workshop speaker Christopher Maxwell from the University of Michigan also noted that it can be difficult to evaluate successful intervention components because of the many linkages among programs. For example, battered women's shelters provide a variety of services to meet multiple needs, and it can be challenging to determine which shelter resources are most effective at reducing violence.

Need for Political and Societal Support

As Marta Santos Pais, the United Nations (UN) Special Representative for Violence Against Children, reminded the participants, although evidence itself should be neutral, sometimes political tensions can arise from research findings. Evidence on the rates of violence or program effectiveness does not always shed favorable light on political administrations, nor does it always support decisions that leaders believe to be the most politically strategic. For example, Forum member Rodrigo Guerrero, Mayor of Cali, Colombia, noted that policy makers face the decision of whether to keep published homicide rates low by using inconsistent methods of determining homicides or to remain transparent and use consistent methods but at the risk of inviting public questioning and criticism of the effectiveness of their leadership. Similarly, workshop planning committee member and speaker Daniel Webster from the Johns Hopkins Bloomberg School of Public Health mentioned that some law enforcement leaders are rewarded for maintaining low levels of violent crime and thus have little incentive to report higher rates of incidents.

Webster noted that politicians often want to respond quickly to violence by implementing the programs they believe are necessary to reduce incidents. Frequently, they are not as interested in ensuring a random

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assignment of interventions for study groups because they are hesitant about allocating limited resources to control groups or random provision of services.

Santos Pais discussed a global survey that she and other partners developed and sent to many UN Member States. The survey was an attempt to better understand the steps that national governments were taking toward violence prevention. It included questions on the prioritization of data and research in influencing policy. Fifty-five percent of the countries did not respond to these questions, and those that did reported mixed success with the use of evidence in policy making. Many responses suggested that statistics offices are effective in data collection, but these offices are not linked well to the public and policy makers. Other respondents mentioned that poor coordination among different organizations hinders effective data collection and dissemination.

Difficult Coordination Among Sectors

The results of the UN global survey highlight another barrier that extends beyond politics, which is the potential difficulty of working across stakeholder groups on multisectoral approaches to violence prevention. A workshop participant cautioned that as public health violence prevention approaches are designed, it is critical to include other relevant sectors, such as the human rights and criminal justice communities. A comprehensive approach is no easy task, however, and Santos Pais noted the challenges in bringing sectors together to address; for example, unemployment and poverty and their effects on families. She noted that too often people wait to address these issues after the violent crisis has been resolved, but violence prevention is more likely to be successful and sustainable if sectors collaborate early to address violence.

Limited Resources and Diversion of Resources

Another challenge to evidence generation is that, in the short run, data collection can divert time, energy, and resources from implementing violence prevention programming. As Leary discussed, there is an ongoing struggle between expedience and evidence—is it worth the time to evaluate program effectiveness when there are problems that need to be addressed with an intervention now? Workshop speaker Daniela Ligiero from the Office of the U.S. Global AIDS Coordinator recognized that there is a debate among the research community, decision makers, and the public over the importance of evidence and, even within the research community, over the amount of evidence needed before taking action.

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Forum co-chair and workshop planning committee member Mark Rosenberg from the Task Force for Global Health noted that while researchers are taking the time to get good data, they often lose the opportunity to influence policy. Policy makers often call for data on prevalence and effective interventions immediately after a crisis has occurred; Forum co-chair and workshop speaker Jacquelyn Campbell from the Johns Hopkins School of Nursing emphasized the need to have evidence available in the face of these crises in order to garner support for the most appropriate response. However, because political and financial support for research often does not reach its peak until after a crisis, Rosenberg noted the difficulty of generating usable evidence in a timely fashion without rushing methods and affecting the quality of the data.

Different Research Methods

Workshop participant Janice Humphries from the University of California, San Francisco, School of Nursing suggested that mixed-methods research, which uses both quantitative and qualitative methods and the appropriate analyses of each type of data, is an opportunity to include the voices of stakeholders and community members into the evidence base in a rigorous way and can provide useful context about the community in which the program is being implemented. However, there are barriers to mixed-methods approaches in violence prevention research. Workshop speaker Neil Boothby from Columbia University mentioned that multilateral organizations and governments often resist tapping into informal networks to find information from individuals and communities who are perhaps closest to the problems and the most insightful. Furthermore, Ligiero commented that evidence derived from the hard sciences is frequently valued over evidence from the social and behavioral sciences.

Restricted Support for Funding and Publishing

While there are calls for financial, material, political, and academic support for violence prevention, it is only one of a multitude of important public health priorities competing for a limited pool of resources. Schorr noted that the best funded prevention programs are those that are backed by significant evidence and carry the lowest risk of failure, and the most frequently published studies are those that employ what is viewed as proven methodologies. Webster added that grants often require applicants to demonstrate that they are applying evidence-based interventions to address a problem, but he questioned the value of broadly applying the criteria because effectiveness will vary, depending on the place and time of an intervention. Schorr noted that funders and journal editors have the

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power to move the field forward, but will need to be convinced of the value of supporting a greater variety of programs and types of evidence. Don Berwick, formerly from the Centers for Medicare & Medicaid Services, and Paul Batalden, from the Geisel School of Medicine at Dartmouth, have attempted to address this issue by proposing new criteria to journal editors for the acceptance of articles for peer-reviewed publication. Schorr said it is less clear how to convince funders of the need to take risks to encourage innovation, but challenged the workshop audience to continue to spread the message that there is a difference between an intervention that is ineffective and an intervention that has not yet been proven to be effective.

DESIGNING METHODOLOGIES

Despite the noted challenges in building the evidence for violence prevention, several speakers recognized that progress continues in developing methods for data collection. Speakers shared some best practices in methodological design considerations from their experiences in research and practice:

- identifying meaningful, measurable outcomes;
- engaging stakeholders in design and dissemination;
- consulting affected communities;
- choosing high-quality and relevant comparison data;
- looking at effects across sectors; and
- applying judgment and common sense.

Identifying Meaningful, Measurable Outcomes

Several speakers highlighted the importance of identifying meaningful outcomes to measure in outcome-focused program evaluations. They cautioned against becoming distracted with measuring program effects that ultimately do not clarify whether the program is meeting its final goals. For example, Forum member Michael Phillips from Shanghai Jiao Tong School of Medicine mentioned that many suicide prevention programs promote their effectiveness in reducing depression or suicide ideation, but it is still not clear whether they actually reduce suicidal behavior. Similarly, MacMillan pointed out some studies that show that sexual abuse prevention programs improve children's knowledge of the issues, but do not determine whether the programs actually reduce the occurrence of child sexual abuse.

On the other hand, some speakers also noted that evaluations should not become so focused on measuring the predetermined meaningful outcomes that they miss other less obvious effects. Reed pointed out that the

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Air Force Suicide Prevention Program, a successful program included on the Suicide Prevention Resource Center's Best Strategies Registry, not only has reduced suicide by 33 percent among active duty Air Force personnel, but has also been effective in reducing domestic and other forms of violence. These findings improve the knowledge base of violence prevention and can be used practically to change and refine program elements and objectives.

Engaging Stakeholders in Design and Dissemination

A recurring message throughout the workshop was evidence as an opportunity to break down silos and involve key stakeholders at all stages of research. Ligiero stressed the importance of working with communities and governments before embarking on survey research to ensure widespread support and to receive important feedback on research design from various perspectives. Santos Pais described the recent study conducted in Tanzania that involved multiple partners in an effort to uncover the prevalence of physical, emotional, and sexual violence in youth populations (United Republic of Tanzania, 2011). She suggested that the most strategic element of the project was that it was carried out by a multiministerial task force representing many governmental departments, religious organizations, youth, international agencies, and academia. She noted that this widespread participation resulted in more stakeholders feeling ownership of the issue and a willingness to invest in violence prevention. The broad reach of the taskforce allowed them to widely disseminate the survey findings. She noted that when the task force made a presentation to the government, they presented suggested policy responses alongside the concerns that arose in their findings. Their community communications strategy sought to convey their messages to everyone, including young people. By involving multiple stakeholders in the planning and dissemination of their research, they had knowledge, resources, and political support when they publicly presented their study results and ideas for how to move forward to reduce violence.

Reed encouraged the public sector to engage more with private companies to increase interest in and funds for more evidence generation. He noted one example of a successful public–private partnership started by Health and Human Services Secretary Kathleen Sebelius and Defense Secretary Robert Gates. This partnership, the Action Alliance for Suicide Prevention, is co-chaired by Army Secretary John McHugh and Gordon Smith, chief executive officer and president of the National Association of Broadcasters. It brings together about 45 partners from the public and private sectors. They have formed task forces, a sustainability committee, and an operational arm that assists the country in advancing the objectives of the National Strategy for Suicide Prevention, and have set an objective of saving 20,000 lives in 5 years. Reed suggested that such bold goals can

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be reached if researchers continue to determine what works in violence prevention while investors continue to invest in promising interventions.

Consulting Affected Communities

Throughout the workshop, speakers emphasized the broad reach of violence and its effects on all sectors and levels of society. Several speakers implied that too often, voices from affected communities are excluded from the data that are collected. Boothby contended that the information researchers need does not always come from the police or multilateral organizations, but from the victims, offenders, siblings, and neighbors. Santos Pais noted that surveys on violence in youth populations can be more comprehensive when completed directly by youth themselves. Several speakers highlighted the importance of qualitative data collection methods for illuminating often otherwise unheard perspectives.

When using surveys, one challenge of collecting data from victims and other people involved directly in violent incidents can be determining how to limit reporting bias. For example, MacMillan mentioned that once parents have been through a parenting program, they know the program objectives and provider expectations. When reporting on their own behavior, they are thus more likely to alter their responses to better align with these program goals.

Choosing High-Quality and Relevant Comparison Data

In his presentation on methodological flaws in gun violence studies, Webster noted that in the information age, there is a tendency to think that all the available data should be used for study controls. However, Webster argued that more data are not necessarily better data, and instead of focusing on amassing high quantities of data, researchers should spend more time ensuring that the data are relevant to their research. For example, when trying to assess the effectiveness of a school bullying program in Baltimore, one could try to compile multitudes of data from numerous schools across the country. However, Webster claimed it would make more sense to find a smaller number of comparison schools in communities that are most similar to the Baltimore community. Webster suggested that finding similar comparisons will help researchers to develop study controls that most closely mirror the condition that the studied population would be in if the intervention had not been implemented.

Webster suggested two qualities that researchers should look for when searching for good controls to compare with intervention sites, using the antibullying program study as an example. First, the comparison schools should have similar baseline rates of bullying as the school with the intervention, and

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second, the comparison schools should be on trajectories similar to the intervention school. For example, if the antibullying program were implemented in a school as a response to quickly rising rates of bullying, the comparison schools should also have similarly rising rates of bullying. Comparison schools with bullying levels that have remained relatively unchanged over time likely will not shed light on what levels could have been in the studied school if bullying continued to increase without the intervention.

Webster shared a study that adhered to the principles of finding comparisons with similar baselines and trajectories. The Maryland Saturday Night Special Ban study examined the effects of a ban on small, easily concealable, and poorly made handguns in Maryland. Rather than comparing Maryland to every state to measure the effects of this law, they searched for states that had similar trends and patterns in homicide as Maryland before the law was passed. They found that Pennsylvania and Virginia would be the best comparison states. They used these two states together, with prior cycles and patterns in Maryland, to model predicted gun homicide rates in Maryland had the law not been implemented. They found that rates did decrease after the policy came into effect. Webster explained that modeling must be accurate to give an evaluation study credibility, and the accuracy of this particular modeling was demonstrated by comparing the modeled preintervention homicide rates to the actual preintervention rates. The modeled rates were very similar to the observed rates, thus highlighting the effectiveness of using data from only two very similar states rather than many less similar states.

Looking at Effects Across Sectors

Workshop speaker Mark Bellis from Liverpool John Moores University discussed the importance of measuring program effects across sectors, especially when evaluating prevention interventions that address the underlying root causes of violence. When evaluating school-based interventions such as social and emotional learning programs, for example, one should look beyond measuring educational outcomes. Educational outcomes alone might show that it takes a long time to offset program costs, but assessment of the program benefits to criminal justice, health, and social sectors may reveal that the costs are actually offset much more quickly when a larger range of outcomes is considered. While it might be difficult to convince the education sector that its investments are worthwhile because of benefits to other sectors, perhaps a combined approach to program evaluations will encourage sectors to combine programmatic efforts for greater outcomes.

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Applying Judgment and Common Sense

Schorr reminded the audience that numbers and data do not have meaning; it is individuals who use intelligence and judgment to understand the data who assign meaning. Webster cautioned against attaching the wrong meaning to numbers, and stressed the importance of using common sense. He added that politicians and policy makers do not necessarily need to know epidemiology to read study conclusions with a critical eye, but they can evaluate studies using what they know about causality from their experience in violence prevention. As an example, Webster noted that experienced decision makers should realize that policy changes that affect certain gun-carrying permits mostly held by individuals in suburban and rural communities will not likely affect urban violence.

In addition, Webster cautioned evaluators to be aware of other program effects that the data are not capturing, again in order to ensure that the data are being correctly interpreted. For example, an evaluation might show that drug use has declined in an area after a certain intervention. Before assuming that the intervention is effective, however, one would need to first rule out the possibility that the program has merely pushed drug use into a neighboring area. Thoughtfulness and a comprehensive understanding of the issues can help determine what to measure.

INTEGRATING EVIDENCE

Efforts are ongoing to make existing evidence for violence prevention easily and quickly accessible. Several speakers presented on the development of these efforts, which assist practitioners and policy makers who need timely advice on successful interventions for responding to violence. Patrick Tolan from the University of Virginia noted that there are multiple strategies for estimating effectiveness and limited consensus about the standard for identifying programs as evidence based. Best practice lists are much-needed tools that use set criteria to standardize the evidence and aid practitioners and policy makers in comparing programs and their characteristics. Ongoing list-making initiatives that were discussed in the context of the workshop are included in Table 3-1. Two lists that were presented in detail during the workshop, Blueprints for Healthy Youth Development and CrimeSolutions.gov, are described in detail following the table.

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TABLE 3-1 Initiatives for Integration Violence Prevention Evidence Discussed During the Workshop

Initiative	Website
Blueprints for Healthy Youth Development	http://www.blueprintsprograms.com
CrimeSolutions.gov	http://www.CrimeSolutions.gov
Evidence-based Prevention and Intervention Support Center at Penn State University (EPISCenter) (Prevention Research Center, Penn State University, Pennsylvania Commission on Crime and Delinquency, and the Pennsylvania Department of Public Welfare)	http://www.episcenter.psu.edu
Global Implementation Conference	http://globalimplementation.org/gic
National Suicide Prevention Resource Center best practices registry	http://www.sprc.org/bpr
Secretary general's database on violence against women	http://sgdatabase.unwomen.org/home.action
U.S. Preventative Services Task Force	http://www.uspreventiveservicestaskforce.org
Virtual Knowledge Centre to End Violence Against Women and Girls	http://www.endvawnow.org

Examples of Promising Evidence Integration

Blueprints for Healthy Youth Development

As described by Tolan, Blueprints for Healthy Youth Development (Blueprints) is a registry compiled by proactive search for and review of evaluations of individual prevention and treatment programs for violence, drug abuse, delinquency, mental health, educational achievement, and physical health. Blueprints staff perform literature reviews on a monthly basis and identify studies that might meet the Blueprints standards, and board members systematically review all material available about a particular program, including information directly received from program developers. Individual programs with positive effects on meaningful outcomes are then certified as promising or model programs, and the programs labeled as model are eligible for dissemination (see Table 3-2). Blueprints then produces a fact sheet that describes the program's theoretical model, program costs, net benefits, funding, materials, and extra references.

Tolan noted that the critical issue in program evaluation is determining whether the effects shown are a result of the program or of alternative

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TABLE 3-2 Blueprints' Criteria for Promising and Model Programs

Promising	Model
Study(s) meet design requirements to be considered valid	Study(s) meet design requirements to be considered valid
1 high-quality RCT or 2 QEDs	2 high-quality RCTs or 1 RCT and 1 QED
Significant positive effects	Significant positive effects
No health-compromising effects	No health-compromising effects Sustainability of 12 months or more on 1 outcome

NOTE: QED = quasi experimental design; RCT = randomized control trial.
SOURCE: Tolan, 2013.

causes, and Blueprints tries to identify as model programs those that have big effects. Ideally, model programs would be supported by a meta-analysis of at least two high-quality randomized controlled trials (RCTs), but Tolan pointed out that programs with multiple evaluation studies are difficult to find; replication is not a well-funded activity, nor is it exciting for a researcher's career to replicate another's work.

CrimeSolutions.gov

Another registry, CrimeSolutions.gov, was presented by Phelan Wyrick from the Department of Justice. This registry provides practitioners and policy makers with information on effective programs in criminal justice, juvenile justice, and crime victim services. The registry labels programs as effective, promising, or no effects and also indicates which conclusions are supported by multiple studies. The no effects category includes programs that have either null or negative effects, and it specifically identifies programs that have been proven to cause harm. Each program profile includes a program description, the measured outcomes, study methodology used in the evaluation, cost information, implementation information, and additional references. Wyrick explained that the purpose of the site is not only to provide information on specific programs in which to invest resources, but also program characteristics that could be incorporated into existing programs.

Programs that are added to the CrimeSolutions.gov list are reviewed in an eight-step process of identifying programs, screening programs, searching literature, screening evidence, selecting evidence, sending evidence through an expert review, classifying studies, and rating the evidence. The reviewers assess four main dimensions of the studies: (1) the degree to which the program is based on a well-articulated conceptual framework; (2) the ability

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of the research design to establish a causal association between treatment and outcome; (3) the degree to which the outcome evidence supports the program treatment; and (4) the degree to which the program was implemented as designed. Wyrick noted that much weight is given to reviewer confidence—if reviewers notice a significant flaw in the study that is not captured in the other criteria, they have the authority to change the rating to reflect it.

CrimeSolutions.gov targets mayors and police chiefs as users more than researchers and academics and thus tries to present the research in clear, nontechnical terms. The developers have invested in website design and accessibility, and usage of the site has continued to rise since its launch. Twenty percent of the site users are outside the United States. Wyrick mentioned that some users have expressed concern that the program descriptions are lengthy, but he emphasizes to practitioners that, if they are investing large amounts of money into a program, the information in the descriptions is valuable.

There is significant overlap between the Blueprints and CrimeSolutions.gov lists. Blueprints uses a higher standard of evidence to rate their programs and thus CrimeSolutions.gov's "effective" category includes more studies than the Blueprints model program category. All of the Blueprints model programs are also deemed effective by CrimeSolutions.gov, which provides further confirmation of the programs' effectiveness.

Both Tolan and Wyrick emphasized that the process of developing registries is ongoing and always evolving. While discussing further considerations for registry development, Tolan mentioned the need to better understand the role of cost-effectiveness studies in reviews to determine program effectiveness (see Box 3-1). The audience was queried, if reviewers encounter a study that shows that a program has a small effect size ($p < 0.05$) but the cost/benefit ratio is good because the program affects a lot of people, how is it best to balance effect size with cost-effectiveness?

Tolan also noted that much work needs to be done to develop consistent criteria for reviewing program evaluations so that practitioners and policy makers do not have to refer to multiple, similar-looking lists. Different lists have different standards of what is meant by "evidence base," and as evidence becomes more important for program development, it will be helpful to have a shared understanding of what constitutes adequate evidence.

Looking Beyond Program Data

Several speakers stressed the importance of integrating evidence beyond program evaluations to determine what works in violence prevention. Schorr cautioned the audience that if the research community decides

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BOX 3-1
Evolving Considerations for Blueprint Reviews

- Determine how to measure the sustained effect of continuous treatment/intervention programs
- Look at design and power issues between studies at different levels (school, neighborhood, community level)
- In addition to individual programs, evaluate the impacts and sustainability of program delivery systems (e.g., Communities That Care)
- Consider regression discontinuity and other "non-experimental" estimates of program effects
- Undergo independent replication
- Determine replication criteria
- Understand the role of effect sizes
- Consider cost-effectiveness of programs

SOURCE: Tolan, 2013.

that strictly defined experimental evaluation of programs is the preferred method of understanding effectiveness, they are likely to close off other ways of valuable learning.

She pointed out that current pressure to minimize risk and maximize effectiveness with public and private money often leads funders to invest primarily in programs proven successful by evaluation, which potentially limits creativity and innovation for developing new interventions that fill the gaps not covered by the proven programs. For example, the evaluations of the overall successful Nurse–Family Partnership (NFP) found that the program was not able to retain the most depressed mothers or enroll families with substance abuse and domestic violence issues. Community groups that wanted to also address these issues were discouraged from doing so because they could not easily find funding for initiatives that fell outside of the NFP's proven framework.

Collective Impact of Interventions

In addition to facilitating more innovation and exploration, many speakers agreed that looking beyond program data will illuminate not only the programs that work, but also how and why they work. Schorr and Brian Bumbarger from The Pennsylvania State University both encouraged the violence prevention community to focus their research efforts on

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understanding the effects of combined interventions, as well as identifying the successful underlying components of interventions.

Schorr suggested that the collective impact of programs is sometimes greater than the sum of its parts, and isolated program evaluations do not necessarily illustrate the true effects of programs. Bumbarger pointed out that real-world effect sizes are often different from effect sizes found in tightly controlled experimental trials, thus illustrating that implementing a proven program in a community will not necessarily bring about population-level health improvements. To understand the real effects of programs, much work is needed to develop evaluation methods that measure comprehensiveness of programs and interactions of interventions.

Schorr mentioned efforts in the United States to reduce tobacco use as an example of success that resulted from reaching beyond isolated interventions. Initially, in the 1960s, states were not finding significant effects of tobacco reduction programs because they were only measuring the effects of individual interventions. However, California and Massachusetts took a very comprehensive approach and studied the overall effects of multiple programs working in unison. They found that this combination of interventions eventually led to tripling their annual rates in the decline of tobacco consumption. Schorr mentioned that other states were much more interested in the data from California and Massachusetts than they were in the thousands of controlled trials on individual programs because they provided useful information that could not be gleaned merely from individual program evaluations.

Boothby described a program in Burundi that implements household economic-strengthening programs with positive parenting programs. Together, these interventions produce positive results that might not appear at all if the programs were delivered in an uncoordinated and isolated manner. He suggested moving to multiyear efficacy trials and developing a larger and consistent research effort that would move the field from project level evidence to knowledge across sectors.

Identifying Successful Intervention Components

A theme acknowledged by several workshop speakers was the need to go beyond determining which strategies work to understanding the underlying components that make them work. One method of uncovering successful elements of programs is the use of systematic reviews of the current research body. Workshop speaker Mark Lipsey from Vanderbilt University discussed the potential of systematic reviews to aggregate evidence from multiple studies in order to smooth out variability within the studies and summarize the full body of evidence on a particular topic. Lipsey pointed out that one study on program effectiveness is not enough to provide a

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confident basis for action, and the strength of systematic reviews usually increases with the number of studies incorporated.

Lipsey highlighted the key steps in a systematic review, beginning with the development of clear criteria for study inclusion in the review. Researchers then perform methodical searches of research literature to find studies that meet the criteria. They continue with coding and extraction of data, which they then statistically analyze.

Lipsey noted that meta-analysis is one type of systematic review method that combines the results of individual quantitative studies by standardizing effect sizes. It involves the use of statistics to find a common metric that can be used to compare studies that use differing units to measure the same outcome. These standardized effect sizes are found in a way that does not confound the magnitude of the effect with sample size or variability and thus are different from statistical significance. Meta-analysis is not merely summation of statistically significant results throughout the research body, but instead uses analysis that looks at the distribution of effects across studies.

Lipsey explained how meta-analysis allows researchers to pull together the evidence on a particular type of intervention to produce a more accurate comparison of programs. For example, an effect size distribution of studies measuring the effectiveness of cognitive behavioral therapy (CBT) programs on prevention of juvenile and adult recidivism used an odds ratio as the standard measure for comparing 58 studies. It showed a wide spectrum of effectiveness—some CBT programs were very effective, while others were not, and no difference in effectiveness was found between brand-name and homegrown CBT programs.

Lipsey suggested that researchers can use meta-analysis to determine the special ingredients of successful programs such as the characteristics associated with positive and negative effects of the CBT interventions mentioned above—the types of offenders involved, the environment of the intervention (in the community, a probation setting, a prison, etc.), the types of approaches and treatments used, or the quality of implementation. For example, this analysis found that programs focused on high-risk offenders had larger effects than those focused on lower risk offenders. High-intervention frequency, program fidelity, and interpersonal problem-solving approaches also correlated with CBT program success in this study.

One can go a step further and use comparative meta-analysis to compare the effectiveness of different types of approaches on an outcome. Lipsey mentioned that one such analysis gathered studies on the effects of CBT, behavioral, social skills, challenge, academic, and job-related interventions on recidivism rates of juvenile offenders. The analysis found the greatest effects from CBT and behavioral interventions. One can also look even more broadly to compare philosophies of interventions. For example,

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TABLE 3-3 Characteristics of Two Methods Used to Compile and Evaluate Program Data

Best Practices List	Meta-Analysis
Assesses programs	Assesses practices and approaches
Looks at programs that can be used as they are	Looks at large numbers of program studies
Takes study methodology into consideration and puts it through an account analysis	Requires quality methodology for inclusion

SOURCE: Tolan, 2013.

a meta-analysis that compiled studies on the effects of therapeutic (restorative, skill building, counseling, etc.) and control-oriented (discipline, deterrence, etc.) approaches on recidivism rates found that therapeutic interventions are far more effective.

Some of the characteristics of best practices lists and meta-analysis that were identified by Tolan are summarized in Table 3-3.

Risk and Protective Factors

Many speakers emphasized the need for more data on individual and community-level risk and protective factors. Risk factors are commonly considered to be conditions or variables associated with a lower likelihood of positive outcomes and a higher likelihood of negative or socially undesirable outcomes, while protective factors have the reverse effect, enhancing the likelihood of positive outcomes and lessening the likelihood of negative consequences from exposure to risk (Jessor et al., 1998). Campbell and Bumbarger both called for a shift from surveillance of outcomes to more surveillance of these risk and protective factors, as well as the development of long-term studies to better understand these factors and their effects. Bumbarger highlighted the program model Communities That Care, which collects local epidemiological data on risk and protective factors that predispose children to multiple poor outcomes.

Bellis explained that once risk factors are identified, programs can be designed to target risk factors and could affect a wider range of outcomes than if the program were designed only with a single outcome in mind. He highlighted two studies, one in the United Kingdom and one in the United States, which showed an increased risk of low mental well-being, severe obesity, and smoking in adulthood for those who experienced four or more adverse experiences in childhood. As these studies imply, the determination of the real impact of risk-focused interventions on well-being will require the measurement of appropriate outcomes (in this case, mental well-being, obesity, and smoking), even if a program's main focus is measuring and

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targeting risk factors and associated outcomes. Due to the widespread impact of preventative programs that address risk and protective factors, evaluating their effectiveness may require measurement of many outcomes across sectors.

Consideration of Theoretical Frameworks

Schorr suggested that in addition to identifying program components that seem to be successful, the violence prevention community should also use theoretical research to consider nonevaluated interventions and program components that might work. For example, a project on human development in Chicago neighborhoods found that the largest single predictor of crime levels in the neighborhoods studied was social cohesion and mutual trust among neighbors combined with the willingness to intervene on behalf of the common good. Currently there are no proven program interventions that address neighborhood cohesion, but Schorr suggested these are the places that need to be given more attention.

Consideration of Experiential Knowledge

Workshop speakers emphasized the need to look for evidence in places beyond traditional evaluations, studies, and analysis. As Schorr claimed, "We need a broader knowledge base, not a narrower one that considers experimental evidence as the sole proof of effectiveness." Workshop planning committee co-chair and Forum member James Mercy from the Centers for Disease Control and Prevention highlighted the knowledge among workshop participants that can be derived not from the results of their study findings, but from their experience in implementing, practicing, and researching violence prevention interventions. In addition to learning from the scientific evidence presented at the workshop, he encouraged workshop participants to also learn from the experiences of other participants and audience members.

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Key Messages Raised by Individual Speakers

- Better understanding risk and protective factors can provide evidence for developing programs on a broader range of outcomes (Bellis, Bumbarger, Campbell).
- Meaningful outcomes need to be identified when programs are developed and measured (MacMillan, Maxwell, Phillips, Tolan).
- Stakeholder communities should be engaged throughout the process to increase understanding and buy-in (Ligiero, Santos Pais).

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4

Disseminating Evidence

Several workshop speakers stressed that evidence that is generated will be useful only if it is strategically disseminated by those who are in a position to apply it to decision making. They discussed current and potential efforts to improve the exchange of evidence-based information for violence prevention between the public, policy makers, practitioners, and researchers.

DISSEMINATION TO THE PUBLIC

"The importance of investing in communications, in messaging, in decodifying what we realize is critical [is] so that those who are not experts feel . . . an irresistible agenda to support, joining hands with us in moving this process forward," said workshop speaker Marta Santos Pais, the United Nations Special Representative for Violence against Children. Forum co-chair and workshop speaker Jacquelyn Campbell from the Johns Hopkins University School of Nursing noted that community members should have access to violence prevention evidence in a format that will allow them to glean the knowledge needed to quickly develop appropriate responses to violence in their neighborhoods. This would likely involve efforts to present evidence in ways that are meaningful in a variety of communities, taking into account local languages and the cultural relevance of issues and responses.

Santos Pais pointed out that communication with key populations is especially important for engaging community leaders who have the leverage and rapport to make change. She noted that in youth violence prevention,

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the youth themselves are often the best advocates and organizers. Increased dissemination to the public does create increased demand, Santos Pais noted, and children, for example, are becoming increasingly impatient for action and are eager to see improved legislation, more resources, and better services to end violence.

Forum member and workshop speaker Michael Phillips from Shanghai Jiao Tong University School of Medicine added that increased dissemination of information is not always linked to positive outcomes in violence prevention and thus dissemination strategies should be thoughtful and well planned. He discussed the impact of media in perpetrating information on suicide methods, and gave the example of carbon monoxide poisoning becoming a widely used method of suicide in Hong Kong only after dissemination of a publication describing the method and that it is easy and painless.

DISSEMINATION TO POLICY MAKERS

Workshop speaker Daniela Ligiero from the Office of the U.S. Global AIDS Coordinator acknowledged that policy makers perform a balancing act between the pressures to act based on political considerations and the pressure to act based on what the evidence suggests. Often these considerations can be in contradiction. The violence prevention community could benefit from being mindful of this balancing act when presenting evidence to policy makers.

Forum member Rodrigo Guerrero, Mayor of Cali, Colombia, stated that efforts to inform politicians of evidence should equip them with enough information to be convincing and prepare them to act. Workshop speaker Jerry Reed from the Education Development Center suggested that, to convince politicians to take action, evidence could be coupled with personal stories from those who could be affected greatly by proposed programs and policies. Guerrero reminded the audience that politicians are very practical people and thus benefit most from evidence that is presented in a practical form, and workshop planning committee member Anthony Petrosino from WestEd added that leaders often need information as quickly as possible so that they can use it to respond to current events.

Workshop speaker Brian Bumbarger from The Pennsylvania State University emphasized that it is much easier to get information to politicians if researchers develop trust and positive relationships with the politicians from the beginning of research, rather than approaching them with the final results. His organization the Evidence-Based Prevention and Intervention Support Center (EPISCenter) is an intermediary organization that addresses this need to better connect policy makers, researchers, program developers, and practitioners. Before even beginning their research on violence

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prevention, EPISCenter staff members reach out to policy makers and other stakeholders to better understand their needs and perspectives. The goals and motivations of policy makers and researchers may not always overlap, and opening communication early in the research process will more likely facilitate better understanding among groups and a greater collaborative impact in violence prevention.

Workshop speaker Alys Willman from the World Bank noted that, particularly in low- and middle-income countries, efforts need to be made to ensure that policy makers and researchers are speaking the same language. In her experience, policy makers sometimes have assumed that violence prevention means using crime deterrents such as security cameras and fences rather than focusing on primary prevention.

DISSEMINATION TO PRACTITIONERS

Knowledge derived from research can be disseminated to practitioners in a number of ways. Workshop speaker Virginia Dolan from Maryland's Anne Arundel County Public Schools commented that it is often up to middle and upper management to provide evidence to practitioners through trainings or professional development. Educational best practices guidance, for example, is usually delivered to teachers by state departments of education in the framework of high-stakes testing.

According to workshop speaker Tammy Mann from the Campagna Center, research currently reaches practitioners mostly through an unsystematic trickle-down effect. Professional and social networks play a large role in determining the type of information that practitioners learn, and exposure to the most up-to-date evidence largely depends on whether practitioners are in the right place with the right people. Workshop speakers presented a number of suggestions for disseminating evidence to practitioners methodically and with better communication.

Using All Types of Current Communication Tools

Mann reminded the audience that younger generations of professionals find and digest information much differently than older generations. Research is still widely disseminated using traditional formats, but the violence prevention community needs to make an effort to package information in ways that can be delivered to practitioners through blogs, tweets, podcasts, and other social media. Workshop participant Ellen Schmidt from the Education Development Center echoed the need for more social media in violence prevention, and called for a better system of information exchange within the field to decrease duplication of efforts.

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Translating Research More Clearly for Practitioners

Several speakers suggested that practitioners are more likely to use information if it is presented in a manner that is easy to digest and relevant to their work. Workshop speaker Jim Bueermann from the Police Foundation suggested that barriers to effective dissemination are not lack of access or practitioner intelligence, but are related to technical language barriers and time pressures.

Throughout the workshop, speakers repeated the need for translation of lingo and jargon between sectors. Technical words and phrases that replace descriptions of entire concepts in one community are often meaningless in others, and thus do not convey the depth of information necessary to make the research useful. Bueermann mentioned several evidence-based policing and criminology projects that are addressing this problem by translating evidence reports from the scientific language to plain language, thus making the information more useful to practitioners and the community.

In addition to language barriers, practitioners often are faced with time pressures that prevent them from delving more deeply into research. Bueermann shared experiences from his work as a police chief. He observed that police do not have the time to sort through large bodies of research and thoughtfully dissect multiple studies. He challenged researchers with what he referred to as the "guacamole dip paradigm"; that is, to take one study they have completed and "reduce it to the three to five things … that you could tell me as a nonscientist at a party over the guacamole dip." Bueermann and workshop speaker Dean Fixsen from the University of North Carolina at Chapel Hill agreed that practitioners are not necessarily interested in study methodology and evaluation rigor, and Bueermann maintained that research will be used in practice only if they can be convinced to investigate further after hearing a short summary of the key points. Speaker Joan Serra Hoffman from the World Bank added that highlighting successful program elements such as the resources used or the implementation timeline will make it easier for practitioners to more quickly assess whether program components would be useful to them.

Developing Organizational Systems of Learning

Another way that useful information could reach practitioners is through organizations and partnerships that systematically connect research with practitioners. Mann recommended that organizations concentrate on developing cultures and structures that create an environment of wanting to learn and improve. She suggested that one way for agencies to accomplish this is to partner with local academic institutions to take advantage of emerging information. She also emphasized that learning organizations

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dedicated to the implementation of research-based practices for violence prevention do not need to be created from scratch. She reminded the audience that a constant search for the next best program shuts out the opportunity of working with people and organizations that are already knowledgeable and committed to preventing violence.

DISSEMINATION BY PRACTITIONERS

Dissemination practices often remain largely unidirectional, and several workshop speakers discussed the need for improved methods of communicating practitioners' experiential evidence to the wider violence prevention community. Access to information from experienced practitioners could help researchers to identify biases, confounders, or alternative conclusions of findings in their research, as well as inform the development of research questions and selection of test populations. Workshop speaker Lisbeth Schorr from the Center for the Study of Social Policy noted that "people working at the front lines understand that experimental evaluations provide essential information about what works, but so do the insights that come out of other research and practice." Workshop speaker Thom Feucht from the National Institute of Justice echoed this, saying that the violence prevention community needs to learn from the wisdom of practitioners. Fixsen noted that practice-policy feedback loops should become institutionalized components of organizations, and Schorr called for more thought on other ways of systematically collecting and disseminating experiential evidence to improve prevention programming.

Key Messages Raised by Individual Speakers

- Communicating with communities and community leaders can provide critical contextual information and provide leverage within the target population (Campbell, Santos Pais, Schorr).
- Practitioners have a wealth of knowledge from experiential evidence that should be disseminated to researchers and policy makers (Feucht, Fixsen, Schorr).
- Opening communication with policy makers early will likely facilitate better collaboration and effectiveness of violence prevention interventions (Bumbarger).
- Policy makers are pragmatic and efforts to disseminate evidence to them should be convincing and equip them to take action (Guerrero).

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5

Translating Evidence into Effective Action

As Dean Fixsen from the University of North Carolina at Chapel Hill reminded workshop participants, the goal is not building the evidence or entertaining researchers through debate and development of methodologies. The goal is to prevent violence and improve lives for the benefit of individuals and communities. Evidence-based programming is an experiment in the efforts toward this goal, and Fixsen stressed that disseminating the evidence is not enough to reach it; the evidence must be implemented. He commented on the transition toward effective implementation—an ongoing movement that began with letting information trickle down to practice; moved toward facilitating information to practice through manuals, videos, workshops, or websites; and now concentrating on making it happen through focused and purposeful implementation strategies. Speaker Brian Bumbarger from The Pennsylvania State University called for this movement from the *science of prevention* to what he called the *service of prevention*, recognizing that implementation of best practices is as important as studying best practices.

The discussions during the workshop demonstrated that there is evidence for violence prevention, reflected Forum co-chair and workshop speaker Jacquelyn Campbell from Johns Hopkins University School of Nursing. There are both systems and programs that work, and resources and databases have been created and updated with the goal of providing easy access to this evidence. However, to move the field of violence prevention forward, a greater focus is needed on the other part of the workshop's charge—that is, how to implement evidence and how to translate programs

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that have been proven to work so that they are culturally appropriate and contextually relevant.

APPLYING EVIDENCE TO PROGRAM DESIGN

Workshop speakers discussed several factors to be considered when designing evidence-based programs: theoretical frameworks, surveillance data, characteristics of target populations, risk and protective factors, and the larger context.

Theoretical Frameworks

Several speakers suggested that, to maintain clear programmatic focus and better identify intended goals and outcomes, interventions could be designed on the basis of well-supported underlying theories. Basing programs on assumptions that are not based on established theory can sometimes lead to programs that are inadequate in addressing their intended goals. For example, Forum member and workshop speaker Michael Phillips from Shanghai Jiao Tong University School of Medicine mentioned several suicide prevention training programs for mental health practitioners that are based on the presumption the practitioners can identify high-risk individuals. However, this presumption is not supported by the current body of evidence, which suggests that although high-risk groups can be identified, available tools are inadequate to determine suicide risk or predict suicidal behavior of individuals (IOM, 2002).

Phillips also stressed that, considering the dynamic contextual factors related to violence prevention, programs based on theoretical frameworks need to be flexible and able to adjust based on changes to existing models. For example, current models of suicidal behavior and prevention focus mostly on the individual and do not always capture the contextual nature of suicide, such as changes in culture, risk factors, and environmental influences. Programs based on current theories might not work in 5 years, and thus consistent monitoring and informing by theoretical adjustments can be valuable. If practitioners and planners are consistently readjusting their approaches to align with strongly supported models, they are more likely to remain focused on improving the outcomes they initially identified.

Surveillance Data

Once a program has an established focus and theoretical basis, appropriate surveillance data could inform the design of targeted interventions. Workshop speaker Mark Bellis from Liverpool John Moores University noted that surveillance data will be used differently by programs depending

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on their intended goals and outcomes. As an example, he discussed a study conducted by the Trauma and Injury Intelligence Group in the United Kingdom which found that most violent incidents in one city happened near bars. A program invested in environmental control might target the bar area with a criminal justice response, but programs that emphasize primary prevention would instead target interventions in neighborhoods of the offenders to address the underlying causes of violence.

Targeted Populations

Several speakers discussed how data can be used to determine the target populations for violence prevention interventions. Evidence on program effectiveness in different cultures, age groups, and socioeconomic groups can inform how programs for specific populations are designed. For example, Bellis explained that socioeconomic status can affect the onset of some developmental experiences, indicating that the focus age group may need to be different among populations even for the same intervention. He identified a study in the United Kingdom that found that the use of emergency services peaks at age 13 in populations of deprived females, and at age 20 for affluent females (Bellis et al., 2012). Similar differences in demand for emergency services are found between deprived and affluent elderly populations. Key populations will differ depending on the type of intervention and desired outcomes, and the evidence base can help to identify the individuals to target for more effective and efficient interventions.

Risk and Protective Factors

Workshop speakers discussed the importance of identifying risk and protective factors in communities and opportunities for interventions that address them. Bumbarger described the work of Communities That Care (CTC) as an example for determining appropriate interventions based on risk and protective factors. CTC determines these factors in a neighborhood using local epidemiological data, which are used to create community-specific profiles in which CTC compares the community risk and protective factor rates to controls. CTC then works with communities to develop a community action plan based on evidence-based programming that best focuses on decreasing the community's most prevalent risk factors and increasing the least prevalent protective factors (Hawkins et al., 2012).

Bumbarger shared a study that showed that Pennsylvania communities implementing programs using CTC's approach of addressing risk and protective factors reported lower rates of risk factors, substance abuse, and delinquency, and higher levels of protective factors. A 5-year longitudinal study found that children in CTC-supported communities had different

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developmental trajectories from children in similar Pennsylvania communities that were not using the CTC model. Children in CTC-supported communities had lower rates of delinquency, less self-reported negative peer influence, better school engagement, and better academic achievement. Bellis pointed out that this was a crime prevention initiative funded by the state crime commission, yet the largest outcome was increased academic achievement. By targeting interventions based on data on risk and protective factors rather than outcomes, communities were able to see results in areas beyond crime prevention.

Bumbarger added that this study also looked at the impact of CTC programs on the juvenile justice system. In 2010, there was a 3 percent lower rate of youth placed in delinquent correctional centers in communities that adopted the evidence-based programs recommended by CTC compared with communities that did not. Bumbarger noted that a 3 percent difference is equivalent to $3 million in Pennsylvania, an amount significant enough to catch a policy maker's eye. This study was offered as an example of research that leads to action and impact where the governor of Pennsylvania announced his decision to save $10 million by closing a 100-bed juvenile correctional facility and reinvesting that amount into evidence-based prevention programs.

The Larger Context

The larger context in which an intervention is being implemented may be considered in the intervention design. For example, is there access to a functioning health care system or criminal justice system, which are both critical components of violence prevention? These challenges are particularly relevant in low- and middle-income countries (LMICs). Workshop speaker Alys Willman elaborated on this point from her work at the World Bank. Some components of domestic violence prevention programs, such restraining orders and shelters do not exist in LMICs. In these settings, such factors illuminate how context affects considerations for program design and implementation.

IMPLEMENTING EVIDENCE-BASED PROGRAMS

In addition to using theory, prevalence data, and program and strategy effectiveness data to determine program focus and goals, program designers may use knowledge obtained from implementation research to design interventions that function well in the real world. Fixsen reiterated that successful implementation will result in socially significant outcomes—changes that people notice and feel directly in their communities. It is through implementation research that practitioners may ensure programs

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that are being carried out are contextually appropriate and culturally relevant. Speakers discussed several areas of consideration when implementing programs:

- program fidelity,
- role of practitioners and practitioner training,
- incentives for evidence-based programming,
- replacing ineffective programs,
- implementation teams, and
- improvement considerations.

Program Fidelity

Fixsen noted that many studies are carried out with the assumption that the program being evaluated followed its stated description, but the study does not actually measure the program's fidelity to this description. Fixsen and colleagues reviewed 1,200 outcome studies and found that only 18 percent of them actually assessed the independent variable to determine its fidelity to the defined intervention. The remaining 82 percent of studies purported to measure outcomes of an intervention described in their methods sections, but they more likely measured a variation of the intervention that is adapting to real-world challenges and changes (Fixsen et al., 2005). Fixsen cautioned that unless program fidelity is also measured in evaluations, there can be no certainty that the measured outcomes are the result of the intervention as defined.

Fixsen also suggested that competency, strong leadership, and effective organization are the factors that drive successful implementation and ultimately support the practitioner in direct delivery of services. He encouraged workshop participants to develop practical fidelity assessments in order to ensure that practitioners and managers are using innovations correctly and consistently to strengthen these drivers. If these drivers are strong and practitioners use innovations with fidelity, a proven program is more likely to reliably produce benefits.

Bumbarger added that the quality of implemented programs is more important than implementing a large quantity of prevention programs. The goal is not to bring evidence-based programs to as many places as possible, but to carefully choose the programs that will be the best fit and most effective in a certain context. He pointed out that dissemination is sometimes at odds with high-quality implementation—programs are more likely to be implemented with increases in dissemination of program effectiveness evidence, which makes it harder to ensure program quality and fidelity. Instead of pushing for large dissemination campaigns, he suggested that the violence prevention community focus on correctly implementing a small

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number of interventions likely to work in a certain context. Identifying tipping points at which to intervene might be more effective than saturating the market with programs.

Roles of Practitioners and Practitioner Training

Several speakers commented that there is value for organizations to select and train good practitioners when implementing programs. Understanding specific strategies that make programs successful allows implementers to focus resources on specific components and then adapt programs for their local communities. Workshop speaker Harriett MacMillan from McMaster University provided an example of such data being used to improve replications of the Nurse–Family Partnership, which provides new mothers with home visits from nurses to provide early parenting support. To test the initial model of this program, David Olds led three randomized controlled trials that found the Nurse–Family Partnership model was indeed effective in a variety of populations. The third trial, in Denver, Colorado, included another element of comparison, which looked at the difference in effectiveness of nurse visitors and paraprofessional visitors. They found that nurses were much more effective than paraprofessionals, and the program evolved to focus only on using nurse visitors rather than both types (Olds et al., 2007). Campbell suggested that nurses have been effective implementers in this model because they have flexibility in delivery of the program and a professional knowledge base from which to draw. When they enter a family's house, even though it may be the day to address nutritional adequacy or feeding practices, they also are there to address whatever problems that family is facing, such as mental and physical health and whether there is money to pay the rent.

Speaker Tammy Mann from the Campagna Center noted that some managers do not want to rigidly prescribe program methods to practitioners for fear of limiting their critical thinking. She noted that managers and direct practitioners often have a good understanding of theoretical frameworks. Implementing evidence-based programming does not mean replacing the discretion and knowledge practitioners have gained; instead, researchers and practitioners can use their judgment and knowledge together to determine how to best integrate evidence into practice and decision making.

Mann and Virginia Dolan from Anne Arundel County Public Schools both mentioned the need to provide practitioners with follow-up coaching and support after conferences and training. Mann noted that teachers often go to conferences where they are immersed in new and exciting ideas that they would like to use in their own teaching practices; however, when they return to their schools, they are faced with work demands and limited

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support and resources for implementing new ideas. Mann suggested there may be value in the networking that happens at conferences, but without direct follow-up with practitioners much of the information is lost.

Fixsen noted that fidelity of training components to the original design is imperative if the training is to lead to the use of new practices. He mentioned a study by Joyce and Showers (2002), which showed that teaching theory of educational practices together with discussion and training resulted in no use of the practices taught in the classroom. If trainers added opportunity for feedback and practice, they found that 5 percent of trainees implemented new practices in the classroom. When coaching in the classroom was also added to the training regiment, the number of teachers who then used these practices in their teaching rose to 95 percent.

Incentives for Evidence-Based Programming

Several speakers mentioned the need to make use of evidence more desirable to practitioners. Workshop speaker Jim Bueermann from the Police Foundation pointed out that often decisions of practitioners are not based on evidence, but rather situational and community-specific motivations. Dolan added that pressures to generate and apply more evidence can often seem tedious and time-consuming for practitioners who typically already have heavy workloads. She noted that teachers, for example, often make negative associations with the term "evidence." New strategies for measuring student performance, building new responses to findings, and increasing testing can be viewed as adding more work to their busy schedules and taking time away from teaching.

Leaders could add incentives and change organizational policies to encourage practitioners to apply evidence. Dolan suggested that practitioners and managers recognize and celebrate positive outcomes as an example, and others discussed using political and professional rewards to encourage evidence use. Bueermann's agency, for example, started adding questions about theories and research to interviews for competitive police positions. Because of this, interviewees started preparing for their interviews with research and literature reviews, and the dialogue in police offices started to include a broader knowledge base. In the late 1990s, Bueermann's police department reorganized around an evidence-based approach that focused on addressing risk and protective factors. They changed internal incentives to align with the new focus and conducted five randomized controlled trials to assess their work. Bueermann has called for nationally mandated reward systems that bring research to police and other practitioners to at least engage everyone into the same conversation.

Another example of an organizational effort to emphasize the importance of evidence is the Evidence Integration Initiative in the Office of

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Justice Programs (OJP) that aims to equip all employees with an appreciation of evidence. Mary Lou Leary from the Department of Justice OJP explained that the objectives of the program are to improve the quantity and quality of evidence that the OJP generates, to effectively integrate evidence into policy and program decisions, and to improve the translation of evidence so that practitioners understand its relevance and application.

Replacing Ineffective Programs

Fixsen mentioned his colleague George Sugai's rule: "For every new initiative started, two current initiatives should be stopped in order to maintain efficiency and focus." However, he added that programs cannot be terminated over night because people and communities depend on their services. He suggested that more effective interventions should be established and able to absorb clients from the old programs before the closings occur. Bumbarger noted that program implementation can be a competitive practice, and it is prudent for implementers to be sensitive about the replacement of programs and other's ideas for effective methods.

Implementation Teams

Fixsen noted that researchers disseminate a lot of information to practitioners with little guidance on how to apply it. Implementation teams can step in to provide technical assistance and work simultaneously at multiple levels of the intervention to ensure that programs are implemented with fidelity. Fixsen said that, ideally, implementation teams have at least three people with expertise in innovation, implementation, and organizational change. The teams would be sustainable and able to tolerate member turnover. Fixsen said implementation teams with the correct expertise can get 80 percent of their partner organizations to implement their programs well within 3 or 4 years. If information is merely disseminated without the work of these teams, about 14 percent of organizations succeed, taking about 17 years (Fixsen et al., 2005). He added that implementation teams also increase the likelihood the programs will be sustainable and have long-lasting effects.

Improvement Considerations

Fixsen noted that program development is an ongoing practice of self-evaluation and improvement. The state of violence prevention is much better than in the past, but still it is not enough to address the magnitude of the problem and, due to changing societal and environmental factors, interventions that are effective now might not work in a few years. The violence

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prevention community thus is cautioned not to become unconditionally committed to certain interventions, but always be looking for a better way. Organizations could use a variety of methods to determine improvement opportunities, such as rapid-cycle, plan-do-study-act problem-solving models; usability testing for new products and programs; and practice-policy communication loops. Leary discouraged researchers, practitioners, and policy makers from thinking that they have the final answer and are done. Rather, determining what works, and what works better, is an ongoing process.

IMPLEMENTING EVIDENCE-BASED PROGRAMS ACROSS COUNTRIES

Jennifer Matjasko of the Centers for Disease Control and Prevention described health as "a dynamic state of well-being characterized by a physical, mental, and social potential that satisfies the demands of a life commensurate with age, culture, and personal responsibility." According to this perspective, health by definition depends on context. She explained that when determining how to best implement violence prevention initiatives in various contexts, it is important to understand how evidence translates in different cultures and systems. She suggested that the violence prevention community leverage translational work used in areas such as HIV prevention. An understanding of how evidence applies to different contexts will lead to improved program scale-up and sustainability.

An understanding of the context-specificity of violence prevention is important because research conclusions from studies in one country cannot necessarily be applied to another country. Phillips said studies show that in China, only 37 percent of women who make serious suicide attempts have an active mental illness, but in Western countries, about 95 percent do. Strengthening mental health systems might be an effective response to suicide in Western countries, but maybe not in China. In China, pesticide use seems to be driving suicide more than poor mental health. Phillips elaborated by explaining that pesticide use causes a third of suicides globally, and research shows that suicide rates in China decrease as people move to urban areas and have less access to lethal means of suicide.

Phillips gave more examples of important differences in suicide data among countries: in Latin America, religion is a protective factor against suicide; in China, it is a risk. In western countries, the ratio of male to female suicides is 3:1; in China it is 1:1. Again, the contextual factors are important for determining programmatic focus.

Phillips noted that 84 percent of suicides happen in LMICs, yet 95 percent of suicide research is conducted in high-income countries (HICs). Similarly, workshop speaker Neil Boothby from the U.S. Agency for

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International Development and Daniela Ligiero from the Office of the U.S. Global AIDS Coordinator both mentioned the abundance of programs that have been proven effective in HICs but are not supported by any studies from LMICs, where systems and contexts are very different. Workshop speaker Catherine Ward from the University of Cape Town, South Africa, did point out that many of the challenges and solutions that exist in LMICs are similar to those in low-income areas of high-income countries, so when determining how to translate information and programs, it may be helpful to look more closely at the types of communities being researched rather than comparing entire countries. Currently there is little understanding of how evidence from one context can be applied to another and workshop participants discussed ways of developing programs for a place (especially in LMICs) when little context-specific evidence is available.

Discussions on implementing evidence-based programs across countries focused on several key areas:

- barriers to consider,
- translatable theories,
- cost-effectiveness of programs,
- cultural adaptation, and
- local research and programming.

Key messages specifically from workshop breakout group discussions on applying knowledge to effective action in LMICs are summarized in Box 5-1.

Barriers to Consider

Speakers discussed barriers to consider before beginning program implementation in an LMIC. Several speakers pointed out that certain resources and infrastructure are missing from some countries and thus cannot be relied upon to support violence prevention. Willman noted that some components of domestic violence prevention programs, such as restraining orders and shelters, do not exist in LMICs, and Campbell mentioned that some countries do not have developed health care or criminal justice systems. Workshop speaker Julie Meeks Gardner from the University of the West Indies, Open Campus, mentioned implementer's considerations of how to address space constraints, environmental issues, and deficiencies in human, material, and financial resources are important when establishing programs in LMICs. When practitioners and program developers in LMICs need to access research and informational material they often face obstacles such as high journal costs and language barriers.

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Willman also pointed out that the political structure of some countries can interfere with advances in violence prevention. For example, it might be more difficult in a country that elects leaders for 18-month terms to secure political commitment to a program that only shows effects after several years. Meeks Gardner added that other countries have policies that are not aligned with successful programs. For example, the Jamaican government's national security plan focuses on addressing gang-related problems, whereas its Peace Management Initiative focuses more on community development and initiatives to prevent gang involvement before it becomes a problem.

Translatable Theories

Several speakers discussed theories that are universal and can be applied to LMICs as a basis for violence prevention programs. For example, Ward mentioned that programs based on social learning theory work well across many different contexts. Therefore, to expand programming in a certain area, implementers could scale up existing programs based on this theory or use the theory to design new programs. Matjasko noted that the developmental tasks and needs of adolescence are also universal, despite different cultures having varying definitions and levels of recognition of adolescence. Programs across the globe can then build youth-focused programs to address the needs of adolescents using this framework.

Cost-Effectiveness of Program

Ward noted that programs are often too costly to implement in LMICs and more understanding of the true costs and benefits of violence prevention in these countries would be valuable. She noted that program advocates often point out the long-term cost-effectiveness of their programs, but this might not be a very influential consideration in countries with much lower per capita spending. For example, U.S. estimates of the cost of the Nurse–Family Partnership are about $8,000 to $9,000 per child. In 2009, the average low-income country spent about $25 per child on health. Regardless of the cost-effectiveness of the program, the initial costs are enormous and prohibitive for countries spending so little per capita on health. Furthermore, she noted that a program might be cost-effective, but if a country's department of social services is not spending any money on programs in the first place, then the department is not going to save money in the short term by implementing the program than it is currently saving by not doing anything.

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BOX 5-1
Discussions from the Workshop Exercise in Applying Knowledge into Effective Action in Low- and Middle-Income Countries

During the workshop, participants were divided into four breakout groups and asked to respond to a scenario regarding violence in Nairobi, Kenya. The breakout groups were assigned topics for discussion: evidence-based programming and decision making based on community needs; identification and engagement of key stakeholders to be involved in selecting, planning, and implementing evidence-based interventions; adaptation of evidence-based programs to local conditions and culture; and evaluation and sustainability. After the sessions, breakout participants provided their insights and thoughts from the discussions.

Forum member Colleen Scanlon from Catholic Health Initiatives provided comments on evidence-based programming and decision making based on community needs. She noted that the violence discussed in the case study could be perhaps addressed with programs focusing on education, income generation, job creation, and education for males on gender violence. Whatever the response, she noted that one component could be the creation of a coordinating network to promote and nurture partnerships with various stakeholders throughout the program. Scanlon added that in order to determine the community's needs and plan the appropriate response more data might be needed on the realities and conditions that prompted violence, the community's assets and existing resources, the relationship of the government with the community, the population subsets that could be targeted, programs in similar regions that could be replicated, and surveillance information on daily movement and active social areas.

Workshop planning committee co-chair and Forum member Katrina Baum from the Department of Justice provided comments on key stakeholders to involve in identifying the problem and planning and implementing the response. A wide range of stakeholder involvement is necessary to help identify other potential public and private partners, identify community priorities, identify other communities with similar problems, and encourage community support of the project. Baum noted that in addition to the obvious interested stakeholders it would be prudent for program developers to involve groups of people who might potentially show resistance to the project. For example, implementers could consult police who might themselves be involved in the violence, and attempt to understand and find overlap with goals of policy makers who will be instrumental to the program's

Cultural Adaptation

Many speakers pointed out that culture plays an important role in how programs affect communities. Ward noted that cultures have varying values, literacy levels, beliefs, family structures, and child-rearing traditions. She mentioned that implementers in countries with no local research

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success. The program could be implemented in a partnership with community leaders in a language that they understand, and implementers could acknowledge the expertise of stakeholders and continually ask for their advice throughout the process. Baum emphasized that the establishment of trust between implementers and other stakeholders is vital to the success of the project, and program developers might focus on spending as much time as necessary to build strong relationships with the community and other partners.

Breakout group facilitator Dina Deligiorgis from United Nations Women commented on adapting violence prevention programs to local conditions and cultures. She said that before beginning to implement the program, stakeholders might focus their efforts on analyzing the community situation and local context. It would be useful if they identify the prevalent risk factors and the cultural, religious, and institutional context, and this will help planners to identify multiple points at which to intervene as well as structural and legal barriers they might face. For example, a situational analysis might expose that alcohol in Kibera is made, distributed, and consumed in different ways than nonlocals are used to, which could potentially inform new methods of implementing the prevention program. Phillips added that some other considerations could be: ensuring that local community identifies and respects the cultural background of the program implementers; opportunities for bidirectional learning across other low- and middle-income countries that are similar to Nairobi and implementing violence prevention programs; and providing affected communities with hope that their situation can change.

Breakout group facilitator Patricia Campie from the American Institutes for Research provided comments on considerations for evaluating and sustaining the response that might be implemented as a result of the Nairobi violence described in the case study. She noted the need to first assess the validity of data that are already available and then build on currently existing data systems to find new information. Evaluators may face certain challenges when working with available data systems; however, police who are perpetrators of the crime might not report incidents or victims might not want to identify their situations for fear of retaliation. For example, Campie added that evaluators could engage the community and invest in qualitative research to comprehensively understand the program's effects. She also noted that it is important for program developers to earn the trust of the community and be clear that community members are not merely study subjects but partner creators of hope and change. Campie mentioned that a focus on sustaining the belief that change is possible, rather than merely focusing on sustaining the program, can promote for long-lasting violence prevention efforts.

on program effectiveness face the challenge of trying to maintain the right amount of fidelity to the original program while adapting it to the local culture. Ward observed that some parenting programs seem to be more successful outside of their original contexts than other types of programs. She speculated that this is because the programs were designed to be

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collaborative and flexible, working with parents to reach family goals rather than instructing them.

Local Research and Programming

Though studies take money and time, several speakers commented that LMICs could move forward with local research on violence prevention. Boothby noted that LMICs could better understand the magnitude and causes of violence with the development and use of active surveillance systems. Ward added that LMICs would benefit from knowing what risk and protective factors are prevalent in an area. She noted that countries do not have to spend resources establishing what the risk and protective factors are because this information already exists, but the countries can concentrate on doing baseline studies to determine their prevalence. Phillips cautioned that even surveillance research requires thoughtful consideration of culture. For example, monitoring suicide rates would be difficult in some Islamic countries where suicide is illegal and people resist reporting incidents.

Matjasko commented that LMICs could use more information on their best prevention delivery systems. In some countries, for example, schools are the best way to deliver prevention programs but this is not necessarily universal. Phillips added that individuals and institutions can better support programs if they are aware of the resources that are available for violence prevention, and thus developing systematic methods of performing situational analyses across various settings could be useful.

Ward added that despite limited resources, researchers can still use the best available methods to test program effectiveness in all countries. She emphasized that this is perhaps most important in LMICs because they do not have money to waste on ineffective interventions.

Value of Multisectoral Efforts

Willman from the World Bank commented that throughout the 2 days of discussion, breaking down silos and working together was a recurring theme. She noted that violence has long been a public health issue and a criminal justice issue, but it is only more recently being recognized as a development issue. Violence has important economic impacts and dimensions, both at the individual and systems levels. Intimate partner violence has massive economic dimensions—it is difficult for someone to leave an abusive relationship without somewhere to go or the income to sustain them when they get there. She also noted the role of infrastructure in violence prevention; for example, city streets wide enough for police cars to access them and parks with streetlights so activities can be monitored at night.

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Willman noted that some of the interventions that have shown the most promise for violence prevention in LMICs are ones that have a strong economic dimension, such as microcredit financing. In the beginning, violence and violence prevention were not considered as factors in microcredit programs. However, it was realized that some women participating in the programs were being battered when they came home with money. She explained that many of "the men did not understand where they [the women] were going when they were going to these community meetings and why they were coming home with money. What we have learned is that when you engage men in a positive way and they see that as family income and they see their wives as partners, they can do amazing things with that money." Willman noted that there is still a lot of work to be done in this area of microcredit programs, but it is showing promise. Other economic interventions in low- and middle-income settings, such as conditional cash transfers and youth employment, are now being designed and monitored in terms of outcomes on prevalence of violence.

Several important—but overlooked—stakeholders in violence prevention program implementation that were suggested included state health departments, policy makers and their staff, and city council members and managers in implementation of interventions.

PROVIDING HOPE

Mark Rosenberg, Forum co-chair and workshop planning committee member, stated

> We have struggled for such a long time in violence [prevention] against the notion of fatalism. It is the counter-point to the idea of hope, that violence is evil. There has always been evil in the world—you are not going to do anything about it; it has always been with us; it will always stay with us, so why even try? This notion of fatalism unfortunately is still alive and well.... But I think this [workshop] was a tremendous effort toward overcoming fatalism and understanding ways forward.

Several workshop speakers commented that implementation of evidence-based violence prevention programs can provide individuals with the hope that a horrible situation in which they find themselves can change; that their situation will be better, at an individual level and at a systemic level. Implementing interventions can have the potential to directly create change and is the critical component that links research to real community outcomes and violence reduction.

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Key Messages Raised by Individual Speakers

- Through implementation science, practitioners can ensure programs are contextually appropriate and culturally relevant (Fixsen).
- Practitioners who are implementing evidence-based programs are a key component to the overall success (Campbell, Dolan, MacMillan, Mann).
- Implementation science can move the dissemination of evidence-based information toward effective application and the ultimate goal of improved well-being and safer communities (Bumbarger, Fixsen).
- Implementing effective evidence-based programs is a process of constant evaluation and adjustment to current context and state of the knowledge base (Fixsen, Leary, Phillips).

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Part II

Papers and Commentary from Speakers

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II.1

IMPLEMENTATION AND SCALING VIOLENCE PREVENTION INTERVENTIONS

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Much of the violence prevention literature is about interventions to prevent or treat violent behavior in individuals or groups. This work is to be applauded! Interventions have advanced a long way from the declaration a few decades ago that "nothing works" (Martinson, 1974). So many interventions happen now that there are reviews of reviews and meta-analyses across studies (Lipsey and Cullen, 2007). This is good news for violence prevention and treatment globally.

The next task is to develop evidence-based approaches to implement evidence-based programs. The complexities and difficulties encountered when attempting to use programs and interventions on purpose were documented in the 1970s (Pressman and Wildavsky, 1973; Fairweather et al., 1974; Van Meter and Van Horn, 1975; Fixsen et al., 1978). As noted then (Hough, 1975) and now (Kessler and Glasgow, 2011), people cannot benefit from interventions they do not experience.

Dobson and Cook (1980) documented "Type III errors" in research where outcomes were attributed to programs that did not exist in practice. Schoenwald et al. (2011) have outlined the key factors related to assessing the presence and strength of interventions in practice. Assessments of the independent variable (Naleppa and Cagle, 2010) are important to help discriminate implementation problems from intervention problems.

The purpose of this paper is to outline some key factors related to implementation that have emerged in the past several decades.

Applied Implementation Science

Implementation is the link between science and practice. Implementation is an active process that is designed to put into practice an activity or program of known dimensions (Fixsen et al., 2005). According to this definition, implementation processes are purposeful and are described in sufficient detail such that independent observers can detect the presence and strength of the "specific set of activities" related to implementation (implementation fidelity). In addition, the activity or program being implemented

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is described in sufficient detail so that independent observers can detect its presence and strength (intervention fidelity).

Applied implementation science is evidence based and mission driven (Fixsen et al., 2013). Applied research is done to help accomplish a goal, not just to satisfy an investigator's curiosity or advance knowledge in a general way. Applied implementation science is focused on real issues that arise in the course of attempting to use evidence-based interventions in practice (Fixsen et al., 2001). Research done in support of the National Aeronautics and Space Administration space mission to land people on the moon and return them safely did not set out to investigate interesting variables; they set out to solve real problems such as heat-shield tiles falling off under the extreme temperatures encountered during re-entry. Similarly, attempts to use evidence-based interventions in practice on a socially significant scale encounter problems that require research-based implementation solutions (Nzinga et al., 2009; Glisson et al., 2010). Research related to these real problems has produced a good foundation for applied implementation science and helps accomplish the mission of using research in practice.

When thinking about implementation, the observer must be aware of two sets of activities (*intervention-level* activity and *implementation-level* activity) and two sets of outcomes (*intervention* outcomes and *implementation* outcomes).

A formula for successful uses of evidence-based programs in typical human service settings can be characterized as follows:

Effective innovations × Effective implementation × Enabling contexts
= Socially significant outcomes

The formula for success involves multiplication (for more information, see http://nirn.fpg.unc.edu). If any component is weak, then the intended outcomes will not be achieved, sustained, or used on a socially significant scale. Like a serum and a syringe, innovations are one thing and implementation is something entirely different. Doing more research on a serum will not produce a better syringe; doing more research on an innovation will not produce better implementation methods or create more supportive organizations and systems (Blase et al., 2012).

The Active Implementation Frameworks help define **WHAT** needs to be done (effective interventions), **HOW** to establish what needs to be done in practice (effective implementation), **WHO** will do the work of implementation, and **WHERE** the innovation and implementation processes will be supported and improved to accomplish socially significant outcomes in typical human service settings.

WHERE evidence-based interventions can be or need to be used has been a vexing problem. This is especially true in global health applications

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where cultures, languages, social mores, economic conditions, current service system services and functioning, and every other aspect related to human societies vary widely within and across countries. From an intervention point of view, this is especially daunting—is a different form of the intervention needed to accommodate each and every variation?

From an applied implementation point of view, the process of adjusting interventions, organizations, and systems to fit and function together is expected and a part of implementation (Aarons et al., 2012; Higgins et al., 2012; Saldana and Chamberlain, 2012). This is like a physician being overwhelmed with the infinite variation among individual human beings, each with their own DNA, physical characteristics, strengths, and weaknesses. Yet, for the application of many pharmaceuticals, the variation is accounted for by a simple dosage calculation of so many milligrams per kilogram of body weight. By stepping back a bit, implementation tools and methods have been established to sense contextual variations that matter and accommodate those infinite variations in the implementation process.

Conclusion

Having evidence-based interventions is a good start to providing effective violence prevention and intervention services. Evidence-based implementation practices are the next step toward making use of those prevention and intervention services in a full and effective manner on a socially significant scale.

II.2

THE FEDERAL ROLE IN PROMOTING EVIDENCE-BASED VIOLENCE PREVENTION PRACTICES

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The drop in crime rates over the past two decades has been accompanied by another encouraging trend: the use of social science research and other forms of evidence to design criminal justice policies and programs. The federal government, through the Office of Justice Programs (OJP) in the U.S. Department of Justice (DOJ), is playing a prominent role in driving this trend by collecting information about evidence-based violence prevention practices and making it available to justice system professionals.

The federal role in criminological research is, of course, not new. President Lyndon Johnson's Commission on Law Enforcement and Administration of Justice said in 1967 that "the greatest need is the need to know" and

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recommended the creation of federal offices to support state and local law enforcement and to generate knowledge aimed at improving public safety, the forerunners of OJP and its National Institute of Justice (NIJ) (President's Commission on Law Enforcement and Administration of Justice, 1967). Over the years, NIJ, as DOJ's primary research and evaluation agency, has improved our understanding of domestic and sexual violence, drug markets, the life course of criminals, and many other important criminal justice topics. But until recently, the impact of this research, so profound in potential, has been largely regarded as a sideline to crime fighting and violence prevention efforts in the United States.

Integrating Evidence

Curiosity about what spurred the crime decline and an immediate need to maximize resources in tight budget times have driven a self-examination among civic leaders and justice system practitioners, who are no longer content to rely on age-old approaches of doubtful merit. They want to know what works. In 2009, backed by Attorney General Eric Holder and the Obama administration, OJP began an earnest effort to make evidence central to its programmatic and policy decisions across the agency, not only in NIJ and its data collection arm, the Bureau of Justice Statistics, but also in its grant-making offices, the Bureau of Justice Assistance (BJA); the Office of Juvenile Justice and Delinquency Prevention (OJJDP); the Office for Victims of Crime (OVC); and the Office of Sex Offender Sentencing, Monitoring, Apprehending, Registering, and Tracking (SMART).

The Evidence Integration Initiative, or E2I as it is familiarly known, has three fundamental goals: (1) to improve both the quantity and quality of evidence generated by OJP, (2) to integrate that evidence into program and policy decisions, and (3) to improve the translation of evidence into practice. Its primary purpose is to help the field understand what has been shown to work, determining effectiveness by the scientific principles undergirding the approaches and by credible evaluation techniques. A cornerstone of the E2I is an online repository of evidence-based programs called CrimeSolutions.gov.

CrimeSolutions.gov is designed to be a single source of information for practitioners and policy makers about effective, promising, and ineffective programs in criminal and juvenile justice and crime victim services, essentially spanning the range of OJP activities. CrimeSolutions.gov is meant to serve mayors, law enforcement executives, judges, prosecutors, state criminal justice planners, and others who administer justice programs and decide how to allocate resources in their communities, states, or tribes. Currently, the site contains more than 250 program profiles, with comprehensive descriptive information and evaluation outcomes for each one.

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A key feature is its evidence rating system, which places each program in one of three categories—"effective," "promising," or showing "no effects"—based on an eight-step review and rating process. Included in the "effective" category are therapeutic prevention-centered approaches such as functional family therapy, a program for high-risk youth that concentrates on removing risk factors and increasing protective factors through flexibly structured and culturally sensitive clinical sessions, and multisystemic therapy, which involves the family and treats adolescents in the environments that foster problem behaviors. On CrimeSolutions.gov, users will find programs like these and other violence prevention and reduction programs that have been shown to work or that have potential and, just as important, programs that have not demonstrated effectiveness.

In developing CrimeSolutions.gov, OJP made it a priority to strike an appropriate balance between practical utility and social science rigor. On the one hand, OJP aimed to increase access to evidence of program effectiveness for a wide range of practitioners and policy makers so that they may be better informed in their decision making. On the other hand, the many practical areas within criminal justice, juvenile justice, and crime victim services lacked a substantial body of evidence based on the most rigorous forms of social science program evaluation. CrimeSolutions.gov adheres to conventions around standards for causal evidence in that only randomized experimental designs and quasi-experimental designs are accepted. However, the inclusion of a "promising" category allows CrimeSolutions.gov to make accessible a wide range of evidence that might otherwise be overlooked due to noted limitations in the original study methods. This allows a wider range of practitioners to benefit from social science evidence as they face difficult challenges and decisions in the work they do every day.

The inclusion of a "no effects" category was carefully considered and debated during the development of CrimeSolutions.gov. There are inherent risks to stating that something does not achieve its intended outcomes. However, it was through communication with intended users—justice practitioners and policy makers—that OJP resolved to include this category. Those groups emphasized that it was important for them to have a credible source for identifying ineffective programs because some of these programs remain popular in spite of the evidence. CrimeSolutions.gov uses the "no effects" label to apply to programs that have not achieved their intended outcomes and those programs that have actually produced negative effects. The online profiles for programs that have produced negative effects are clearly marked with statements about those effects. From an evidence standpoint, the same high standards of social science evidence that apply to "effective" programs are applied to "no effects" programs—the only difference is the direction of the observed effect.

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OJP has been very pleased with the response and reaction to CrimeSolutions.gov from the field. There has been significant growth in use of the website since the launch in June 2011. The launch of the site was recognized by The Crime Report as 1 of the 10 most significant news stories in criminal justice in 2011. In early 2013, the website averaged more than 60,000 visitors per month. OJP continues to work to improve CrimeSolutions.gov and to seek input from users.

Preventing and Treating Violence Among Youth

CrimeSolutions.gov exemplifies the approach to integrating evidence into practice embodied in E2I. Individual programs in each OJP program office also reinforce these evidence-based principles. A high priority of OJP, DOJ, and the Obama administration is preventing youth violence, an issue the President has discussed against the backdrop of the current debate on gun violence. As national rates of crime and violence remain at historically low levels, some communities are nevertheless experiencing higher levels of violence, much of it committed by and against young people.

Under an initiative called the National Forum on Youth Violence Prevention led by the White House, federal agencies—including DOJ—and 10 cities have formed a network to develop strategies aimed at sustainably reducing youth and gang violence. OJP plays a principal role in facilitating the exchange of information among the sites and in organizing meetings to brainstorm and share ideas. The National Forum operates on three basic tenets: multidisciplinary partnerships; strategies informed by data and research; and balanced approaches that emphasize prevention, intervention, enforcement, and re-entry.

The National Forum encourages the adoption of evidence-based programs such as CureViolence (formerly CeaseFire), which employs a public health model for violence prevention. CureViolence focuses attention on the small group of high-risk offenders likely to be involved in violent crime and simultaneously works through public education and community mobilization to change behavioral norms. Another approach to violence prevention that has been tried with great success is the focused deterrence model, pioneered in Boston, Massachusetts, to tackle gun markets and in High Point, North Carolina, to take down drug markets. These programs used what is referred to as the "pulling levers" approach, a carrot-and-stick tactic that leverages the threat of severe consequences to prevent illegal activity while extending the offer of support to those willing to reform their behavior. OJP's OJJDP funds several projects that build on these techniques through its Community-Based Violence Prevention Initiative.

Violence prevention programs are most effective when intervention begins early, particularly for children who live in violent situations or are

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otherwise exposed to violence. Sixty percent of children in the United States are exposed to some form of violence or abuse, either directly as victims or indirectly as witnesses or by being nearby when it is committed (Finkelhor et al., 2009). Research has found that this exposure can lead to a host of problems, including future criminal behavior. But we also know that children have an extraordinary capacity for recovery and resilience. Programs constructed on a firm evidence-based foundation, such as those using multisystemic therapeutic approaches, can blunt the impact of violence in a child's life. It also is worth remarking that most youth who commit serious offenses will greatly reduce their offending over time, so interventions that are based solely on enforcement and confinement and that do not provide for rehabilitation can be limited in their effectiveness, as well as costly in both human and economic terms (Mulvey, 2011).

In October 2010, the Attorney General launched an initiative called Defending Childhood, for which OJP—and its OJJDP in particular—is the lead component. Defending Childhood has three goals: to prevent children's exposure to violence, to mitigate the negative effects experienced by those who are exposed, and to develop knowledge about and raise awareness of the issue. In addition to funding demonstration programs in eight cities, OJP is supporting research projects to improve our understanding of the causes and consequences of exposure to violence. Moreover, a national task force appointed by the Attorney General produced a report outlining 56 recommendations for action to be taken by federal, state, and local governments, as well as researchers and community organizations. Among the recommendations are several designed to inculcate evidence in practice, including the incorporation of evidence-based, trauma-informed principles in federal grants; continued support of a data collection infrastructure to monitor trends in children exposed to violence; and education and training to help child-serving professionals screen and assess children exposed to violence.

Changing Policy

Preventing violence and promoting public safety are also advanced through "back end" strategies that address the risks, costs, and needs posed by those returning to society after being incarcerated. Legislators, government executives, and justice system leaders in many states have begun to turn away from costly prison-based activities and toward practices designed to reduce crime, violence, and recidivism. OJP, primarily through its BJA, is supporting state and local efforts to reduce the incidence of reoffending. Along with the Pew Center on the States, BJA funded a study by the Council of State Governments that found states are realizing success in lowering recidivism by focusing on science-based principles in managing

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the corrections population, for example, by focusing on those most likely to offend and using risk instruments to guide their work. Authorities in Ohio, for instance, were able to reduce recidivism 11 percent over 3 years by using validated risk assessment instruments to target treatment and supervision to high-risk individuals. Rates in Kansas dropped 15 percent after officials placed a heightened emphasis on postrelease supervision, among other services. Under the authority of the *Second Chance Act*, BJA is funding additional states to experiment with these strategies.

Through an initiative called Justice Reinvestment, OJP—in partnership with the Council of State Governments Justice Center, the Pew Center on the States, and the Urban Institute—provides resources to states and counties to help them determine, based on crime data, how to reallocate resources to reduce recidivism and save public dollars. These approaches have been tied to success in states both red and blue. To take one example, the Kentucky General Assembly enacted legislation, based on a Justice Reinvestment analysis, that reserves prison beds for the most serious offenders and refocuses resources on community supervision and evidence-based programs. The state is projected to reduce its prison population by more than 3,000 inmates over the next 10 years and save some $422 million as a result of the new law.

Helping the formerly incarcerated stay crime free is a high priority of the Attorney General. He chairs a Federal Interagency Reentry Council, created to coordinate federal resources and advance federal policy to bolster state and local re-entry efforts. The heads of 20 federal agencies, including several cabinet-level officials, participate. Since 2009, OJP has made more than 400 awards totaling more than $250 million under the *Second Chance Act* to support adult and juvenile re-entry programs.

A common element of re-entry, justice reinvestment, and recidivism reduction activities is an emphasis on the role of community corrections programs, particularly probation and parole. Rather than viewing it simply as an intermediate or alternative stage of punishment, practitioners and policy makers increasingly see community supervision as an opportunity for reform and accountability. Perhaps the most well-known example is the Honest Opportunity Probation with Enforcement (HOPE) program, begun by Steven Alm, a Circuit Court judge in Honolulu. The HOPE model applies immediate, predictable, and proportionate sanctions for probation violators. Research has shown remarkable success rates among participants. An NIJ evaluation found that the new arrest rate of HOPE participants was less than half that of other probationers (Hawken and Kleiman, 2009). HOPE is now considered by many to be a model of the benefits of swift and certain—and not necessarily severe—punishment. OJP's BJA and NIJ are currently testing the approach through a multisite demonstration project

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that will include randomized controlled trials (RCTs) to measure its effectiveness in other jurisdictions.

Moving Ahead

OJP has instituted a broad strategic approach for integrating evidence in its programmatic and policy-making activities. Its efforts have received support from both Attorney General Holder, who has used his position to call for evidence-based practices in criminal justice and has appointed a Science Advisory Board to guide science into OJP's programs, and President Barack Obama, who with the approval of Congress has set aside 2 percent of OJP's budget for research, statistical, and evaluation activities. Under their leadership, evidence now occupies a central position in federal criminal justice planning. The vision of President Johnson's Crime Commission—of a justice system informed by knowledge—is coming into clearer focus.

II.3

EVIDENCE FOR GLOBAL VIOLENCE PREVENTION DURING ADOLESCENCE AND EMERGING ADULTHOOD[1]

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> Health is a dynamic state of well-being characterized by a physical, mental, and social potential, which satisfies the demands of a life commensurate with age, culture, and personal responsibility.
>
> —Bircher, 2005

Adolescence is generally a healthy period of the life course characterized by relatively low morbidity and mortality rates. Adolescence is also a developmental phase characterized by rapid physical, social, emotional, and developmental changes and growth. As a result, this developmental phase represents a pivotal time in shaping behavioral trajectories by either supporting positive ones or redirecting negative ones. In our efforts to facilitate healthy development for adolescents, it is essential to meet the particular developmental needs of individuals at this stage of the life

[1] The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

[2] The authors wish to thank Linda Dahlberg, Greta Massetti, and Alana Vivolo-Kantor for their valuable feedback and input.

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course. Adolescent involvement with violence disrupts the course of healthy development for many adolescents worldwide. Violence is defined as "the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment, or deprivation" (Krug et al., 2002, p. 4). Gore et al. (2011) explored the global burden of disease in those between the ages of 10 and 24. They found that violence ranks as the fifth leading cause of morbidity for youth in that age range as measured by disability-adjusted life years. Thus, the primary prevention of youth violence (i.e., preventing the initial occurrence of violence) is critical in meeting the development needs of adolescence and setting individuals on positive behavioral trajectories during this stage of the life course. In this paper, we identify the universal developmental tasks and needs that characterize adaptive and prosocial adolescent development, and describe the evidence supporting youth violence primary prevention programs that address these needs and offer promising options for global youth violence prevention. The universal developmental tasks and needs are consistent principles that transcend global and cultural contexts. Effective global youth violence prevention efforts may vary, but it is critical that they address these universal developmental tasks and needs.

For the purposes of this paper, we are defining adolescence and emerging adulthood as individuals between ages 10 and 24. There are noteworthy cultural variations in the extent to which adolescence is recognized as a distinct stage in the life course. Most cultures differentiate between childhood and adulthood with a period of preparation for adult roles and responsibilities. Despite these variations, the developmental tasks and needs of adolescence are universal. A list of developmental tasks is included in Table II-1. All of these tasks are necessary precursors for developing into a positive and productive (i.e., healthy) adult, regardless of culture or context. Also, a list of developmental needs is included in Table II-2, and these needs must be met to successfully accomplish the universal developmental tasks of adolescence.

In terms of opportunities to meet these developmental needs, the social ecological model locates where there may be resources and/or deficits for adolescents. The ecological framework specifies that an individual operates within family, school, and community contexts. Yet, that individual is not just acted *upon* by influences in those contexts; the various attributes and needs that the individual expresses interact with the forces exerted by each level of the social ecology. As to these other levels of the social ecology, the family/relational, school, community, and societal contexts either fulfill the adolescents' developmental needs or they create deficits in meeting those needs. Because the social ecological context of adolescence is critical in pinpointing opportunities for meeting the developmental needs of adolescence,

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TABLE II-1 The Universal Developmental Tasks of Adolescence

Developmental Tasks	Definition
Achieving emotional autonomy	The skills to deal with and handle emotions without having to heavily rely on others to process emotions
Achieving behavioral autonomy	The skills to act without having to heavily rely on others to take action
Understanding one's emerging sexuality	The ability to recognize, process, and manage one's emerging sexuality during a period when hormonal changes occur
Acquiring the interpersonal skills for dealing with romantic relationships	The skills to form healthy intimate relationships with a romantic partner which will aid in mate selection and the transition to adult intimate relationships and marriage
Resolving identity issues	The identity exploration is aided by the ability to think abstractly about who you are and who you would like to be and involves reflection about one's values in different domains of life
Acquiring education and other experiences needed for adult work	Acquiring educational and occupational experiences will aid in the transition to an independence during adulthood

SOURCE: Havighurst, 1953.

the framework has also been used to explore opportunities for preventing violence at this stage of the life course. Programs designed to prevent youth violence are often described according to the social ecological model. Below, we summarize the evidence base based a slight variation of the model.

Evidence Base for Violence Prevention During Adolescence and Emerging Adulthood

For the purposes of this paper, we will summarize the evidence base for youth violence prevention and identify the universal developmental needs that are met by various programs and strategies. We identify the various types and broad categories of prevention programs that have demonstrated evidence of effectiveness, and then provide one specific example of an effective program at each level of the social ecology. We use the social ecological model as a general guide in classifying the evidence base, but expand it to provide a more cohesive grouping of programs that have

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TABLE II-2 The Universal Developmental Needs of Adolescence

Developmental Needs	Links to Developmental Tasks
Positive social interaction with adults and peers	Positive social interaction can be a sounding board for identity issues, encourage a developmentally appropriate level of autonomy, and the development of prosocial interpersonal skills
Structure and clear limits	While autonomy is an important task of adolescence, the need for structure and clear limits is constant, making it important that adolescents' families and schools are structured with clear limits on what is acceptable and unacceptable behavior
Opportunities for self-definition within communities	Communities are important contexts for the identity exploration process making it critical that there be adequate community resources to aid in the process
Meaningful participation within schools and families	In order to build autonomy and interpersonal skills, adolescents must have opportunities to contribute to their households and schools in meaningful ways
Competence and achievement	Competence and achievement in multiple domains (e.g., education, sports) aids in identity exploration, acquiring education, and other experiences needed for adult work
Creative expression and physical activity	The need for outlets for creativity and physical expression aids in the identity exploration process and helps adolescents to understand what their values are

SOURCE: Scales, 1991.

demonstrated effectiveness for youth violence prevention. The groupings include (1) school-based programs, (2) parenting and family approaches, (3) therapeutic approaches for high-risk youth, (4) mentoring and other relationship-building strategies, and (5) community-level strategies. The evidence base includes programs that are implemented during the period of adolescence and emerging adulthood. It also includes programs implemented during other phases of the life course that have demonstrated impacts on youth violence-related outcomes. Youth violence includes acts of violence perpetrated by youth between the ages of 10 and 24 and excludes sexual violence, teen dating violence, intimate partner violence, and suicide.

Before we explore the evidence base for youth violence prevention, we point out several important considerations. First, the evidence is based primarily on rigorous evaluations conducted in the United States or other high-resource, primarily English-speaking countries typically delivering the programs within existing infrastructures. In the United States, this means working in both the public and the private sectors with the various service

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providers and systems that interface with youth and their families during childhood, adolescence, and early adulthood. The systems and service providers are different in developing countries. Thus, keeping these differences in context in mind is important when considering whether and how to implement evidence-based programs outside of high-resource countries, and research is considering how to best adapt evidence-based programs for use in varying contexts (Kumpfer et al., 2012). Second, we will summarize some general approaches that have been shown to be effective in reducing violent behaviors among adolescents, but it is important to bear in mind that there is significant variation within each general category. That is, for the approaches mentioned at each level of the social ecology, there are programs within each class that are not effective, or that simply have not been evaluated. We encourage readers to consult registries such as *Blueprints for Violence Prevention* of the Center for the Study and Prevention of Violence at the University of Colorado at Boulder to explore the specific programs that have demonstrated effectiveness in reducing youth violence-related outcomes. In addition, systematic reviews of youth violence prevention programs and approaches offer useful resources in summarizing the evidence base (Fagan and Catalano, 2012; Matjasko et al., 2012).

School-Based Approaches

School-based programs include a range of approaches that are implemented within the school setting. Generally, they are aimed at reducing student misbehavior, improving teacher management of student behavior, and improving school climate. Many evidence-based school programs have shown moderate to strong effects on youth violence-related outcomes (Matjasko et al., 2012). These include conduct problem prevention programs implemented in elementary schools, drug use prevention programs, conflict resolution programs, social and emotional learning programs, achievement mentoring, early childhood education, and multitiered school climate improvement programs. The developmental needs addressed in these categories include (1) positive social interactions with adults and peers, (2) structure and clear limits provided by teachers so that classrooms are more manageable, (3) opportunities for meaningful participation within these schools, and (4) facilitation of adolescent competence and achievement within the school environment.

One example of an evidence-based school program is Life Skills Training (LST). LST is implemented within the school setting and aims to address the major risk factors that are associated with substance use, delinquency, and violence. The program addresses multiple risk factors and teaches the personal and social skills necessary for youth to successfully navigate the developmental tasks of adolescence. LST provides educational materials

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about the major life transitions of adolescence, as well as opportunities to practice the social skills that are taught in the curriculum. The program also uses culturally sensitive and developmentally appropriate content and has demonstrated significant impacts on reducing youth violence and delinquency-related outcomes (Botvin et al., 2006). The program is now undergoing global implementation.

Parenting and Family Approaches

Programs and strategies at this level of the social ecological model include family-based interventions and parenting skills programs. These approaches generally aim to improve functional (i.e., healthy) family processes and improve parenting skills. Across systematic reviews and meta-analyses, family/relational approaches show moderate effects on youth violence prevention (Matjasko et al., 2012). Specific evidence-based approaches include family therapeutic approaches and parenting skills training during childhood and adolescence. They also include various forms of cognitive behavioral therapy (CBT) and multilevel programs that include individual therapeutic approaches focused on changing adolescent maladaptive behavior. Generalizing from these effective family/relational-level treatment approaches, the developmental needs addressed in these categories include

- encouraging positive interaction with adults and peers by changing relational processes so that they are healthy and adaptive;
- providing structure and clear limits for the adolescents;
- allowing adolescents to engage in meaningful ways with their families by fostering more functional relational processes; and
- establishing relationships with prosocial adult mentors in the communities who may introduce adolescents to opportunities for self-definition within a community.

Brief Strategic Family Therapy (BSFT) offers one example of an evidence-based parenting and family strategy. BSFT is a short-term, problem-focused intervention with an emphasis on modifying maladaptive patterns of interactions. Therapy is based on the assumption that each family has unique characteristics that emerge when family members interact, and that this family "system" influences all members of the family, thus the family is viewed as a whole organism. BSFT works to transform any maladaptive interactional patterns into more functional ones and has been found to reduce symptoms of conduct disorder and aggression (Szapocznik and Williams, 2000).

Additionally, one example of a multilevel parenting and family approach that also includes individual therapeutic approaches is multisystemic

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therapy (MST), which addresses the multiple factors known to be related to delinquency across the key settings in which youth lives unfold. Working closely with parents and families, MST strives to promote behavior change in each youth's natural environment, using the strengths of each system (e.g., family, peers, school, neighborhood) to facilitate change. One of the major goals of MST is to empower youth to cope with family, peer, school, and neighborhood problems. This program has been found to reduce delinquency and recidivism in rigorous evaluation trials (Henggeler et al., 1998).

Therapeutic Approaches for High-Risk Youth

Therapeutic approaches for high-risk youth share the general goal of reducing maladaptive behaviors—like aggression and violence—and promoting prosocial behavior. Specific evidence-based approaches include CBT and social skills training with high-risk youth. Many approaches also include parents and families within treatment, and have been found to have moderate effects on reducing youth violence (Matjasko et al., 2012). In terms of the developmental needs addressed by individual approaches, they include (1) encouraging positive interaction with adults and peers by reducing maladaptive behaviors, (2) promoting healthy physical activity and creative expression (particularly with CBT), and (3) increased competence and meaningful participation in families and schools.

One example of an evidence-based cognitive behavioral therapy program that also includes a family component is Trauma-Focused Cognitive Behavioral Therapy (TF-CBT). TF-CBT aims to alleviate symptoms of stress by teaching participants the skills necessary to process thoughts and feelings from a traumatic event in a functional manner. The program is composed of individual sessions with children/adolescents and their therapists. It also includes a family component that teaches parents the skills necessary to better support their children and several parent–child sessions with the therapist. In a rigorous evaluation of the program, TF-CBT was found to significantly reduce child behavior problems (Cohen et al., 2000).

Mentoring and Relationship-Building Strategies

Mentoring and relationship-building strategies aim to foster prosocial relationships with adults and peers. They include structured mentoring strategies, through which adults from the community are paired with adolescents. Focused on achievement or social activities, the pair meets for a specified number of hours and the adult serves as a positive role model for the adolescent. Approaches in this category also include strategies that connect youth with prosocial peers of the same age or slightly older ones who can also serve as positive influences for adolescents. Programs in this

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category have demonstrated moderate impacts on reducing violent behaviors (Matjasko et al., 2012).

One example of an evidence-based mentoring program is Big Brothers/Big Sisters of America (BB/BS), a program that matches young people with an adult volunteer. The volunteer provides support and serves as a positive role model for youth. The volunteer makes a 1-year commitment to meeting with the youth an average of 3 to 5 hours per week and engaging in social and cultural activities within the community. BB/BS has demonstrated significant impacts on reducing violent behavior among youth (Tierney et al., 1995).

Community- and Societal-Level Approaches

Community and societal interventions include strategies at the local, state, and national levels that aim to improve community conditions or affect social change or norms. This area of research, as it applies to youth violence prevention, is in its early stages with fewer rigorously tested interventions. Because of this, it is important to note that the rigor of the evidence base is different than for the other levels of the social ecology. Still, several approaches that have been evaluated for their effects on youth violence have yet to be replicated, thus we can discuss these approaches as promising. They include policies limiting access to alcohol; establishing business improvement districts; manipulating the built environment with Crime Prevention Through Environmental Design strategies; and using prevention planning operating systems (e.g., Communities That Care). The developmental needs addressed at this level are relatively few compared to the strategies at other levels of the social ecology. The appeal is that strategies at this level have the capacity to impact a larger number of individuals. The developmental needs addressed include (1) the provision of more space for physical activity through the built environment approaches, which often involve the development of parks and green space with the aim of bringing community members outside, increasing physical activity, and possibly even encouraging positive social interaction with adults and peers in the community; and (2) increased chances to find opportunities for self-definition within communities because of improved community conditions.

One example of a promising strategy is Business Improvement Districts (BIDs). BIDs are grassroots, self-organizing public–private initiatives that provide economic development opportunities within communities. Communities that have implemented BIDs experienced significant reductions in violent crime. Research has found that how BIDs allocate their resources matter. In particular, BIDs that focus resources on private security and sanitation experience the largest share of the reduction in homicides (MacDonald et al., 2010).

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Gaps and Future Directions in Building an Evidence Base for Global Youth Violence Prevention

Even after 25 years (and more) of assessing the effectiveness of programs at all levels of the social ecology on youth violence prevention, many gaps and unanswered questions remain. First, it is important to point out that most of the evidence is based on research on youth up to age 18. We know much less about the effectiveness of interventions during emerging adulthood. Second, there are significant questions in the field about the necessity and effectiveness of cultural adaptations to evidence-based interventions. Certainly, language adaptations are necessary, and ongoing work seeks to clarify whether cultural adaptations improve the effectiveness of interventions. Third, given that most of this work has occurred in the United States or other high-income countries, it is difficult to know the extent to which this evidence translates into countries with fewer resources that have key differences in infrastructure. One of the key questions here is what prevention delivery systems are available in other countries. Much of the prevention research has focused on school-based programs because they are one of the most efficient ways to reach youth. The adaptation and translational work in other areas, such as HIV prevention, need to be leveraged to understand how evidence-based interventions can be adapted and disseminated in other contexts. For example, researchers in the HIV field have used the concepts of accommodation, incorporation, and adaptation when adapting evidence-based interventions within a global context (Copenhaver et al., 2011). The process of accommodation accounts for the differences in communication styles. Incorporation involves the integration of community practices and customs into the evidence-based intervention. Adaptation involves the idea that the intervention should promote adjustment to these community norms. Finally, the field of implementation science on youth violence prevention is burgeoning (Fagan et al., 2008; Wandersman et al., 2008; Fixsen et al., 2009). We now have a host of programs that we know work with specific populations and under specific conditions. How do we effectively bring these programs to scale, and how do we sustain these efforts within communities?

Summary and Conclusions

In conclusion, youth violence prevention programs should meet the universal developmental needs that are unique to adolescents and emerging adults. We highlighted ways in which individual needs vary and how families, adults, peers, schools, and communities can be supported to meet those needs. We also have a solid evidence base at the individual, relational, and school levels about effective ways to meet those needs. Yet, we need

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to know more about what works at the community and societal levels. We also need to understand how evidence-based youth violence programs can be implemented and evaluated in other countries with varied resources and delivery systems. Related to this, we need to rigorously evaluate these adaptations to make sure they are working as intended within diverse contexts so that adolescents and emerging adults worldwide are healthy and fulfilling their potential.

II.4

CAN INTERVENTIONS REDUCE RECIDIVISM AND REVICTIMIZATION FOLLOWING ADULT INTIMATE PARTNER VIOLENCE INCIDENTS?[3]

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Introduction

Intimate partner violence (IPV) is a complex social problem that can negatively influence the lives of both females and males throughout most of their lifespan.[4] It is found in variable degrees in both developed and developing nations, in poor and rich milieus, and married and unmarried couples (Garcia-Moreno et al., 2005). Although committed by both men and women against their intimate partners, this form of violence more often harms females, particularly those who are young (Sarkar, 2008) or have constrained resources (Adams et al., 2012). Females experiencing IPV report higher levels of depression than females in the general population, poorer mental and social functioning, and more frequent and adverse health issues (Bonomi et al., 2006, 2007). In addition, more so than any other type of crime, this form of violence poses unique challenges for public, private, and voluntary-sector agencies because the victim and offender are linked

[3] We thank the workshop organizers and their sponsors for inviting us to present our research. Without the leadership and support of the National Institute of Justice, the Centers for Disease Control and Prevention, and the United Kingdom's Home Office, as well as the support from several UK and U.S. foundations, most of the research we summarize in this report, including our own, would not exist.

[4] The term Intimate Partner Violence describes physical, sexual, or psychological harm by a current or former partner or spouse. See http://www.cdc.gov/violenceprevention/intimatepartnerviolence/definitions.html (accessed October 10, 2013).

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through their shared intimacy, material resources, and legal, social, and familial relationships. For structured interventions to reduce this form of violence, pundits have argued for interventions that can address a range of issues that contribute to IPV, targeting not only those factors aligned with the offenders, but also the victims (e.g., Pence and Shepard, 1999; National Center for Injury Prevention Control, 2008). The purpose of this paper is to take stock of what we know now about interventions that may work to reduce repeat intimate partner violence. While there is a wide breadth of efforts to address IPV, particularly within Western developed countries, the scientific community is only now beginning to understand the limits and benefits of these efforts.

We structure this paper into two sections. To provide context, the first section describes several recent trends and patterns of IPV in the United States and the United Kingdom. The second section provides a synthesis of research that documents the impact that IPV-focused interventions have had on reducing repeat IPV. As we document throughout this paper, despite several decades of research activity on this topic, it is far from clear how to purposely reduce IPV recidivism and revictimization. Some early evidence produced by both quasi- and randomized experiments suggested that the rate of recidivism is lowered by both informal and formal interventions that produce consequences. However, more recent evidence produced by rigorous systematic reviews of other forms of interventions have suggested that these benefits are not as widespread as many had hoped.

What Are the Recent Trends and Patterns of IPV?

Figure II-1 displays 18 years of IPV self-reported victimization rates for the United States and the United Kingdom.[5] As Figure II-1 illustrates, IPV rates are trending down in both countries. What we find particularly fascinating about this figure is that the two countries parallel each other both in terms of absolute rates of nonlethal violence and their downward trends. By 2010, the rates in both countries are less than four incidents per 1,000 residents. Both of these rates are also nearly 60 percent lower than in 1993.

Figure II-2 displays the two countries' IPV homicide counts by the victim's sex. Similar to trends for nonlethal violence, the frequency of IPV

[5] Data underlying Figures II-1, II-2, and II-3 were collected by national household victimization surveys (the National Crime Victimization Survey in the United States and the British Crime Survey in the United Kingdom) or from homicide incidents reported to the police that are annually aggregated by national statistical agencies. The primary summary data analyses were produced by staff at the U.S. Bureau of Justice Statistics and the United Kingdom Home Office. We extracted and combined the summary data from their published reports, from published data collections, and from more extensive tables produced by the staff for this report.

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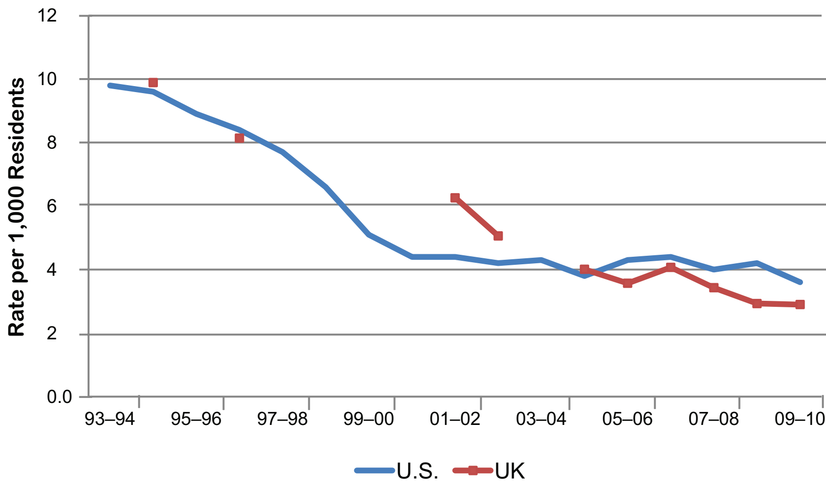

FIGURE II-1 U.S. and UK intimate partner violence victimization rates, 1993-2010.
SOURCES: Christopher D. Maxwell and Amanda L. Robinson.

homicide incidents are also decreasing over time, particularly among U.S. males. Recently, researchers have reported or shown that IPV homicide rates are also decreasing in Canada and Australia (Dawson et al., 2009; Powers and Kaukinen, 2012; Sinha, 2012).

Figure II-3 displays IPV victimization rates by age group for the United States.[6] As depicted in this figure, in the early 1990s the graph displays a fairly typical age by crime distribution curve (i.e., much higher rates among younger people that decline perceptively by age). Now, however, 15 to nearly 20 years later, the value of using age in explaining aggregate crime rates has dissipated by a factor of 3 or by about 75 percent. Accordingly, the decline in overall rates of IPV seems largely due to a drop in violence among those ages 18 to 35. The annual rates among older people have also have dropped, but not to the same degree as among younger adults.

At this point, it is important to recall what is known about the typical patterns of criminal offending over time. Criminological research has established that an individual's rate of IPV—indeed any type of violent offending—decreases with the passage of time (Fagan, 1989; Feld and Straus, 1989; Quigley and Leonard, 1996; Whitaker et al., 2010). This has come to be known as *natural desistance*. This claim is supported by many IPV-focused studies that document a desistance rate from violence that is larger

[6] Of course it is both possible and desirable to produce similar analyses using British Crime Survey data from the United Kingdom, which we are planning for a future publication.

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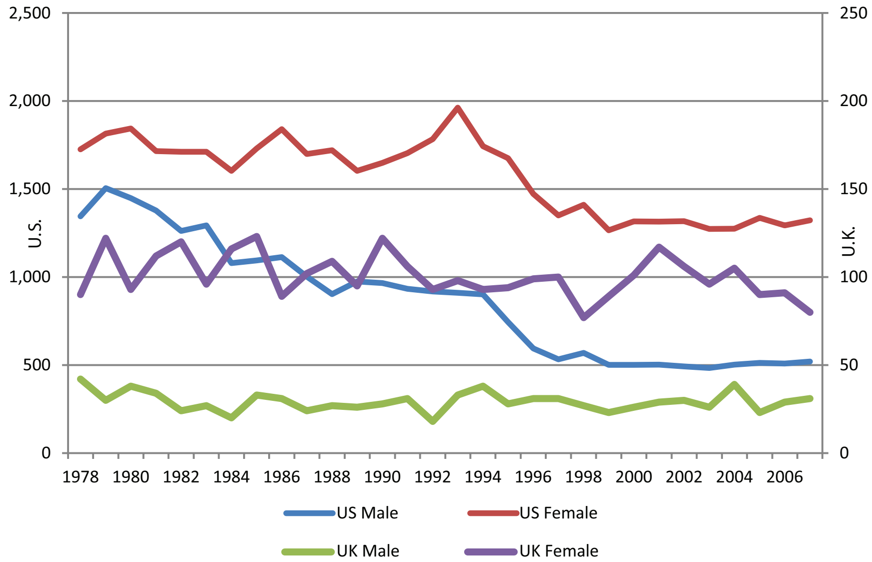

FIGURE II-2 U.S. and UK intimate partner homicide counts.
SOURCES: Christopher D. Maxwell and Amanda L. Robinson.

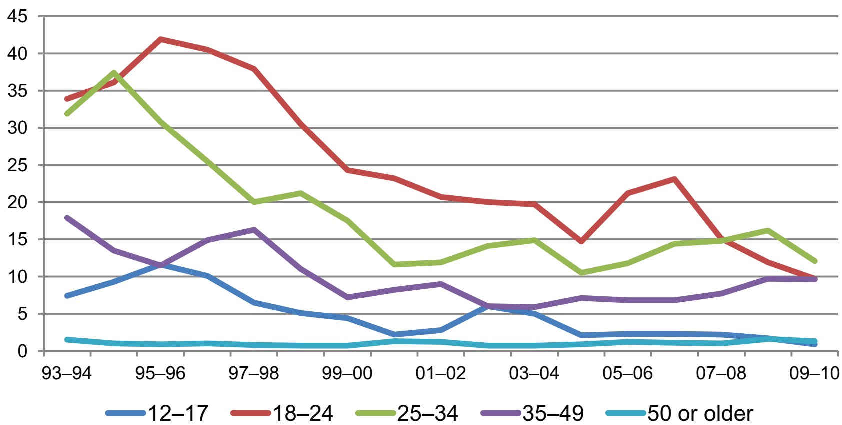

FIGURE II-3 U.S. female intimate partner violence rates by age groups, 1993-2010.
SOURCES: Christopher D. Maxwell and Amanda L. Robinson.

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than the recidivism rate even *without* formal intervention (Klein and Tobin, 2008). This latter point is important because the fact that violence decreases with time regardless of the presence or absence of an intervention means that to fairly test whether an intervention reduces violence one must have an equivalent control group to distinguish between natural and accelerated desistance. Therefore, the question about whether an intervention program works or not needs to be more explicitly phrased as "Does the intervention accelerate the rate of desistance among active IPV offenders and if so, to what degree?" In our attempt to answer this question, we primarily report the summary results from systematic, quantitative reviews of groups of similarly implemented RCTs. Unfortunately, this parameter does result in us reporting the results from a subgroup of available studies. However, as noted above, this is necessary for distinguishing between natural desistance and those accelerated significantly by an effective intervention.

What Impacts Have IPV-Focused Interventions Had on IPV?

In this section, we discuss the research evidence for different types of interventions that are intended to reduce IPV. For the purposes of this report, we focus on those interventions that are representative of the main U.S. and UK government approaches to the problem of IPV.

During the past two decades in particular, a broad platform of interventions has emerged that can be described as two parallel streams of intervention efforts: one focused on reducing IPV by targeting the offender and changing or controlling behavior, and the other focused on providing victims with resources that may reduce their risk of experiencing further victimization. In some instances, these interventions emerged organically whereas in other cases they resulted from systematic implementation efforts. Accordingly, combining the research evidence is not straightforward primarily because victims and offenders are not mirror opposites where interventions designed for one group always produce a known, consistent impact on the other.

Producing a clear statement of the impact of IPV interventions on IPV rates is further complicated by the fact that many interventions are now in place. These are located in different domains, including those delivered by nongovernmental organizations (NGOs) in the voluntary sector, through the criminal justice system, or by health care providers. Each one of these systems will have dozens, if not hundreds, of interventions that have been designed and implemented in various ways across time and place. Then there are efforts to combine interventions (i.e., to deliver services to victims and/or offenders in multiagency partnerships) that might produce outcomes that are dependent on time, place, and fiscal challenges. In sum, although evidence clearly shows IPV rates are declining, another challenge is to state

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which intervention or combination of interventions produced these very substantial reductions. Furthermore, we suspect it is likely that the path to desistance (for offenders) or to safety (for victims) will involve multiple exposures to multiple interventions over time.

Interventions Delivered by NGOs/The Voluntary Sector

We begin our review of intervention programs by focusing on the oldest, most well-established mechanisms to address IPV. These programs are commonly known in the United States and the United Kingdom as "refuges" or "battered women's shelters." Started in the 1960s, they emerged organically to address a stark gap in service provision. These settings establish a "safe space" for women (and more recently, men) fleeing their homes due to IPV. Thus, the setting alone constitutes an intervention, but other services are also delivered in these settings, such as legal and financial advice, counseling, and parenting and other skills programs.

The evidence to date about the benefits of this intervention is not promising when the assessment scientifically compares aggregate or summary rates rather than individual outcomes. Although there are no systematic reviews of shelter evaluations, nor a single RCT, there is one study that correlates shelter stays with IPV revictimization rates, but it did not produce positive, straightforward results (Berk et al., 1986). Several other studies using aggregated data have likewise not found a connection between more shelter resources and lower aggregated IPV rates (Farmer and Tiefenthaler, 1996; Dugan et al., 1999; Wells et al., 2010). However, because many types of interventions are delivered in shelter settings, identifying the specific mechanism that links to better outcomes for victims is difficult. Furthermore, these interventions may influence different outcomes across domains such as physical, psychological, sexual, and financial abuse; victims' perceptions of safety and emotional well-being; and similar outcomes for their children. Consequently, services delivered in these settings—indeed the setting itself—continue to serve as the cornerstone in the response to IPV in the United States and the United Kingdom.

The next stage in the development of victim services was to offer support to women living in the community (i.e., women should not have to flee their homes to access services). Known as providing "advocacy," these forms of interventions involve the provision of professional advice, support, and information to victims about the range and suitability of options to improve their safety and that of their children. A small body of rigorous research from the United States points to the benefits of providing support and advice to women in community-based settings (Sullivan and Davidson, 1991; Ellis et al., 1992; Jouriles et al., 2001; Johnson et al., 2011). However, these studies are small, single-site evaluation designs that have not

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consistently found that the intervention significantly reduces revictimization. We did locate one systematic review of 10 applicable RCTs. This review by Ramsay et al. (2009) concluded that intensive advocacy (12 or more hours in duration) might reduce physical abuse after the first year, but for no longer than 2 years, and that there are uncertain impacts on victims' quality of life and mental health. However, evidence for one promising intervention entitled the Independent Domestic Violence Advisors (IDVAs) model was not yet available at the time of Ramsay et al.'s (2009) review. IDVAs are professional support workers who provide intensive support and safety planning with victims deemed to be at high risk of further abuse; IDVAs are now being used across the United Kingdom. A multisite pre-post study found improvements across a range of victim outcomes (Howarth et al., 2009), but the longer term impacts of this type of intervention have not yet been established (Robinson, 2009).

Criminal Justice–Based Interventions

We next turn our focus on responses by elements of the criminal justice system, particularly responses purposefully designed and implemented to reduce IPV. Perhaps the most notable example of such a response is the first randomized experiment that investigated the effect of a criminal sanction on any type of recidivism by offenders, commonly known as the *Minneapolis Domestic Violence Experiment* (Sherman and Berk, 1984). This experiment compared arrest to two other traditional approaches used by the police (separation and mediation) to respond to IPV incidents. The authors found that arrest *reduced* the recidivism rate by half against the same victim within 6 months of the arrest. The National Institute of Justice then followed up on this study by sponsoring six "replications," which became collectively known as the Spouse Assault Replication Program (SARP). By 1991, the five completed SARP studies had produced inconclusive and mixed outcome results (Garner et al., 1995); however, two later studies pooled together the replication studies, either by averaging their published findings or by merging and reanalyzing their raw case-level data. Both of these "meta-analyses" found that arrest was a significantly more effective policing intervention than informal responses (Sugarman and Boney-McCoy, 2000; Maxwell et al., 2002). Maxwell et al. (2002) reported that the victims whose abusers were randomly assigned to the arrest group reported significantly less frequent violence on average over the first follow-up year than those in the non-arrest, control group.

While the police are beneficial, they are just the first stage in the criminal justice process. Therefore, research that is more recent has focused on the decisions made by prosecutors and the judiciary, and on how these decisions influence the subsequent rate of repeat IPV. The most comprehensive

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analysis to date reviewed 135 studies that produced data measuring the prosecution and conviction of IPV offenders. This study found that criminal charges were filed in about 60 percent of all arrests and that about 50 percent of IPV prosecutions resulted in a conviction (Garner and Maxwell, 2009). Thus, the authors concluded that the rates of prosecution and conviction for IPV were not, as was commonly reported, "rare" or "infrequent" occurrences. Maxwell and Garner (2012) subsequently reviewed in detail 32 of these 135 studies to assess whether more prosecution resulted in less recidivism. Their analysis showed that 65 percent of the 144 comparison tests produced no significant differences in the rates of recidivism among types of criminal sanctions; however, the authors argued that these studies were methodologically weak and thus unlikely to entirely separate the effect of the intervention from other factors, including selection biases. Research based on a more narrow focus on specialized domestic violence courts by Cissner et al. (2013) also reported mixed findings in terms of recidivism outcomes from nine quasi-experimental evaluations. Their report documents that 5 of the 12 data analyses produced significantly lower IPV recidivism rates among those cases processed by a specialized court. Among the other analyses, six produced results showing no difference in recidivism rates and one produced results indicating a significant increase in recidivism.

Besides criminal sanctions, courts can also compel offenders to participate in therapeutic treatment programs. These programs are loosely organized around the principles of the Duluth model, and thus they largely focus on promoting psychosocial or cognitive behavioral changes. The programs last from a few weeks to a year (Pence, 1983). Over the past three decades, 10 studies have tested various versions of this model, but none replicated another. Among these studies, four used an RCT design. A systematic review of these studies by Feder and Wilson (2005) reported that while the effect of treatment on reducing officially recorded recidivism was modest, the effect of treatment on reported revictimization was near zero. Among the six quasi-experimental studies, a positive correlation between length of treatment and the rate of recidivism was produced: the more treatment was attended, the less violence was reported during the first follow-up year. Unfortunately, these later studies were too weakly designed to produce unequivocal information about treatment effectiveness.

Finally, courts can also issue temporary and quasi-permanent restraining orders (ROs) when there are threats of or actual incidents of IPV. These orders are a form of civil sanctions because they all universally compel would-be offenders to not contact the complainant; augment existing punishment schedules if there is subsequent violence; and add sanctions for actions (or lack of actions) that are otherwise legal. Unfortunately, no one has yet completed a systematic review of studies that connect ROs to

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recidivism or revictimization rates, nor has anyone fielded an RCT to test their efficacy. However, we were able to identify 21 individual studies that reported a relationship between the presence of an RO and IPV recidivism and/or revictimization. Although none of the studies employed an RCT design, 13 included a post-treatment comparison group, and another 4 used a pre-RO rate as their comparison group.[7] Our codification of the results provides only mixed support for the use of ROs, as 43 comparison tests produced only 15 statistically significant results. The most prevalent finding is that there is no difference in the rates of recidivism or revictimization between those with and those without an RO.

Controlling IPV via Health Care Settings

We now turn our focus on interventions through health care settings; as the NGOs discussed earlier, these are places for victims to seek help that are not necessarily linked to the police or the courts. Interventions typically start when someone visits a health care provider, either in an emergency room (ER) or at their primary care provider, or someplace between them. Relative to many of the other areas we have assessed so far, the research on health care interventions is more rigorous. There are a number of RCTs and even more systematic reviews. In terms of screening victims, several published systematic reviews covering more than 30 studies find that screening instruments sufficiently and equally identify women experiencing IPV, and that there are no significant adverse effects on most women (Cole, 2000; Nelson et al., 2004; MacMillan et al., 2006). However, in terms of whether screening reduces morbidity, the evidence to date is not as positive. Neither of the two ER-based RCTs found significant, positive effects on IPV revictimization rates (MacMillan et al., 2009; Koziol-McLain et al., 2010), nor did the one primary care–based RCT study (Klevens et al., 2012). In addition, among the studies that examined outcomes after combining screening with another intervention, only one of six studies found significant reductions in IPV rates due to the interventions (Parker et al., 1999; McFarlane et al., 2000, 2006; Tiwari et al., 2005; El-Mohandes et al., 2008; Coker et al., 2012).

Multiagency Partnership Interventions

This final section discusses interventions that combine treatments from different domains. The first of these are programs that combine police and victim advocate interventions. These "teams" jointly visit a residence after

[7] The 21 studies are listed at http://www.msu.edu/~cmaxwell/ROteststudies.html (accessed October 10, 2013).

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an initial police response to provide services such as informing the victim of her rights, issuing an RO, warning the perpetrator, or providing transportation. These programs also represent what is likely the first known systematically planned and tested interventions to address repeat domestic violence incidents in the United States. The initial quasi-experiment was conducted in the late 1960s, and it found reduced rates of IPV homicides in the New York City neighborhoods with the program (Bard and Zacker, 1971).

Since these initial positive findings, this "team" approach had been implemented throughout the United States. More rigorous experiments also had been conducted to test their impact on subsequent violence. In 2008, Davis et al. (2008) produced a systematic review of 10 program evaluations. Among these evaluations, they identified five RCTs, which were all located in the United States. Across these five RCTs, this approach slightly increased the odds that a household reported another incident to the police, but did not significantly reduce revictimization. The authors concluded that "while these programs may increase victims' confidence in the police . . . they do not reduce the likelihood of repeat violence."

Regardless of these findings, many have argued that the police–advocacy partnerships only represent the tip of the iceberg in terms of what can be accomplished if far more collaborations are developed across all provider domains. Thus, over the past 25 years, various versions of community collaborations have been implemented across the United States and in the United Kingdom. While the early evaluations produced positive conclusions, none has yet used a controlled design. Furthermore, only one of the five most recent demonstration programs provided data on repeat victimizations or recidivism (Garner and Maxwell, 2008). This study found mixed evidence that two Community Collaborative Response (CCR) programs produced less violence than their comparison sites (Harrell et al., 2007). This finding is consistent with another 10-site evaluation of CCRs funded by the U.S. Centers for Disease Control and Prevention (Post et al., 2010). This primary prevention study found that county-based CCRs do not significantly affect respondents' knowledge, beliefs, or attitudes toward IPV; knowledge and use of available IPV services; nor risk of exposure to IPV.

In the United Kingdom, another approach called the Multi-Agency Risk Assessment Conferences (MARACs) was piloted in Cardiff, Wales, in 2003. This program targets those victims deemed most at risk of escalating abuse or homicide. The program provides for a brief but focused information-sharing process involving representatives from the full spectrum of responding agencies, such as the police; health, housing, and social services agencies; and NGOs. MARACs are now in operation in more than 250 UK jurisdictions. An early process and outcome evaluation of the first MARAC showed that this program could provide an effective blueprint for how to help the most at-risk victims (Robinson and Tregidga, 2005;

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Robinson, 2006). However, despite the proliferation of this model, the Home Office reports that Robinson's study remains the only independent evaluation of their effectiveness (Steel et al., 2011).

Conclusion

In this brief paper, we have summarized the outcomes from a substantial body of research that tested whether intervention programs can reduce IPV recidivism or revictimization. We sought to document the outcomes of available systematic reviews, or individual studies within a particular domain if this was our only option. We have shown that there is proliferation of all types of IPV interventions across the United States and the United Kingdom, and that there are both single and multiagency approaches as well as victim- and offender-focused interventions. Yet, after about 45 years of producing systematic evidence, our knowledge about what accelerates the decline of IPV is still relatively weak. To date, while mindful of the methodological, ethical, and conceptual complexities that are involved, we are disappointed that only a small proportion of interventions had been subjected to rigorous RCT research protocols, or what is normally considered the "gold standard." Nevertheless, there are a number of key points to take away from our summary.

First, IPV rates are declining significantly across the United States, the United Kingdom, and a number of other countries. Unfortunately, it is not possible to conclusively identify who or what program deserves the credit for producing this decrease. Our preferred interpretation of this finding is that better government and governance in the form of more investment, proactive responses, and the increased volume of services now available for victims and offenders is making a difference. This perspective is aligned with Pinker's (2011, p. 121) claim that the recent "civilizing process" explains the drop of all sorts of violence across the globe over the past 20 years. Accordingly, the pronounced decline in IPV, particularly among the younger cohorts, could be optimistically interpreted as a consequence of the combination of specific and general deterrent effects produced by the multitude of interventions now in place.

Second, evidence in a number of areas is both rigorous and positive. For instance, to reduce IPV recidivism, the best available evidence suggests that a police response, particularly one that results in an arrest, is the most effective offender-focused solution. To reduce revictimization, advocacy programs combined with victim safety planning—particularly those delivered by NGOs in the voluntary sector—are linked to improvements across a range of victim outcomes. However, researchers have also demonstrated that neither approach is sufficient to address all incidents of intimate partner violence. Furthermore, no one has established how to link

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these two interventions to effectively compound their individual benefits. We therefore recommend that future research efforts should focus on using multidimensional RCT designs to assess how much these two interventions work separately and work in concert with each other and with other approaches, such as hospital and primary screening programs. Because of the multitude of IPV etiologies and patterns, the most likely path to eliminating IPV entirely, once started, is represented by efforts that bring multiple agencies together so they can identify, assess, and respond appropriately when needed. Such partnerships are the most likely solution for addressing the range of systematic issues facing people who experience violence and abuse within their intimate relationships.

II.5

INTEGRATING EVIDENCE ON VIOLENCE PREVENTION: AN INTRODUCTION

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WestEd

Questions like "What works to prevent violence?" require a careful examination of the research evidence. The evidence is composed of the studies that have been conducted to test the effects of an intervention, a policy, or a practice on violence outcomes.

Integrating evidence is necessary because many programs and policies have been evaluated, across many countries and with different populations within the same nations, and using many different methods and measures. How can we even begin to make sense of these studies to respond to the question, "What works to prevent violence?" How can we do it in a way that is systematic and explicit, and convinces the skeptics (and there are at least a few of those) that the answers are reasonable and to be trusted, especially when decisions about what to do often take place in a highly politicized and contentious context?

There have been several developments to integrate evidence in violence prevention. Two of the more common approaches are referred to in this paper as systematic reviews and evidence-based registries. This paper provides a brisk overview of both.

[8] The author thanks Trevor Fronius and Claire Morgan for their comments on earlier drafts of this paper.

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Systematic Reviews

A terrific scenario would be if every study was conducted in the same way and came to the same conclusions. Then it would not matter what study we pulled out of a file drawer or what bundle of studies we presented; they would represent the evidence quite well.

But, as it turns out, life is not so simple. Studies usually vary on all sorts of dimensions, including the quality of the methods and the confidence we have in the conclusions. Another way that studies vary is on the results that are reported. Some studies report a positive impact for an intervention, others report little or no effect at all, and still others report harmful effects for it. This variation in results presents a problem, as zealots and advocates on both sides of a public policy question can selectively use the evidence ("cherry picking") to support their particular position. This was the point made by Furby and her colleagues in 1989 (p. 22) when reviewing the impact of treatment of sex offenders on their subsequent reoffending:

> The differences in recidivism across these studies are truly remarkable; clearly by selectively contemplating the various studies, one can conclude anything one wants.

Apart from the variation across studies and how this might be intentionally exploited by advocates and zealots for particular positions, there are some other issues about evidence that need to be addressed. An important one is that there are potential biases in where studies are reported and how they are identified. What does this mean? Research has shown in some fields that researchers are more likely to submit papers to peer-reviewed academic journals, and editors are more likely to publish them, if they report statistically significant and positive effects for treatment. So any integration of evidence that relies only on peer-reviewed journals could be potentially biased toward positive results for the treatment(s) being examined. How true this is in the violence prevention area has not been implicitly tested, but it is considered good practice now for any integration of evidence to take into account studies published outside of the academy.

Another issue is how "success" for a program is determined. Traditional scientific norms generally mean that we use "statistical significance" to determine whether a result for an intervention is trustworthy. If the observed effect is so large that the result is very likely not due to the "play of chance," we say it is statistically significant. Traditionally, we are willing to say a result is statistically significant if the result would be expected by the "play of chance" 5 times or fewer in 100 (the .05 criterion). But statistical significance is very influenced by sample size; large samples can result in rather trivial differences being statistically significant, and very large effects may not be significant if the sample sizes are modest. Research has found

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that relying solely on statistical significance as a criterion for determining success of a program can bias even the well-intentioned and non-partisan reviewer toward concluding a program is ineffective when it may very well have positive and important effects.

Issues about where results are reported and how success is determined are but a few of the issues that can challenge evidence integration efforts. What is the conscientious person to do? Fortunately, in the past half-century or so, there has been considerable attention to the way reviews of evidence are done. Under the label of meta-analysis, research synthesis, and more recently, systematic reviews, a "science of reviewing" has emerged that essentially holds reviews of evidence to the same standards for scientific rigor and explicitness that we demand of survey studies and experimental studies. In some sense, we have moved from experts doing traditional reviews and saying "trust me" to researchers doing systematic reviews and saying "test me."

Systematic reviews can be done in several ways, but most follow a similar set of procedures. An example of a very timely systematic review in the violence prevention area may illustrate the point. Koper and Mayo-Wilson (2012) conducted a systematic review of research for the Campbell Collaboration on the effects of police strategies to reduce illegal possession and carrying of firearms. Following the mass shootings in the United States the past few years, and particularly following the massacre of elementary schoolchildren in Connecticut in December 2012, there is much attention on whether these strategies work. The procedures Koper and Mayo-Wilson (2012) followed were as follows:

- Like any study, a good objective or research question that can be responded to by a systematic review is needed. In this review, the authors wanted to identify the impacts, if any, of police strategies to reduce illegal possession and carrying of firearms on gun crime.
- Once the question of interest is settled, the reviewers need to set out explicit criteria to determine which studies will be included in the review and which will be excluded. Koper and Mayo-Wilson (2012) included only those studies that used a randomized or quasi-experimental design. The studies had to include measures of gun crime (e.g., gun murders, shootings, gun robberies, gun assaults) before and after intervention.
- The review team needs to conduct and document a search for the eligible studies. The search must be comprehensive and designed to reduce the potential for bias described above by including those published in peer-reviewed journals and those reported in other sources (e.g., government reports, dissertations). The authors searched 11 abstracting databases for published and unpublished

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literature; examined reviews and compilations of relevant research; and searched key websites. They found four studies that included seven outcome analyses.

- A structured instrument is designed and then used to carefully code or extract information from each study to form a dataset. David Wilson of George Mason University has a wonderful phrase for this: "interviewing the studies." Koper and Mayo-Wilson (2012) interviewed the studies to collect information on the research design used, the participants included in the study, the exact nature of the treatment, and the outcomes used in the evaluation.
- If a quantitative review or meta-analysis is possible, the outcomes of interest are "quantified" if possible into a common metric known as "effect size." In this particular review, no meta-analysis (quantitative synthesis) was attempted because there were a small number of studies, and they varied so extensively that attempting a statistical synthesis made little sense.
- Results are reported. If quantitative or statistical analyses are done, this will take a number of forms. This usually includes a description of the included studies, an estimate of the overall impact of the treatment(s) under investigation (average effect size across all studies) and how that overall impact (the average effect size) varies based on characteristics of the treatment(s), the populations, the methods, etc. But if no quantitative synthesis is done, the results are reported qualitatively. Koper and Mayo-Wilson (2012) produced the latter. Six of the seven tests indicated that directed patrols reduced gun crime in high-crime places at high-risk times, ranging from 10 to 71 percent. The authors concluded that although the evidence base is weak, the studies do suggest that directed patrols focused on illegal gun carrying prevent gun crime.
- A structured and detailed report is produced, explicitly detailing every step in the review. Koper and Mayo-Wilson (2012) conducted their study with the Campbell Collaboration, an international organization that prepares, updates, and disseminates high-quality reviews of evidence on topics such as violence prevention. Campbell Collaboration reports are structured to uniformly present necessary details on every step in the review process.

Many public agencies do not have staff that can spend the time necessary to do a systematic review, and they generally rely on external and trusted sources for evidence. The advent of electronic technology has meant that summaries of evidence from systematic reviews can be provided quickly so long as the intended user has Internet access and can download documents. Groups such as the Campbell Collaboration's Crime and Justice

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Group not only prepare and update reviews of evidence, but make them freely available to any intended user around the world. The rigor and transparency of such reviews have made them a trusted source of evidence, particularly in the politicized and contentious environment that surrounds government response to violence.

Evidence-Based Registries

Campbell Collaboration and other systematic reviews tend to be broad summaries of "what works" for a particular problem (e.g., gun violence) and classes of interventions (police-led strategies for policing illegal guns). They are not usually focused on brand name programs or very specific, fine-grained definitions of an intervention. Because decision makers often need evidence on *particular* interventions, other approaches to providing evidence that is more fine grained have been developed.

During the past 10 to 15 years, a common approach across a variety of public policy fields can be classified under the heading of "evidence-based registries." They are also referred to as "best practice registries" and "best practice lists." In the violence prevention area, quite a few are relevant, including the University of Colorado's Blueprints for Violence and Substance Abuse Prevention, DOJ's Crime Solutions effort, the Coalition for Evidence-based Policy's "Social Programs That Work," and the U.S. Substance Abuse and Mental Health Administration's National Registry of Effective Programs and Practice. Table II-3 provides a list of some important registries across different fields.

These registries differ in terms of scope and focus, but they all have a similar framework: An external group of scientists examines the evidence for a very specific intervention or policy, such as Life Skills Training or Gang Resistance Education and Awareness Training (G.R.E.A.T.). The external group gathers the evidence on that specific program. Generally, though the standards are different for each registry, evidence is only included if it is based on randomized or quasi-experimental designs. Whatever evidence on the intervention is then screened to determine if it meets minimum evidentiary standards, and those studies meeting the screen are used to assess its effectiveness. Most registries attempt to distinguish between (1) model or exemplary programs that have two or more studies demonstrating positive impacts and (2) promising interventions that have only one study indicating positive impacts. Many of the registries include a stunning amount of material on the intervention so that those interested in adopting it can do so. The registry is made available electronically so it is available instantly to the busy professionals who need it. There is also no charge to access the registry, so it is free to all who can benefit from it.

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TABLE II-3 Evidence-Based Registries Across Different Areas

Evidence-Based Registry	Area	Evidence Standards
What Works Clearinghouse	Education	Randomized experiments Quasi-experiments with evidence of equating
CrimeSolutions.gov	Criminal justice	Randomized experiments Quasi-experiments (but those with evidence of equating are rated highest)
Coalition for Evidence-based Policy Top-Tier Evidence	Federal policy (Office of Management and Budget/ Congress)	Randomized experiments
What Works in Reentry Clearinghouse	Offender Reentry/ reintegration Programs/ policies	Randomized experiments Quasi-experiments with evidence of equating
HHS Evidence-based Teen Pregnancy Prevention Models	Teen pregnancy prevention	Randomized experiments "Strong" quasi-experiments
SAMSHA National Registry of Evidence-based Programs and Practices (NREPP)	Prevention, broadly	Randomized experiments Quasi-experiments

NOTE: HHS = Department of Health and Human Services; SAMHSA = Substance Abuse and Mental Health Services Administration.
SOURCE: Anthony Petrosino.

An example may serve to also illustrate the evidence-based registry. The Coalition for Evidence-Based Policy is a not-for-profit group based in Washington, DC, that advocates for the use of evidence in policy decision making, particularly at the U.S. federal level. They have been very influential with Congress, the Office of Management and Budget (OMB), and federal agencies such as the U.S. Department of Education's Institute for Education Sciences. The Coalition's registry identifies Top-Tier and Near-Tier Evidence; the difference between them is based on whether a high-quality replication of a program has been conducted. A good example is the "Nurse–Family Partnership" championed by David Olds of Syracuse University, which has been identified as a Top-Tier program by the Coalition.

First, the Coalition solicits or seeks out candidates for Top-Tier or Near-Tier programs. For those candidates, the Coalition then undertakes a careful search to find the evidence on the effects of the program. The Coalition only considers evidence from randomized experiments to designate programs as Top-Tier or Near-Tier. This is a rather strict standard and has not been adopted by nearly all of the other registries, but the Coalition

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stresses that only randomized experiments—when implemented with good fidelity—produce statistically unbiased estimates of impact.

To be designated as Top-Tier, a program must have sizable and sustained effects. This is established with multiple experiments testing the program. The Coalition located three randomized experiments of the Nurse–Family Partnership with different populations that have all reported positive effects on a variety of outcomes. Two studies reported a reduction in child abuse and neglect, the outcome that is most relevant to violence prevention. After the Coalition is done summarizing the evidence, it asks for a review by the evaluators who produced the experiments to ensure any inaccuracies are corrected.

Each summary of Top-Tier interventions in the Coalition's Registry includes details on the program, and how it was different than what the control group received; the populations and settings in which the intervention was evaluated; the quality of the randomized experiment; and the results on the main outcomes of interest. Because it is Top-Tier, the Coalition argues that it should be implemented more widely, and has been pushing Congress and OMB to facilitate wider adoption of programs like the Nurse–Family Partnership. Most registries contain very detailed information on the intervention and population because one goal is to facilitate adoption and implementation of these Top-Tier programs.

Conclusion

The move toward systematic reviews and evidence-based registries resonates with me as a former state government researcher in the justice area in two states (Massachusetts and New Jersey) over my professional career. Our units would, on occasion, receive an urgent request from the state's Attorney General (AG), the Governor's Office, a state legislator, or the head of the Office of Public Safety. These requests came in the days when the Internet was just beginning and offered skimpy sites compared to today. The request would go something like this: "We want to know what works and we want to know by five o'clock." Generally, this meant there was money to be appropriated and they wanted to make sure those funds were allocated toward effective strategies. Or there might be some controversy over a program like G.R.E.A.T. and they wanted to know what the evidence on the program's impact was. (In the interests of full disclosure, sometimes those requests were something like "here's what we're going to do, now get us the evidence to support it.")

Little did I know, electronically accessible systematic reviews and evidence-based registries would spring up all over the Internet a few years after I left state government service. These allow the busy government researcher to respond quickly to urgent policy requests. If I were employed

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by those same state government agencies now, and our unit received such a request, I could respond by going to the Campbell Collaboration website to find a vetted systematic review relevant to the issue of violence prevention. Or I could go to the websites for one of the evidence-based registries and identify some programs that these external groups have vetted as an effective violence prevention strategy, and offer several of these to the Governor, the AG, or some other esteemed requester. Now this could be done in a matter of a few hours.

II.6

MAKING AND USING LISTS OF EMPIRICALLY TESTED PROGRAMS: VALUE FOR VIOLENCE INTERVENTIONS FOR PROGRESS AND IMPACT

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The development of standards that can reliably guide interventions and policies for affecting violence can be one of the most critical steps in reducing the rate of the many forms of violence (HHS, 2001). Systematic and soundly rendered identification of a roster of programs (or sets of practices) that can be relied upon for violence reduction can help streamline efforts while increasing benefits (Sherman et al., 1997; Elliott and Tolan, 1999). Another consideration is that relying on scientific evidence for programming and policy is now generally valued. A reference to evidence-based or empirically tested work now has currency. However, because there is still a considerable lack of consensus about what these terms mean, there is pliability in what they represent. There is increasing reference to "evidence based," but growing uncertainty about what that term means.

To create reliable standards, there must be a scientifically sound and objective determination of what can be considered evidence based/empirically tested. With this accomplished, the field could be given clear understanding of which programs are efficacious (able to be effective), which programs are known to be ineffective (soundly evaluated with no significant benefits or negative effects), and which programs lack determination (mixed results from sound evaluations or no sound evaluations). Thus, such a resource can enable funders, implementers, and policy makers to readily access programs that are most likely to be beneficial (Sherman et al., 1997). This resource would be useful without requiring consumers to have extensive knowledge

[9] The author appreciates provision of source material from Delbert Elliott and Sharon Mihalic. However, the views presented are those of the author and are not official representations of the Blueprints Initiative.

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of evaluation methods or the specifics of each evaluation. In addition to improving consumer capability, this approach brings violence prevention evaluation in line with scientific standards used in other areas of public health and social welfare to determine efficacy. As the standard becomes more widely used and respected, it can also help inform program developers and funders about the design characteristics needed to validly test effects of programs. In turn this will expedite development of new programs and the breadth of approaches that can be used to reduce violence. Additionally, reliable lists can enable efficient use of funding because development and implementation requirements would be known, saving funds and time when compared to untested and unspecified programs or local initiatives developed de novo.

This paper outlines the rationale and important criteria for developing a practical, efficacious list for violence reduction and prevention, and notes critical challenges in developing a useful approach. It focuses on Blueprints for Healthy Youth Development (http://www.colorado.edu/cspv/blueprints), formerly the Blueprints for Youth Violence Prevention, which uses scientific standards that permit reliable understanding of program effects, connects standards to rationale for level of endorsement, and has been constructed with assertive surveying of potential programs and consistent application of stated standards. It was one of the first such efforts to develop scientifically based standards and program listing. Thus it exemplifies what listings can offer the field. In addition to a descriptive summary, ongoing practical and methodological issues and limitations of the current policies and practices of the Blueprints are discussed. This examination of Blueprints as an exemplar initiative is provided to highlight the advantages such an approach can offer the violence prevention field and to argue for extending this approach and the standards used in Blueprints to other areas of global violence prevention.

The Value of List Making

The need for scientifically sound guidance for violence prevention has long been recognized (Krug et al., 2002). Many scientific studies can be relevant to identify programs that can work, ranging from case studies and qualitative investigations, to trend analyses and representative surveys, to comparisons of groups and conditions for variation in the extent of problems. However, these are all correlational studies, which are informative but cannot provide information on the causal impact of a particular program or set of practices on violence (Tolan and Guerra, 1994). Such research may point to important targets or suggest processes for program emphasis. However, intervention evaluation requires a method that scientifically and quantitatively compares (1) the effects of the program

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and (2) not being exposed to the program, with confidence that these differences are only due to different exposures/conditions that potentially allow exposure. Three promising approaches are available for determining what can reduce or prevent violence: systematic reviews across studies (meta-analysis); experimental methods (RCTs); and carefully designed, implemented, and controlled quasi-experiment (not randomly assigned) methods (Shadish et al., 2002).

Although considerable debate exists about developing lists of programs versus systematically identifying key features or practices through meta-analyses, there are several reasons lists may provide the best guidance (Advisory Board of Blueprints for Violence Prevention, 2011; Valentine et al., 2011). One advantage is that, even among the most tested programs, there are few reports, so creating rosters of programs rests on relatively few studies per program. In contrast, other approaches, such as identifying a practice common to effective programs or measuring average effects across multiple studies of similar programs, are susceptible to unstable estimations and reduction of important differences into large categories that cannot direct practice (e.g., cognitive behavior approaches). Despite the large burden borne by violence, funding for violence research is severely limited, particularly for trials of different approaches. This means that most efforts will have only a few tests of effects. Thus, at this point and for the foreseeable future, identification of developed and well-specified programs that have adequate empirical evidence is the preferred method for identifying a standard for practice.

What Standards to Use

Several lists of programs meant to reduce violence or related problems have been compiled, using varying methods and standards. Most are organized by benchmarks or criteria for inclusion (how programs are selected for review) and designation of level of confidence in the effectiveness of the listed programs (sorting into one or more levels of confidence that the program is effective). A few lists rate evaluations using multiple criteria to make an overall judgment, so that the rationale for a given program to be included or not is hard to discern. In some cases, ratings are provided, but the user is left to determine how these criteria might affect program value.[10] Noteworthy programs that have the soundest effects and are most preferred (usually highest designation) are those that used

[10] The correspondence of many programs' status across several listings can be found at http://www.blueprintsprograms.com/resources/Matrix_Criteria.pdf (accessed October 10, 2013).

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the strongest evaluation methodology design (e.g., RCT or very carefully matched quasi-experimental).

Forming lists requires three major considerations. The first is how programs are identified for review. The second is determining the methodological standards for potential inclusion. The third issue is what is required to be listed as having beneficial effects and how differences in confidence about those effects are denoted. Systematic and assertive searching of the identifiable literature is needed to minimize bias and/or inconsistency in how and what programs are considered for evaluation and potential conclusion. For example, Blueprints has a policy of regularly surveying publication and online sources to identify reports as the source for evaluation of programs. Also, when program information is sent in, an additional search is done to identify all pertinent information. If potential evaluation literature is not systematically scanned, programs that are effective might be overlooked, and there is a bias for which programs are listed. This also creates confusion about what not being listed means. Similarly, there are problems when lists are developed from programs identified through organization-funded programs. These situations can create pressure to modify standards so programs that were otherwise not reviewable are included.

The Great Advantage of Random Assignment Trials for Determining Evaluation Effects

When program evaluations are identified, there is a second immediate consideration: whether the evaluation material available is of sufficient methodological quality to permit appropriate inference of effects (or lack thereof). Can determinations of effects be attributed to the intervention program and only to the program (Shadish et al., 2002)? This is the basis for an argument for random assignment as the standard or at least the much preferred design. Because the intervention and control conditions only differ by random determination of group assignment of a given person or unit of intervention, it greatly simplifies the ability to have confidence that any differences are due to intervention condition. All other methods have greater susceptibility to confound and biases that affect group assignment and therefore require more extensive and elaborate assurances that such biases did not occur. The advantages of random assignment have made it the standard for identification of effective approaches in many areas of public health and welfare.[11]

While random assignment has many advantages, there are numerous practical considerations that can constrain evaluations regarding reliance on it (Harris et al., 2006). Perhaps the most common is that participants

[11] For example, see Lachin et al., 1988, and Hedden et al., 2006.

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or collaborating agencies will not agree to random assignment. If the fact that the intervention is not proven, which is the reason for the evaluation, is emphasized in presenting the rationale for random assignment, it can diminish enthusiasm for cooperation, or at least the fear of this can undercut preference for random assignment. In many instances interventions are developed out of interest of a group, setting, or agency (e.g., a school that sees the value in violence prevention or an agency that sponsors domestic violence advocacy services). In some cases, matching of a control to the voluntary intervention site is the most plausible design possible. However, such a compromise brings considerable decrement in confidence about the results obtained (Shadish et al., 2002). Concordantly, determining that results are not influenced by design bias (e.g., enthusiasm of comparison is lower than intervention) requires considerably more evidence. Thus, in many areas of health care the standard has become requiring random assignments for consideration for causal inference, showing that an intervention has or does not have direct and clear beneficial effects (Shadish et al., 2002; Hedden et al., 2006). Therefore, random assignment or very strong quasi-experimental design with accompanying statistical tests to ensure lack of bias in results are considered the minimal methodological requirements for an evaluation to provide evidence to determine intervention effects. This is the standard used in the Blueprints initiative.

Random Assignment Design Does Not Ensure a Random Assignment Evaluation

While random assignment provides many strengths, including ease of interpretation, the conduct of a randomized assignment trial is vulnerable to many threats to maintaining the original characteristic of condition assignment only being due to random choice. For example, there can be differential attrition by condition. This means that those not participating, among those assigned and those leaving before the study is complete, may differ on important demographic, risk, or other characteristics that render the once-equitable groups not so for outcome comparison. If, for example, a violence prevention effort requires direct and open discussion of partner violence, it could result in those in the intervention condition leaving if they are engaged in more serious violence because of threat of arrest. This would render a difference between intervention and comparison condition that could explain any effects found, despite initial random assignment. Similarly, there could be loss—even if not different by condition—that could lessen confidence in results because the loss is related to how the program is expected to have effects or how these might be rendered. For example, it could be that all of the most at-risk families tend to move out of a parenting program aiming to reduce child abuse. While the average

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scores may decrease in both groups over time, it would be difficult to rule out differences being due to this systematic change in the populations, even if they are similar across conditions. Other challenges of implementation, such as relatively low reach (low participation), uneven dosage (considerable variation in extent of exposure of those engaged in the intervention), or low fidelity of implementation (uncertainty of what was actually provided/experienced) can also render an evaluation with randomized design to no longer permit a sound interpretation of an intervention result as causal.

Features Other Than Collapse of Random Assignment Can Render an Evaluation Unusable

Other features of an evaluation, while not directly a failure of randomization or of adequate control for comparability for effects, can render a given evaluation not usable for determining a program's effects or lack of effects (Maxwell, 2004). Quite commonly, studies are not conducted at a large enough scale to be able to detect expected differences statistically (low power). This is particularly likely when the unit of assignment is not people, but groups of people (families within a neighborhood targeted for intervention), or organizations or social units in which people might be grouped (e.g., schools). In addition, the statistical analyses applied can be incorrect for the measures used, the units of assignment, or the expected effects. Most commonly, there are analyses of individuals even though random assignment was at the group level (e.g., shelter, marital couple, classroom, school).

While not affecting randomization or internal validity, additional criteria have been suggested to identify usable program progress. One such effort is that the intervention is tested with a sample representing the population of interest. Studies of convenience or opportunity samples may raise questions of generalizability—whether effects are meaningful for the populations affected by these violence issues. Another important consideration is that effects are on outcomes that are meaningful for the problem (e.g., if the goal is to reduce violence in marital conflict, the effects are on violence, not just stated attitudes about violence). A third consideration is that effects need to be accounted for by the processes or practices in the program thought to affect violence (Kazdin, 2007; MacKinnon et al., 2007). Thus, there is increasing interest in mediation analyses that demonstrate the program effects can be explained by theorized processes of effects, with some calling for discriminatory mediation analyses (Kazdin, 2007; MacKinnon et al., 2007).

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Tough Standards?

The process of developing a program that can be tested is daunting. It involves undertaking evaluation with a design and scope that could permit determination of efficacy, implementation with fidelity and consistency, measurement of the key processes and outcomes with sensitivity and reliability, and maintaining randomization or very strong quasi-experimental comparability. These actions can require considerable expertise, resources, dedication, and artfulness. This has led some to suggest that softer standards or less insistence on set standards is in order. The intent is not to make it prohibitive to be recognized as a valid program and to ensure that programs developed without these capabilities are accessible by list users. Counterpositioning design adequacy for scientific judgment and the concomitant challenges seems to conflate two important but distinct considerations. While recognizing the challenges and constraints that affect ability to conduct such evaluations, it is also worth noting that these design and evaluation completion requirements are for basic evidence of effects—to provide the evaluations that could be used to make statements about programs that have promise or can be models for use. Eschewing standards will not lead to sound program choice guidance. If viewed as basic requisites for judging the use of scientific standards, then these challenging requirements may be seen, nonetheless, as necessary for developing a reliable, valid, and transparently rendered roster of programs that can be used for violence intervention. Another helpful step may be to identify areas of need for substantial efforts to conduct trials that can fill in gaps in knowledge in areas such as domestic violence, child abuse, and elder abuse (Tolan et al., 2006).

Scientifically Determined Standards for Determination of Grouping into Levels of Empirical Basis

Because the primary purpose of setting standards for inclusion on lists and compiling lists is to provide efficient guidance to those engaged in funding, practice, policy making, and administration (in addition to adequate methodological design in evaluation and maintenance of that quality throughout the evaluation), the benchmarking used to identify programs included on lists is another important consideration. The basis of different designations (e.g., promising, model, ready to go to scale, ineffective) need to readily understandable, reliably determined, and transparently applied. For example, one Blueprints designation is promising (requires at least one RCT or two quasi-experimental design studies meeting design quality requirements as summarized above), with significant immediate or longer term effects and no health-compromising effects. This designation means exactly what the category title says. These are programs that have been

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reviewed and show promise as violence interventions, based on all relevant data. The second level is labeled model, to indicate these are programs that can be relied on for use. The requirements to be considered a model are (design quality requirements as summarized above) two RCTs or one RCT and one very strong quasi-experimental design evaluation, each with promising positive effects and no health-compromising outcomes. Also, effects must be sustained for at least 12 months after intervention on at least one outcome.

During the past 15 years, the Blueprints staff and advisory board have surveyed and evaluated approximately 1,000 programs (the procedures of the review and data collected and made available from the reviews is in Box II-1). Of those initially considered, about 150 have design standards that appeared adequate for full review. Approximately 39 of these have been designated promising and approximately 9 have been determined to be model programs. (These numbers are increasing, but in addition, as all programs are reviewed again periodically and as new pertinent evaluations are found, programs can change designation and/or be removed from the list.)

Noting that the 1,000 programs surveyed represent a small portion of the variety of efforts being used (and funded) for youth violence—and that most of those do not have evaluation quality to permit determination of effects using basic scientific standards of adequate design—it is still concerning that about 30 have met criteria for promising and only a dozen more have met the model criteria, the standard meant to convey readiness for use. This pattern highlights the extent to which inadequate attention to evaluation strengths and to replication of promising programs is constraining the ability to know whether most violence programs are having any effect.

Limits of List Making with Scientific Standards

The vast majority of violence programs in operation do not have evaluation information that could indicate effects. Some have suggested that lists are too constraining. Some have argued, and cannot be refuted, that there could be many programs that are beneficial, but have not been evaluated in a manner that makes them eligible for listing. However, this seems to argue for more careful and sound evaluation, not forgoing standards or obscuring what list inclusion means. The vast sums of money put toward violence prevention and its concrete importance are both powerful arguments for increasing attention to, funding for, and expectations of stronger evaluations and greater reliance on programs with evidence of effects.

A second limitation is that, to date, these review and listing efforts have been concentrated on youth violence perpetration, not on youth violence victimization or intimate partner violence, child abuse, or elder abuse

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BOX II-1
Assertive Search Procedures and Program Information Used by Blueprints for Healthy Development

Search Procedures

1. Systematically search for program evaluations, published and unpublished
2. Systematically review reports for evaluation methodology quality to be included for consideration
3. Those meeting study design quality standards to validly evaluate effects reviewed by independent advisory board
4. Individual programs with positive effects on meaningful outcome are certified as promising or model programs, depending on strength of evidence
5. Only model programs are considered eligible for widespread dissemination
6. Organize Program Summary and, for model programs, Program Implementation Guidelines Summary

Program Information Recorded for All Reviewed Programs

- Program name and description
- Developmental/behavioral outcomes
- Risk/protective factors targeted
- Contact information/program support
- Target population characteristics
- Program effectiveness (effect size)
- Target domain: Individual, family, school, community

(Tolan et al., 2006). Also, for the most part the reviewed programs are focused on the United States and Western Europe. Thus, perhaps the most critical concern about list making is the lack of such efforts for these other forms of violence and for a broader set of populations. For example, there are few quasi-experimental and even fewer randomized controlled trials on IPV, child abuse, and elder abuse. Those with the strongest methods point to relationship-based approaches, particularly for situations with less than the most extreme threat of harm (Tolan et al., 2006). Yet, these are preliminary and suggestive results at best. Moreover, the viability of such approaches is not a simple issue. This approach is not the focus of the majority of funding for such interventions. More sound evaluations are critical for improving the ability to affect partner, child, and elder abuse. This understanding of "what works" may provide much-needed basic direction, like it has in understanding youth violence.

Another major limitation of list making is programs that are methodologically strong, but may not have good evaluations of fit to particular

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populations or communities, or problems may appear on the list. They may, by virtue of inclusion, take on the primatur of benefits for groups about which they do not have evidence of effects. Although more and more programs are considering these issues in design and in evaluation, most have been tested with specific (actually often unspecified) populations and with relatively weak tests of impact by gender, age group, economic levels, ethnic groups, or community type. Few culture-based or culture-specific programs have had the quality of evaluation to permit inference about effects. This limit is also applicable in regard to international differences in needs and resources. In addition to concentrated efforts to improve evaluation confidence, there does seem to be value in preferring programs with adequate evaluation and evidence of positive effects over those without such evidence.

A third criticism raised about the development of lists with the scientific standards used in other areas of health care is that many established efforts would need to be dropped in favor of efforts that may not have community support. They also may require reorganizing violence prevention efforts. Multiple practical and financial considerations would prompt this criticism. However, it is hard to see this argument prevailing if it is recognized that the current accepted efforts have no sound evidence of making a difference. Programs are being supported for reasons other than the effects they produce. There are multiple examples of efforts that while thought to be valuable, even by the affected communities, were in fact ineffective (no positive effects) and may even increase risk (Elliott and Tolan, 1999).

Ongoing Issues for Blueprints and Other List Approaches

Although Blueprints' list formation efforts and others like it can provide important direction and information toward the goal of effective violence reduction, there are emerging and ongoing issues related to inclusion criteria, review criteria, and determination of preferability. For example, one issue is how replication is determined (Valentine et al., 2011). To replicate a program, how much can content or implementation vary for the results to be considered rendered from the same program? If a program focused on parent training adds a few social-cognitive sessions to promote youth self-control, is this considered a variation or a different program? How important is variation in mode of exposure? If offered in person, is a program equitable to the same approach and activities offered through the Internet?

Another set of issues relates to how effects are judged (Aos et al., 2004). A key criticism of the replication approach used in Blueprints is how statistical significance should be considered (Valentine et al., 2011). A related issue is how the size of effect should be considered, meaning how large of an effect is valued whether meeting standards of statistical significance or

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not. Some have argued that effects need to be of a certain size to be meaningful. Even if statistical significance is found, it should not be enough to judge a program as being effective. One step in that direction has been to calculate the benefits of programs in reduced costs (e.g., criminal justice, education, employment) that can be attributed to reducing violence (Aos et al., 2004). This method compares the cost of the program to the benefits based on the effects over time. The approach has particular appeal because it translates effect sizes into economic calculations that show return on investment for different programs. For example, funding that was dedicated to building more youth correctional facilities was redirected by the state of Washington, based on the cost-effectiveness estimates of increased reliance on empirically tested early intervention and youth violence prevention in that state (Drake et al., 2009).

As there is a growing body of adequate evaluations of some programs, the question of how meta-analytic methods, which measure effects as the average across the pertinent evaluations, should be considered (Valentine et al., 2011). At present, even the most evaluated programs have a relatively small number of evaluations. As noted by Valentine et al. (2011), meta-analysis has many strengths for testing for replication or consistency of findings across studies and for identifying robust estimates of effect size of a program or approach. This is a different set of criteria than the current Blueprints approach, which focuses on replication through independent studies, each with statistical significance. The relative advantages and limitations of the meta-analytic approach versus the independent replication approach are discussed extensively in Valentine et al. (2011) and a related commentary by the Advisory Board of Blueprints for Violence Prevention (2011). What seems to be agreed upon is the value of supporting evaluation of programs and multiple evaluations so that meta-analytic approaches can be applied to provide robust estimates of effects. Until that situation is reached, however, interim standards may be needed when there is a small number of sound evaluations.

Another aspect of violence intervention evaluation that can be vexing is how group-based interventions should be considered. Because such interventions involve randomizing large units and therefore often larger costs and administration requirements, the scale needed for valid randomized controlled trials can be daunting. To ensure inclusion of such interventions, some consideration of these factors seems warranted. How to do so without compromising the scientific standards—which do not vary based on unit of evaluation/assignment—is an ongoing concern with likely evolving standards. A related concern is how those programs meant to change the ongoing developmental environment should be considered (e.g., change procedures used in school for how teachers manage students' misbehavior). These programs are not simply applied to a group of youth and then

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followed for a long-term effect on that cohort, but are meant to change how ensuing cohorts are affected. The question of how to evaluate effects on subsequent cohorts (e.g., do practices continue?) and the question of how to measure the "end" of the program are both important considerations, particularly as such efforts become more common (e.g., legal changes in how domestic violence is to be prosecuted).

Similar issues arise in considering program delivery efforts such as Communities That Care (Hawkins et al., 2002), which are not specific prevention programs, but instead are focused on how communities organize to implement prevention. Thus, the effort is not a specific program with a particular group, but a method of engaging community leaders in use of evidence-based programs that fit the identified risk and protective factors of that community. As with efforts to change organization in schools, these approaches are indirect in the sense of changing the operational setting, which are then thought to change the conditions for youth development. They are also similar in having less clarity about when the intervention ends. These advances in sophistication and breadth of approaches to prevention raise new challenges for any evaluation of approaches that is meant to differentiate "what works" from what does not and what is not properly evaluated. Thus, these are important and welcome challenges for the Blueprints and similar approaches to development of lists.

Program Lists and Moving Forward in Violence Intervention

This report has focused on Blueprints as an exemplary approach to violence prevention because it is a transparent, sound, and reliable standard that has many advantages over other approaches to list development and other efficacious approaches to identifying preferable programs and practices. However, as noted, there is a need for much more evaluation, including multiple evaluations of most promising approaches and model programs. In addition, a key need is to align listing efforts so that consumers—whether funders, administrators, policy formulators, or state and local agencies and groups implementing violence prevention—can readily understand the basis for listing a given program in a given category (e.g., promising, model, unproven, negative effects). There are currently considerable impediments in using the sounder programs because lists have varying quality of standards. Another factor is the varying extent to which listing occurs only if the programs have sound evidence of positive impact. Box II-2 lists a categorization schema developed among several agencies and groups. This effort to standardize list criteria and the terms for different levels of strength of evidence and reliability of use, if adopted in violence prevention across agencies and countries, would improve reliance

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BOX II-2
Suggested Schema for Hierarchical Program Classification Across Lists

1. Model: Meets all standards
2. Effective: RCT replication not independent.
3. Promising: Q-E or RCT, no replication
4. Inconclusive: Contradictory findings or non-sustainable effects
5. Ineffective: Meets all standards, but with no statistically significant effects
6. Harmful: Meets all standards, but with negative main effects or serious side effects
7. Insufficient Evidence: All others

NOTE: Q-E = quasi-experimental; RCT = randomized controlled trial.
SOURCE: Adapted from review of classification systems for program effectiveness ratings (see http://www.colorado.edu/cspv/blueprints/ratings.html).

on empirically tested programs (perhaps including the support for better evaluations).

Similarly, greater integration of usability concerns into program development and evaluation designs is an important step in closing the gap between what has been evaluated and what is readily useful for implementation at the community level. Box II-3 provides a summary of the characteristics for an "ideal" evidence-based program. Continuing to pursue this ideal and to promulgate sound lists can be an important contributor to effective violence intervention.

BOX II-3
The "Ideal" Evidence-Based Program

1. Addresses major risk/protection factors that can be changed and substantially affect problem
2. Easy to implement with fidelity
3. Rationale for and methods of services/treatments are consistent with the values of those who will implement
4. Keyed to easily identified problems
5. Inexpensive or positive cost/benefit ratios
6. Can influence many lives or have life-saving types of effects on some lives

SOURCE: Adapted from Shadish et al., 1991.

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Appendixes

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Appendix A

Workshop Agenda

EVIDENCE FOR VIOLENCE PREVENTION ACROSS THE LIFESPAN AND AROUND THE WORLD

JANUARY 23-24, 2013

Evidence shows that violence can be prevented and its impact reduced, in the same way that public health and criminal justice efforts have prevented and reduced tobacco use, motor vehicle–related injuries, workplace injuries, and infectious diseases in many parts of the world. The factors that contribute to violent responses—whether they are factors of attitude and behavior or related to larger social, economic, political, and cultural conditions—can be changed.

Successful violence prevention programs exist around the world, but a comprehensive approach is needed to systematically apply such programs. As the global community recognizes the connection between violence and failure to achieve health and development goals, such an approach could more effectively inform policies and funding priorities locally, nationally, and globally.

The paradigm of knowledge management serves as the framework for the workshop agenda, and is relevant to understanding the evidence base for violence prevention. The four stages of knowledge management are knowledge generation, knowledge integration, knowledge dissemination, and knowledge application.

The workshop will examine

- What is the need for an evidence-based approach to global violence prevention?

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The Evidence for Violence Prevention Across the Lifespan and Around the World: Workshop Summary

- What are the conceptual and evidentiary bases for establishing what works?
- What interventions have evidence of a reduction in violence?
- What are common approaches most lacking in evidentiary support?
- How can demonstrably effective interventions be adapted, adopted, linked, and scaled up in different cultural contexts?

DAY 1: WEDNESDAY, JANUARY 23, 2013

8:00 AM **Continental breakfast will be served**

8:15 AM **Welcome**
DEEPALI PATEL, *Institute of Medicine*
JAMES MERCY, *Centers for Disease Control and Prevention*
KATRINA BAUM, *National Institute of Justice*

8:30 AM **Opening Remarks**
MICHELLE BACHELET, *UN Women* (via video)

8:45 AM **Day 1 Keynote**
MARTA SANTOS PAIS, *Special Representative of the United Nations Secretary General on Violence against Children*

Part I: The Need for Evidence. Beginning with definitions of evidence, knowledge, and evidence-based, this panel will highlight the need for evidence about what works to prevent violence from the perspective of organizations and people who seek to reduce violence through large scale global or domestic initiatives. Topics include: How do we define evidence? What is the difference between evidence and knowledge? Why is an evidence-based approach important? Who benefits from the use of evidence to inform decision making? How is evidence used by different stakeholders, and from where is it obtained? What are some of the challenges to making progress in building and implementing evidence-based approaches to violence prevention?

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9:30 AM **What Is Evidence and Why Do We Need It?**

Moderator: Mark Rosenberg, *The Task Force for Global Health*
Neil Boothby, *U.S. Agency for International Development*
Daniela Ligiero, *U.S. Department of State*
Jerry Reed, *Education Development Center*
Mary Lou Leary, *U.S. Department of Justice*

10:30 AM **Q&A**

10:45 AM **BREAK**

Part II: Generating and Integrating Evidence. While definitions of what constitutes "evidence" have been debated, there is increasing recognition that evidence is vital for decision makers who fund and implement violence prevention strategies. This part of the workshop will review the various forms of evidence and their value, the theory of change and the foundation for evidence-based programs, and how evidence is established and integrated. Topics include: How do we know if an intervention or policy works? What are the most common methodologies for establishing evidence and what are their strengths and weaknesses? How can we effectively integrate large bodies of evidence to help guide decision makers?

11:00 AM **Importance of Assessing Threats to Study Validity: Cautions About Applying Questionable Evidence to Policies and Programs to Reduce Violence**

The purpose of this presentation is to aid researchers, policy makers, and practitioners in assessing the quality of evidence and the interpretation and generalizability of research results in violence prevention. Using examples from the field of violence prevention, Daniel Webster will address how to assess the rigor of alternative approaches to evaluating a program or policy and how to determine if a specific program or policy is responsible for producing the desired outcomes.

Daniel Webster, *Johns Hopkins Bloomberg School of Public Health*

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11:30 AM **Q&A**

11:45 AM **Integrating Evidence About Violence Prevention**
This panel will discuss systematic reviews as an essential tool for integrating evidence about what works to prevent violence, and other examples of systematic efforts to identify and integrate evidence about violence prevention programs and policies that meet a high scientific standard of effectiveness with the goal of informing governments, foundations, businesses, and other organizations in decision making.

Introduction: ANTHONY PETROSINO, *WestEd*

Systematic Reviews/the Campbell Collaborative
MARK LIPSEY, *Vanderbilt University*

Blueprints for Violence Prevention
PATRICK TOLAN, *University of Virginia*

CrimeSolutions.gov
PHELAN WYRICK, *U.S. Department of Justice*

12:45 PM **Q&A**

1:00 PM **BREAK** ***(Pick up boxed lunch)***

1:15 PM **Experiential Evidence and ICT Interventions for Violence Prevention**
CAROL KURZIG, *Avon Foundation for Women*
NANCY SCHWARTZMAN, *Circle of 6*
THOMAS CABUS, *Circle of 6*

1:45 PM **BREAK**

Part III: Integrating the Evidence Across Low- and Middle-Income Countries and High-Income Countries. The evidence supporting violence prevention is unequally distributed across the world. We know much more about what works in high-income than low- and middle-income countries. Topics include: In what parts of the world do we have evidence that violence prevention works and for what types of violence? What do we know about what does not work to prevent violence? What are the gaps in our knowledge about violence prevention in different parts of the world?

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2:00 PM **Global Overview of What Works in Violence Prevention**
This presentation will provide an overview of what works to prevent violence, what does not work, and where the major gaps lie in our understanding of prevention across the world. This presentation will also describe a life stage and ecological framework for organizing and synthesizing the state of the science.
Mark Bellis, *Liverpool John Moores University*

2:30 PM **Using a Lifestage and Ecological Framework to Integrate the Evidence for Violence Prevention Across the Life Stages**
This panel will focus in greater depth on information about what is known about violence prevention across stages of life across the world. A lifestage framework is a useful organizing principle because risk and protective factors and violent behavior and experiences earlier in life can have consequences at later stages. The presenters will consider how an understanding of violence prevention strategies at each life stage fit within a social ecological framework (individual, family, community, society) and varies across regions of the world.

Moderator: Mark Bellis, *Liverpool John Moores University*

Early childhood (Prenatal through adolescence: ages 0-12)
Harriet MacMillan, *McMaster University*

Youth and emerging adult (Adolescence through young adult: ages 13-24)
Jennifer Matjasko, *Centers for Disease Control and Prevention*

Suicide across the lifespan
Michael Phillips, *Shanghai Jiao Tong University School of Medicine*

Intimate partner violence across the lifespan
Chris Maxwell, *Michigan State University*

4:00 PM **BREAK**

4:20 PM **Q&A and Discussion**

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5:10 PM **Summary of Day 1 and Wrap-Up**
JACQUELINE LLOYD, *National Institute on Drug Abuse*

5:30 PM **ADJOURN DAY 1**

DAY 2: THURSDAY, JANUARY 24, 2013

The objectives of the second day of the workshop are to explore how research and evidence is disseminated and adapted across settings, and how organizations and agencies can create their own data and evidence.

8:00 AM **Continental breakfast will be served**

8:15 AM **Opening and Summary of Day 1**
JAMES MERCY, *Centers for Disease Control and Prevention*
KATRINA BAUM, *National Institute of Justice*

8:30 AM **Day 2 Keynote**
The evidence that shows that violence can be prevented comes from diverse sources, including findings from research, program evaluation, and practice. These must be integrated to provide rigorous guidance for future investments and the innovations that can result in improved results. This presentation will focus on ways of resolving the tensions between minimizing risk by investing primarily in proven interventions and striving for greater impact by assembling and applying a richer knowledge base.
LISBETH SCHORR, *Center for the Study of Social Policy and Harvard University*

9:00 AM **Q&A**

Part IV: Dissemination and Application of Evidence. Over the past several decades the science related to developing and identifying evidence-based practices and programs for violence prevention has advanced greatly. However, the science of how to disseminate and implement these programs broadly with fidelity and good outcomes lags far behind. This part of the workshop focuses on the following questions: How can we effectively and efficiently communicate

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knowledge of evidence-based programs to stakeholders? What are the best strategies for implementing and scaling up evidence-based violence prevention programs? What are the barriers and opportunities for such strategies? What are the unique challenges faced by low- and middle-come countries?

9:15 AM **Barriers to Successful Dissemination and Implementation of Evidence-Based Programs and Opportunities to Overcome Them**

This panel will focus on dissemination and application of knowledge by working to identify (a) key challenges faced by organizations and communities in achieving the broadest possible impact through the dissemination and implementation of evidence-based interventions and (b) strategies for overcoming these barriers. Barriers or challenges to successful dissemination and implementation could be associated with, for example, culture, organizational capacity, readiness, and training.

Moderator: JAMES MERCY, *Centers for Disease Control and Prevention*

JULIE MEEKS GARDNER, *The University of the West Indies*
CATHERINE L. WARD, *University of Cape Town*
BRIAN BUMBARGER, *The Pennsylvania State University*
DEAN FIXSEN, *University of North Carolina at Chapel Hill*

10:25 AM **Q&A**

10:40 AM **Introduction to Breakout Sessions**

JACQUELINE LLOYD, *National Institute on Drug Abuse*

10:45 AM **BREAK**

11:00 AM **BREAKOUT SESSIONS**

Key Steps in Applying Evidence: Translating Knowledge into Effective Action

The purpose of the breakout sessions is to explore key steps and issues in successfully applying evidence-based knowledge about violence prevention to create sustainable actions at the community level. Each breakout group will

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include a facilitator and rapporteur, who will be responsible for organizing and reporting out from each breakout group.

Breakout Group Topics:

Evidence-based decision making based on community needs

Breakout Leaders: Elizabeth Ward, *Violence Prevention Alliance Jamaica*
Daniel Webster, *Johns Hopkins Bloomberg School of Public Health*

Identifying and engaging key stakeholders and people to be involved

Breakout Leaders: Julia da Silva, *American Psychological Association*
Katrina Baum, *National Institute of Justice*

Adapting evidence-based programs to local conditions and culture

Breakout Leaders: Dina Deligiorgis, *UN Women*
Mark Rosenberg, *The Task Force for Global Health*

Evaluation and sustainability

Breakout Leaders: Patricia Campie, *American Institutes for Research*
Anthony Petrosino, *WestEd*

12:00 PM **Reports from the Breakout Groups**

Moderator: Evelyn Tomaszewski, *National Association of Social Workers*

1:00 PM **LUNCH**

2:00 PM **What Practitioners Need in Order to Implement Evidence-Based Programs**

This panel will include perspectives of practitioners from different sectors on the type of information and resources they need to be more effective in identifying and applying evidence-based programs. The panelists will discuss where they believe the most fruitful opportunities lie to build and apply the existing evidence.

Moderator: Katrina Baum, *National Institute of Justice*

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Criminal justice perspective
JIM BUEERMANN, *Police Foundation*
Education perspective
VIRGINIA DOLAN, *Anne Arundel County Public Schools*
Global perspective
JOAN SERRA HOFFMAN, *World Bank*
Education/human service/nonprofit
TAMMY MANN, *The Campagna Center*

3:00 PM **The Way Forward**
The purpose of this panel is to summarize the highlights and key messages from the workshop, drawing on presentations and individual perspectives.
JACQUELYN CAMPBELL, *Johns Hopkins University School of Nursing*
THOM FEUCHT, *National Institute of Justice*
ALYS WILLMAN, *The World Bank Group*

3:30 PM **ADJOURN DAY 2**

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Appendix B

Speaker Biographical Sketches

Michelle Bachelet, M.D., is the first under-secretary-general and executive director of UN Women, which was established in 2010 by the United Nations (UN) General Assembly. UN Women advances women's empowerment and gender equality worldwide in partnership with governments, civil society, the private sector, and the UN system. Prior to joining UN Women, Dr. Bachelet served as President of Chile from 2006 to 2010. She also held ministerial portfolios in the Chilean government as Minister of Defense and Minister of Health. Dr. Bachelet is a long-time champion of women's rights, and has advocated for gender equality and women's empowerment throughout her career.

Katrina Baum, Ph.D. (*Forum Member*), is the senior research officer in the Office of Research Partnerships at the National Institute of Justice (NIJ). During her decade of public service in the U.S. Department of Justice (DOJ), she held positions as the division director of NIJ's Violence and Victimization Research Division; senior statistician at the Bureau of Justice Statistics (BJS); and grant technician at the Office of Community Oriented Policing Services. She represented BJS at a UN Meeting of Crime Experts, and has published numerous government reports using data from the National Crime Victimization Survey on topics such as juvenile victims and offenders, college students, and school crime as well as groundbreaking studies on identity theft and stalking. Prior to joining DOJ, Dr. Baum managed a variety of research projects in criminal justice. While working at the Cartographic Modeling Lab in Philadelphia, she developed the Firearms Analysis System, which is a geographic information system used to track

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firearm-related injuries using data from the Philadelphia Police Department and the National Tracing Center of the Bureau of Alcohol, Tobacco, Firearms and Explosives. Early in her career, she completed a statewide evaluation of community policing in Massachusetts, and was a local evaluator for Weed & Seed and Safe Schools/Healthy Students grants in Philadelphia. She earned her B.A. in law and society from the University of California, Santa Barbara, M.S. from Northeastern University's College of Criminal Justice, and Ph.D. from the University of Pennsylvania's School of Social Policy and Practice.

Mark A. Bellis, OBE, is director of the Centre for Public Health at Liverpool John Moores University, a World Health Organization (WHO) Collaborating Centre for Violence Prevention. He also directs the North West Public Health Observatory, the lead UK observatory for public health intelligence on alcohol, drugs, and violence. Professor Bellis leads on alcohol issues for the UK Faculty of Public Health and sits on the Advisory Board for injury and violence prevention to the director general of WHO. He has acted as expert advisor on substance use, sexual health, and violence prevention to many organizations, including the United Nations, Council of Europe, European Public Health Alliance, and European Monitoring Centre for Drugs and Drug Addiction.

Neil Boothby, Ph.D., is the U.S. government special advisor and senior coordinator on Children in Adversity. In this role, Dr. Boothby fulfills the legislative mandate set forth in Public Law 109-05: the *Assistance for Orphans and Other Vulnerable Children in Developing Countries Act of 2005*, which calls for a coordinated, comprehensive, and effective response on the part of the U.S. government to the world's most vulnerable children. In addition to his interagency coordination efforts, Dr. Boothby will serve as the U.S. Agency for International Development's (USAID's) senior expert on children and adversity. Dr. Boothby is taking a leave of absence from Columbia University's Mailman School of Public Health, where he is the Allan Rosenfield Professor of Clinical Forced Migration and Health. His research focuses on the developmental outcomes of children growing up in abject poverty, war, and other adverse environments.

James R. Bueermann, M.A., was appointed president of the Police Foundation—America's oldest nonpartisan, nonprofit police research organization—in September 2012. Prior to his appointment, he served as an Executive Fellow at NIJ for a year. From 1978 to 2011, he was a member of the Redlands (California) Police Department, where he served his last 13 years as the chief of police and director of housing, recreation, and senior services. He holds a bachelor's degree from California State University at

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San Bernardino and a master's degree from the University of Redlands. In addition, he is a graduate of the Federal Bureau of Investigation's National Academy in Quantico, Virginia, and the California Command College.

Brian Bumbarger, M.Ed., is founding director of the Evidence-based Prevention and Intervention Support Center (EPISCenter) at The Pennsylvania State University (Penn State). The EPISCenter is among the world's first centers dedicated to the study and practice of scaling up effective interventions for preventing delinquency and youth drug use and for promoting positive youth development. Mr. Bumbarger has worked for more than a decade to research and support more than 200 replications of evidence-based programs in trials and natural conditions, focusing on issues of dissemination, high-quality implementation, sustainability, community engagement, and cost–benefit analysis. He also leads the Dissemination and Implementation (Translational Research) Unit at Penn State's Prevention Research Center; is an Adjunct Research Fellow at the Key Centre for Law, Justice, Ethics, and Governance at Griffith University (Queensland, Australia); and is a member of the Board of Directors of the international Society for Prevention Research.

Thomas Cabus is an art director, graphic designer and photographer. Originally from Paris, France, he currently splits his time between San Francisco and New York. His clients range from large corporations (such as Oracle and Orange) to film campaigns, government bodies, and cultural organizations.

Jacquelyn C. Campbell, Ph.D., R.N. (*Forum Co-Chair*), is the Anna D. Wolf Chair and a professor in the Johns Hopkins University (JHU) School of Nursing, with a joint appointment in the Bloomberg School of Public Health. She is one of the inaugural Gilman Scholars at JHU. She is also the national program director of the Robert Wood Johnson Foundation Nurse Faculty Scholars program. Dr. Campbell has been conducting advocacy policy work and research in the area of violence against women since 1980, with 12 major federally funded research grants and more than 220 articles and 7 books. She is an elected member of the Institute of Medicine (IOM) of the National Academy of Sciences (NAS) and the American Academy of Nursing as well as chair of the Board of Directors of Futures Without Violence. She served on the Department of Defense Task Force on Domestic Violence and has provided consultation to the Department of Health and Human Services, Centers for Disease Control and Prevention (CDC), WHO, and USAID. She received the National Friends of the NINR Research Pathfinder Award, the Sigma Theta Tau International Nurse Researcher Award, and the American Society of Criminology Vollmer Award

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for advancing justice. Dr. Campbell co-chaired the Steering Committee for the WHO Multi-country study on Violence Against Women and Women's Health. She has been appointed to three IOM/NAS committees evaluating evidence in various aspects of violence against women. She currently serves on the IOM Board on Global Health and co-chairs the IOM Forum on Global Violence Prevention. She is also a member of the Fulbright Specialist Roster and does work in collaboration with shelters, governments, criminal justice agencies, schools of nursing, and health care settings in countries such as Australia, the Democratic Republic of the Congo, Haiti, New Zealand, South Africa, and Spain.

Patricia Campie, Ph.D., a principal researcher at American Institutes for Research (AIR), is responsible for overseeing and providing quality control for the management of all research, evaluation, and data-related services, training, and technical assistance for the Office of Juvenile Justice and Delinquency Prevention (OJJDP) State Training and Technical Assistance Center (STTAC). Dr. Campie also acts as project director for the Investing in What Works project, a federal initiative aimed at developing and promoting best practice supports for implementing evidence-based and evidence-informed programs to their greatest effect. She is also a senior design team member and lead evaluator for developing grantee evaluation capacity on the OJJDP cross-site evaluation of the Mentoring Enhancement Demonstration Program. This randomized controlled study involves 10 collaborative partnership grantees at more than 30 sites across the country implementing innovative mentoring programming. Dr. Campie is also co-leading a four-state implementation of Project Combine, a unique substance abuse treatment and mentoring intervention approach used with young offenders sentenced to juvenile drug courts in Arizona, Colorado, Virginia, and Washington. Immediately prior to joining AIR, Dr. Campie served as director for the National Center for Juvenile Justice (NCJJ). In that role she oversaw the management, finances, staffing, and deliverables for all of NCJJ's work, which included the National Juvenile Court Data Archive, the State Technical Assistance and Training Center, the MacArthur Foundation's Models for Change national juvenile justice reform project, and other national and subnational juvenile justice initiatives. During this time, she served as the project director for the valuation of the National Resource Center for Legal and Judicial Issues, funded by the Children's Bureau to help legal and child welfare systems work more effectively together, and she oversaw the Pennsylvania Quality Improvement Initiative, a 3-year statewide effort as part of Pennsylvania's Evidence Based Practice Resource Center to provide training and technical assistance to providers to improve the quality of implementation of their evidence-informed programs.

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Julia M. da Silva is the director of the American Psychological Association Violence Prevention Office. She is responsible for the conceptualization, development, implementation, evaluation, and management of programs and projects on violence prevention and treatment, and the administrative operations of that office. This includes oversight and direction of new and ongoing programs; conceptualization and oversight of complex, multisite programs and projects; organization of Web-based and in-person seminars; presentations at conferences and meetings; partnerships with national, state, and local partners; coordination of staff and consultants; management of budget expenses; and fundraising and relationship with a variety of funders. Ms. da Silva has provided leadership for projects addressing behavioral science and public health, violence prevention, women's issues, professional development, vocational education, and adult literacy. With assistance from national experts, Ms. da Silva developed and is the national director for (1) the ACT Raising Safe Kids Program launched in 2000, an early violence prevention parenting program in nearly 100 U.S. sites and 5 countries, and (2) the Effective Providers for Child Victims of Violence Program funded by the DOJ Office for Victims of Crime. The latter program was launched in 2011 to disseminate information on trauma-focused assessment tools and evidence-based treatment to professionals providing services to victimized children. She has a bachelor's degree in Psychology from Catholic University, Sao Paulo, Brazil, and a graduate degree in sociology and Latin American studies from the Université Sorbonne Nouvelle-Paris III in France.

Dina Deligiorgis, M.I.A., has a diverse background and years of activism devoted to human rights and social justice, from working on health issues in rural communities of Brazil, to education issues for U.S. inner city schools to development projects across Ghana. For the past 5 years, she has focused her practice on women's rights and gender equality, supporting initiatives at the World Bank, United Nations Population Fund, and United Nations Development Fund for Women. Ms. Deligiorgis is currently the knowledge management specialist for the Ending Violence against Women Section at UN Women, where she has been managing the development of a first-ever global programming support site, The Virtual Knowledge Centre to End Violence against Women and Girls, that provides practitioners with step-by-step guidance on how to design, implement, and monitor effective policies and programs; it includes a database of more than 800 tools in more than 60 languages.

Virginia Dolan, M.A., Ed.D., has spent more than 30 years in education in multiple roles employed in five school systems in four states, as a middle school teacher and special education teacher of adjudicated adolescents with

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emotional disabilities, school psychologist, and central office administrator. Since moving to Maryland, she spent 15 years as a school psychologist throughout Anne Arundel County Public Schools, grades Pre-K through 12, among the 40th largest U.S. school systems, with nearly 80,000 students, 125 schools, more than 6,000 students, and nearly a billion-dollar budget. In this capacity, in addition to providing psychological services to students and professional development to support student challenges with learning and behavior, she provided and led Trauma Response Teams in critical incidents as needed. She worked on a variety of district, local, and state committees to address barriers to learning, and was president of the Maryland School Psychologists' Association and acting coordinator of Psychological Services. Since 2000, she has been primarily involved with violence prevention in the district, state, and national levels within the full continuum of student behavioral supports and interventions, in partnership with the Maryland State Department of Education, JHU, and Sheppard Health Systems through Positive Behavioral Interventions and Supports (PBIS). As the implementation fidelity increased, also known as "multi-tiered systems of support," the system has scaled up PBIS. She is currently coordinator of Behavioral Supports and Interventions for the district, supporting students and staff. She has consulted with school systems throughout Maryland as well as nationally about the critical features for full-fidelity implementation.

Thomas E. Feucht, Ph.D., is executive senior science advisor at NIJ, DOJ. He has been a member of the federal government's Senior Executive Service since 2005. Dr. Feucht has been with NIJ since 1994, where he has served as chief of the Crime Control and Prevention Division; associate deputy director for research and evaluation; and NIJ's deputy director for research and evaluation and head of the Office of Research and Evaluation. As part of his work for NIJ, Dr. Feucht serves on the Social, Behavioral, and Economic Sciences Subcommittee of the National Science and Technology Council Committee on Science, of the White House Office of Science and Technology Policy. From 1998 to 2000, Dr. Feucht served as chief of staff to the Attorney General's Methamphetamine Interagency Task Force, established as part of the 1996 *Methamphetamine Control Act*. He has conducted and published research in policy and practice; policing and terrorism; substance abuse; intravenous drug use, HIV, and prostitution; prison drug use; and school violence. From 1987 to 1994, Dr. Feucht served on the faculty at Cleveland State University in the Sociology Department and the College of Urban Affairs. Dr. Feucht received his doctorate in sociology in 1986 from the University of North Carolina at Chapel Hill with an emphasis on quantitative research methods and statistics.

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Dean L. Fixsen, Ph.D., began his career in human services as a psychiatric aide in a large state hospital for children with profound developmental delays. He has spent his career developing and implementing evidence-based programs, initiating and managing change processes in provider organizations and service delivery systems, and working with others to improve the lives of children, families, and adults. Dr. Fixsen was co-director of the research group that produced the Teaching-Family Model, an early version of an evidence-based program (45 years and counting) and one of the few that has national certification standards for practitioners and for organizations using the Model. He is co-author of the highly regarded monograph *Implementation Research: A Synthesis of the Literature*. He has served on numerous editorial boards and has advised federal, state, and local governments. He is a senior scientist at the Frank Porter Graham Child Development Institute, University of North Carolina at Chapel Hill; co-director (with Karen Blase) of the National Implementation Research Network; co-director (with Karen Blase, Rob Horner, and George Sugai) of the State Implementation and Scaling up of Evidence-based Practices Center; co-chair (with Jennifer Schroeder, Bianca Albers, and Deborah Ghate) of the Global Implementation Conference; co-founder (with Jennifer Schroeder and Melissa DeRosier) of the Global Implementation Initiative; and a member of the founding Board of Editors of the journal *Implementation Science*. Dr. Fixsen received his doctorate in experimental psychology from the University of Kansas in 1970.

Julie Meeks Gardner, Ph.D., is professor of child development and nutrition, and head of the Caribbean Child Development Centre, within the Consortium for Social Development and Research of the University of the West Indies, Open Campus. Her work has focused on nutritional status and child development of children in difficult circumstances, and on issues of children and violence, including the development of aggression and violence among children, interventions that reduce violence and aggression, children's involvement in gangs, and the effects of violence on children in the Caribbean. She was the lead researcher on the Caribbean Region report on Violence against Children for the UN Secretary General's Global Report. Professor Meeks has published widely in international research journals, several book chapter and technical reports, and a number of books and monographs both authored and edited. She serves as campus coordinator for graduate studies and research. She was the recipient of the Vice Chancellor's Award for Excellence in Research and Public Service, 2011.

Joan Serra Hoffman, Ph.D., a U.S., Brazilian, and Portuguese national, is a violence prevention specialist with 20 years of experience in policy design, implementation, research, and network building, with a focus on

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bridging the gap between researchers and practitioners, and promoting the integration of research-based approaches in community settings. She has served as an advisor to governments, multilateral and bilateral organizations, and universities in the Americas, participating in the development of citizen security and violence prevention initiatives in 12 countries in the region. Previously, at CDC, Dr. Serra Hoffman provided policy and scientific oversight of the National Academic Centers of Excellence on Youth Violence Prevention. Additionally, she was the founding co-director of the Inter-American Coalition for the Prevention of Violence, and the director of the U.S. National Network of Violence Prevention Practitioners. Dr. Serra Hoffman began her work as a youth and community development specialist and special scientist with the Boston Violence Prevention Project; her program development efforts were described in the *Journal of Health Care for the Poor and Underserved*, *the Nation's Health*, the *Alternative Dispute Resolution Report*, *Dispute Resolution Journal*, and the Office of Juvenile Justice and Delinquency Prevention. Dr. Serra Hoffman received her Ph.D. in social policy from The Heller School, Brandeis University. She was selected as a Next Generation Leadership Fellow by the Rockefeller Foundation, and has served on the national and international boards of organizations providing gang victim services, and advancing comprehensive violence prevention initiatives, including President Clinton's National Campaign Against Youth Violence. She has authored many publications, including *Beyond Suppression: Global Perspectives on Youth Violence* (Praeger Press, Global Crime and Justice, 2011).

Carol M. Kurzig is president of the Avon Foundation for Women. Previously, she was president of the National Multiple Sclerosis Society's New York City chapter and director of public services and assistant to the president at the Foundation Center. She was a director and served as board chair of the Support Center for Nonprofit Management and currently serves as a vice chair of the Nonprofit Coordinating Committee Board of Directors. The Avon Foundation for Women was created in 1955 to "improve the lives of women" and is now the leading corporate-affiliated global philanthropy dedicated to women. Through 2009, Avon global philanthropy raised and awarded more than $725 million, all of which focused on women and their families (primarily for breast cancer, domestic violence, and emergency and disaster relief). Avon currently supports breast cancer and domestic violence programs in more than 50 countries. The foundation's grant-making programs include the Avon Breast Cancer Crusade, with goals to accelerate research and ensure access to care; women's empowerment programs, with an emphasis on domestic violence through its Speak Out Against Domestic Violence program; and special programs in response to national and international emergencies. Its extensive fundraising programs include

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the nine-city Avon Walk for Breast Cancer series and special events to raise awareness and funds for gender violence programs.

Mary Lou Leary, J.D., M.Ed., was appointed acting assistant attorney general on March 1, 2012. As head of the Office of Justice Programs (OJP), she oversees an annual budget of more than $2 billion dedicated to supporting state, local, and tribal criminal justice agencies; an array of juvenile justice programs; a wide range of research, evaluation, and statistical efforts; and comprehensive services for crime victims. Prior to her appointment, she served as principal deputy assistant attorney general. Ms. Leary has 30 years of criminal justice experience at the federal, state, and local levels, with an extensive background in criminal prosecution, government leadership, and victim advocacy. Before joining OJP in 2009, she was executive director of the National Center for Victims of Crime, a leading victim advocacy organization in Washington, DC. She also served in leadership roles at the Office of the U.S. Attorney for the District of Columbia, holding posts as principal assistant U.S. attorney, senior counsel to the U.S. attorney, chief of the office's Superior Court Division, and U.S. Attorney. From 1999 to 2001, she held several executive positions at DOJ, including acting assistant attorney general for OJP, deputy associate attorney general, and acting director of the Office of Community Oriented Policing Services. In addition to her years as a federal prosecutor, Ms. Leary prosecuted crimes on the state and local levels as assistant district attorney in Middlesex County, Massachusetts. She received a bachelor's degree in English literature from Syracuse University, a master's degree in education from Ohio State University, and a law degree from Northeastern University School of Law.

Daniela Ligiero, Ph.D., serves as the senior advisor for gender at the Office of the U.S. Global AIDS Coordinator (OGAC) at the U.S. Department of State, leading the inclusion of gender issues in HIV prevention, treatment, and care. Dr. Ligiero is also one of the three co-chairs for the President's Emergency Plan for AIDS Relief (PEPFAR) Gender Technical Working Group. Before joining OGAC in 2010, she held a previous appointment at OGAC, working as country support team lead for Guyana and Haiti, as well as team lead for the Caribbean and Latin America. Dr. Ligiero has worked as a health and gender advisor in various positions. She served as a consultant for the World Bank, where she developed a strategy to integrate gender issues into HIV programming through the Multi-country AIDS Program. She was an American Association for the Advancement of Science Fellow in the U.S. Senate, where she worked as a health advisor for Senator Jeff Bingaman (D-NM), focusing on Global Fund issues and Hispanic health. More recently, before returning to OGAC, Dr. Ligiero served as

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the chief of HIV/AIDS and senior program officer for the United Nations Children's Fund (UNICEF) in Brazil. She has also worked as a clinician, offering psychological counseling for survivors of gender-based violence. Dr. Ligiero has a Ph.D. in counseling and community psychology from the University of Maryland, College Park, with a focus on gender issues, HIV, and public health.

Mark W. Lipsey, Ph.D., is director of the Peabody Research Institute and a research professor at Vanderbilt University. His research activities include meta-analysis of longitudinal studies that identify predictive risk factors for adverse outcomes among children and youth; meta-analysis of prevention and intervention studies for those adverse outcomes; evaluation of social and educational programs for at-risk children; application of research findings to improve program practice; and methodological quality in program evaluation research. Professor Lipsey is a member of the Tennessee Criminal Justice Coordinating Council and the Science Advisory Board for the federal OJP, chairing the OJJDP Subcommittee. He is co-editor of *Research Synthesis Methods* and co-editor-in-chief of *Campbell Systematic Reviews*, and his published work includes textbooks on evaluation research and meta-analysis.

Jacqueline Lloyd, Ph.D., M.S.W. (*Forum Member*), is a health scientist administrator in the Prevention Research Branch in the Division of Epidemiology, Services, and Prevention Research at the National Institute on Drug Abuse (NIDA) within the National Institutes of Health (NIH). Her program areas at NIDA include screening and brief interventions, youth at risk for HIV/AIDS, environmental interventions, peer interventions, women and gender research, and health communications research. Prior to joining NIDA, Dr. Lloyd held faculty positions at Temple University in the School of Social Administration and at the University of Maryland School of Social Work. She has taught courses in research methods, health, and mental health human behavior theory. Her own research activities have included evaluation of a community-based youth prevention program; investigation of HIV risk behaviors and substance use among youth; and investigation of the role of family, peer, and social network contextual factors on risk behaviors and treatment outcomes among youth and injecting drug users. Her many publications include "HIV Risk Behaviors: Risky Sexual Activities and Needle Use Among Adolescents in Substance Abuse Treatment" (*AIDS and Behavior*, 2010) and "The Relationship Between Lifetime Abuse and Suicidal Ideation in a Sample of Injection Drug Users" (*Journal of Psychoactive Drugs*, 2007).

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Harriet MacMillan, M.D., M.Sc., is a psychiatrist and pediatrician conducting family violence research. She is a member of the Offord Centre for Child Studies, and professor in the departments of psychiatry and behavioral neurosciences as well as pediatrics at McMaster University. She also holds associate memberships in the departments of clinical epidemiology and biostatistics, and psychology. Dr. MacMillan holds the David R. (Dan) Offord Chair in Child Studies. From 1993 until 2004, she was the founding director of the Child Advocacy and Assessment Program at McMaster Children's Hospital, a multidisciplinary program committed to reducing the burden of suffering associated with family violence. Her research focuses on the epidemiology of violence against children and women; she has led randomized controlled trials evaluating the effectiveness of approaches to preventing child maltreatment and intimate partner violence. Funding for this work has been provided by organizations such as the WT Grant Foundation, the Canadian Institutes of Health Research (CIHR), Brain & Behavior Research Foundation (formerly NARSAD), and CDC. Dr. MacMillan is the Principal Investigator of a CIHR-funded Centre for Research Development in Gender, Mental Health, and Violence across the Lifespan (PreVAiL: http://www.prevailresearch.ca). PreVAiL is an international network of researchers in the areas of mental health, gender, and violence, and of partner organizations with service, research, and policy mandates in these areas.

Tammy L. Mann, Ph.D., has worked in the nonprofit sector in agencies devoted to improving outcomes for minorities and low-income children and families for more than 20 years. At the outset of her career, she worked on the frontlines as a psychologist, providing home-visiting services to low-income pregnant women and families with children under age 3. Throughout much of her career, she has worked at the senior management level in organizations to shape strategic direction and to develop and expand programs. She currently serves as president and CEO of The Campagna Center in Alexandria, Virginia. The Campagna Center serves more than 1,700 children and operates a range of early childhood, school age, and youth development programs designed to empower and engage parents as they address their children's academic and social needs. Dr. Mann has played an active role in shaping the field of early childhood development through numerous service opportunities. Recently she was appointed Commissioner of the Collaborative Commission on Children, Youth, and Families in Alexandria, where she serves as the Commission's first elected chair. She was also recently elected to serve on the Governing Board of the National Association for the Education of Young Children and is an affiliate associate professor in the College of Education and Human Development at George Mason University.

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Jennifer L. Matjasko, Ph.D., M.P.P., is an acting lead behavioral scientist in the Research and Evaluation Branch in the Division of Violence Prevention at CDC. She has served as an assistant professor in the Department of Human Ecology at the University of Texas at Austin and as a senior researcher at Edvance Research, Inc./REL Southwest. Her research interests focus on the development of at-risk adolescents and the factors that promote their health and well-being. Her research emphasizes the use of ecological, life-course, and person-centered approaches in understanding the relationships among individual, family, school, and community factors and adolescent functioning in order to inform prevention, intervention, and policy efforts targeted to at-risk youth. Dr. Matjasko has also worked with school districts across the state of Texas on developing an early warning system that identifies students at risk of academic failure. In addition, she has worked on the evaluations of academic programs for low-income students and with New York City's Department of Probation on developing a needs assessment that identifies young offenders who are at risk for recidivism. She earned her Ph.D. and master's degree in public policy from the University of Chicago. While there, Dr. Matjasko focused her training in developmental psychology, econometrics, and family/community violence.

Christopher D. Maxwell, Ph.D., M.A., is a professor in the School of Criminal Justice at Michigan State University and serves as the College of Social Science's Associate Dean For Research. Dr. Maxwell's research, scholarship, and outreach activities for the past 22 years have largely focused on understanding and improving how governments prevent and control family violence and violence against women. His sponsored research projects include several that tested for the benefits and costs of sanctions and therapeutic treatments for spouse abusers, the impact of police and court services on victims of domestic violence, and other projects that described the epidemiology of violence against women by intimates and the extent and correlates of sexual assault by and against adolescents. His current research focuses on assessing the extent to which intimate partner violence offenders are prosecuted and testing whether more prosecution and sanctions lead to less violence. This and his other research projects were supported by CDC, NIJ, OJJDP, BJS, the state of Michigan, the H.F. Guggenheim Foundation, and the John D. and Catherine T. MacArthur Foundation. Dr. Maxwell earned his B.A. degrees in psychology, sociology, and criminal justice from Indiana University at Bloomington, and his M.A. and Ph.D. degrees in criminal justice from Rutgers University.

James A. Mercy, Ph.D. (*Forum Member*), is special advisor for strategic directions at the Division of Violence Prevention in the National Center for Injury Prevention and Control of CDC. He began working at CDC in a

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newly formed activity to examine violence as a public health problem and, over the past two decades, has helped to develop the public health approach to violence and has conducted and overseen numerous studies of the epidemiology of youth suicide, family violence, homicide, and firearm injuries. Dr. Mercy also served as a co-editor of the *World Report on Violence and Health* prepared by WHO and served on the Editorial Board of the UN Secretary General's Study of Violence Against Children. Most recently he has been working on a global partnership with UNICEF, PEPFAR, WHO, and others to end sexual violence against girls. His recent publications include "Attention-Deficit/Hyperactivity Disorder, Conduct Disorder, and Young Adult Intimate Partner Violence" (*Archives of General Psychiatry*, 2010) and "Sexual Violence and Its Health Consequences for Female Children in Swaziland: A Cluster Survey Study" (*Lancet*, 2009).

Marta Santos Pais, Esq., is the special representative of the UN Secretary-General on Violence against Children. She has more than 30 years experience on human rights issues, engagement in UN and intergovernmental processes, and a firm commitment to the rights of the child. Ms. Santos Pais joined UNICEF in 1997 as director of Evaluation, Policy and Planning and was director of the UNICEF Innocenti Research Centre from 2001 to 2010. Previously she was the rapporteur of the Committee on the Rights of the Child and vice chair of the Coordinating Committee on Childhood Policies of the Council of Europe. Ms. Santos Pais was a special advisor to the UN Study on Violence against Children and to the Machel Study on the Impact of Armed Conflict on Children. Ms. Santos Pais is a member of the Editorial Advisory Board of the *International Journal of Children's Rights*, and a member of the Advisory Board of the International Inter-disciplinary Course on Children's Rights. Previously, she was a member of the Scientific Committee of the International Child Centre in Paris, and visiting professor at the International University in Lisbon, Portugal. Ms. Santos Pais is the author of a large number of publications on human rights and children's rights. She was a member of the UN Drafting Group of the 1989 Convention on the Rights of the Child and its two Optional Protocols; she also participated in the development of other key international human rights standards.

Anthony Petrosino, Ph.D., serves as senior research associate at WestEd. In 2011, he received the Paul D. Hood Award at WestEd for contributions to the field. He has over a quarter-century of experience collaborating on research and evaluation projects, mostly in criminal justice, and has specialized in systematic reviews and meta-analyses of crime prevention programs. Current projects include a quasi-experimental evaluation of an intervention program for homeless ex-prisoners in Minneapolis and a

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multisite randomized trial of a teen pregnancy prevention program. He is co-author of a report of an NIJ-funded randomized experimental evaluation of a school-based violence prevention program, Tribes Learning Communities (Tribes or TLC). Prior to joining WestEd, Dr. Petrosino served as a research consultant for various education and other institutions. He was one of the founding members of the Campbell Collaboration (C2), an international organization that prepares, updates, and disseminates systematic reviews of research on the effects of social and educational interventions. Specifically, he helped develop the C2's first register of experimental studies (known as C2-SPECTR), its first review (on the "Scared Straight" juvenile delinquency prevention program, now being updated), and one of its first substantive groups (Crime & Justice Group). He received a Distinguished Service Award from the Campbell Crime and Justice Group for his service as founding coordinator.

Michael Phillips, M.D., M.P.H. (*Forum Member*), is currently director of the Suicide Research and Prevention Center of the Shanghai Mental Health Center; executive director of the WHO Collaborating Center for Research and Training in Suicide Prevention at Beijing Hui Long Guan Hospital; professor of psychiatry and global health at Emory University; professor of clinical psychiatry and clinical epidemiology at Columbia University; vice chair of the Chinese Society for Injury Prevention and Control; and treasurer of the International Association for Suicide Prevention. He is currently the Principal Investigator on a number of multicenter collaborative projects on suicide, depression, and schizophrenia. His recent publications include "Repetition of Suicide Attempts: Data from Emergency Care Settings in Five Culturally Different Low- and Middle-Income Countries Participating in the WHO SUPRE-MISS Study" (*Crisis*, 2010) and "Nonfatal Suicidal Behavior Among Chinese Women Who Have Been Physically Abused by Their Male Intimate Partners" (*Suicide and Life-Threatening Behavior*, 2009). Dr. Phillips is a Canadian citizen who has been a permanent resident of China for more than 25 years. He runs a number of research training courses each year; supervises Chinese and foreign graduate students; helps coordinate WHO mental health activities in China; promotes increased awareness of the importance of addressing China's huge suicide problem; and advocates improving the quality, comprehensiveness, and access to mental health services around the country.

Jerry Reed, Ph.D., M.S.W., began serving as the director of the national Suicide Prevention Resource Center in the United States in 2008. Prior to this appointment, Dr. Reed served for 5 years as executive director of the Suicide Prevention Action Network USA, a national nonprofit founded and driven by survivors created to raise awareness, build political will, and

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call for action with regard to advancing, implementing, and evaluating a national strategy to address suicide. He also served as a Fellow in the U.S. Senate, working on health issues to include suicide prevention. Dr. Reed serves on the Board of the International Association for Suicide Prevention as chair of the Council of Organizational Representatives, and is currently a member of the Violence Prevention Alliance Steering Committee operated with the WHO and international partners. Dr. Reed earned a master's of social work with an emphasis in aging administration. He also received a Ph.D. in health-related sciences from Virginia Commonwealth University with an emphasis in gerontology.

Mark L. Rosenberg, M.D., M.P.P. (*Forum Co-Chair*), is executive director of the Task Force for Global Health. Previously, for 20 years, Dr. Rosenberg was at CDC, where he led its work in violence prevention and later became the first permanent director of the National Center for Injury Prevention and Control. He also held the position of special assistant for behavioral science in the Office of the Deputy Director (HIV/AIDS). Dr. Rosenberg is board certified in both psychiatry and internal medicine with training in public policy. He is on the faculty at Morehouse Medical School, Emory Medical School, and the Rollins School of Public Health at Emory University. Dr. Rosenberg's research and programmatic interests are concentrated on injury control and violence prevention, HIV/AIDS, and child well-being, with special attention to behavioral sciences, evaluation, and health communications. He has authored more than 120 publications and recently co-authored the book *Real Collaboration: What It Takes for Global Health to Succeed* (University of California Press, 2010). Dr. Rosenberg has received numerous awards, including the Surgeon General's Exemplary Service Medal. He is a member of the IOM. Dr. Rosenberg's organization, the Task Force for Global Health, participated in the IOM-sponsored workshop Violence Prevention in Low- and Middle-Income Countries: Finding a Place on the Global Agenda, and the Task Force remains interested in helping to continue the momentum of the workshop through the Forum on Global Violence Prevention. The Task Force is heavily involved in the delivery of a number of global health programs and sees many ways in which interpersonal violence and conflict exacerbate serious health problems and inequities.

Lisbeth (Lee) B. Schorr is a senior fellow of the Center for the Study of Social Policy, where she works with colleagues on efforts to broaden the understanding of evidence as applied to the design and evaluation of complex initiatives. She is also a lecturer in social medicine at Harvard University, and a member of the Executive Committee of the Aspen Institute's Roundtable on Community Change, of the IOM, and of the Board of the SEED

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Foundation. She is the author of two books, *Within Our Reach: Breaking the Cycle of Disadvantage* and *Common Purpose: Strengthening Families and Neighborhoods to Rebuild America*.

Nancy Schwartzman is a filmmaker, media strategist, app developer, and catalyst for social change who believes storytelling and technology can create safer communities for women and girls. Named one of the "10 Filmmakers to Watch in 2011" by *Independent Magazine*, Ms. Schwartzman is the director of the award-winning film *The Line*, a documentary that examines rape culture and the line of consent, and *XOXOSMS,* a love story that explores how technology can create digital intimacy. With the creation of the Circle of 6 iPhone and Android app, Ms. Schwartzman's team won the highly competitive White House "Apps Against Abuse" Technology Challenge. Now on iOS and Android, and downloaded by more than 50,000 users, Circle of 6 helps friends stay close and connected to prevent violence before it happens. An early adopter of cutting-edge media tools for women's safety and dynamic storytelling, Ms. Schwartzman is a sought-after speaker and consultant working with college campuses, military populations, independent filmmakers, and international organizations. Her clients include the Academy Award–nominated documentary *The Invisible War* and upcoming *Girl Model* documentary. She is a graduate of Columbia University.

Patrick H. Tolan, Ph.D., is professor of education and of psychiatry and neurobehavioral sciences at the University of Virginia (UVA), where he is director of Youth-Nex: The UVA Center to Promote Effective Youth Development. Youth-Nex is a cross-university, multidisciplinary center to advance prevention of problems affecting youth and to promote healthy development. For the past 30 years, he has conducted research with multiple collaborators on an ecological–developmental understanding of youth functioning, with much of that work focused on high-risk communities and carried out through several randomized trials of family-focused efforts to promote healthy development in such high-risk communities. He also has been a leader in promoting use of empirically tested approaches to promote child and adolescent mental health. This work has led to more than 160 publications, including his forthcoming edited volume, *Advances in Development and Psychopathology. Brain Research Foundation Symposium Series, Volume I: Disruptive Behavior Problems*. He has served on numerous advisory and editorial boards and served as a consultant to several federal agencies and private foundations. Among these are the Blueprints for Violence and Substance Abuse Prevention, which has set the most recognized standards for identifying the evidence base for programming for child and adolescent emotional, behavioral, and social problems.

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Evelyn P. Tomaszewski, M.S.W. (*Forum Member*), is a senior policy advisor within the Human Rights and International Affairs Division of the National Association of Social Workers (NASW), where she directs the NASW HIV/AIDS Spectrum Project. The project is a multiphase, federally funded project based on a training of trainer model that develops provider skills—through training, education, and technical assistance—to better address the clinical practice and policy issues relevant to the range of health and behavioral health issues of living with HIV/AIDS and co-occurring chronic illnesses. Ms. Tomaszewski promotes the NASW Global HIV/AIDS Initiative in collaboration with domestic and international groups and agencies; implements capacity and training needs assessment addressing the social welfare workforce, volunteers, and psychosocial care providers in sub-Saharan Africa; and serves as technical advisor in a USAID-funded Twinning Project with the Tanzania Social Work Associations. She staffs the National Committee on Lesbian, Gay, Bisexual, and Transgender Issues and previously staffed the International Committee and Women's Issues Committee. Ms. Tomaszewski has expertise in policy analysis and implementation addressing gender equity, violence prevention and early intervention, and the connection of trauma and risk for HIV/AIDS and other sexually transmitted infections. She has more than two decades of social work experience as a counselor, advocate, educator, and program administrator. Ms. Tomaszewski holds a B.S.W. and an M.S.W. from West Virginia University and a Graduate Certificate in Procurement and Contracts Management and a Certificate in Leadership Development from the UVA.

Catherine L. Ward, Ph.D., is an associate professor in the department of psychology at the University of Cape Town, South Africa. Her research interests are in violence prevention from the perspective of children's development, and particularly in public health approaches to this—in developing evidence-based approaches to violence prevention that have a wide reach and are effective in improving children's development and reducing their likelihood of becoming aggressive. Much of her current work is focused on preventing child maltreatment, and on understanding the epidemiology of risk factors faced by South African children. Dr. Ward serves on the Steering Committee of the University of Cape Town's Safety and Violence Initiative, an interdisciplinary research initiative that seeks to understand violence and promote safety. The Safety and Violence Initiative is a member of the WHO's Violence Prevention Alliance (VPA), and Dr. Ward co-leads the VPA Parenting Project Group. Recently, she and her colleagues Amelia van der Merwe and Andrew Dawes produced the edited volume *Youth Violence: Sources and Solutions in South Africa*. The book reviews the current state of the science in understanding how to prevent children from becoming aggressive, and how to adapt the evidence base for use in low- and

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middle-income countries. In addition, she serves on the advisory boards of the Alan J. Flisher Centre for Public Mental Health at the University of Cape Town, and the Capoeira Educational Youth Association (a youth development association in Cape Town); and on the Editorial Boards of the journals *South African Crime Quarterly* and *Psychosocial Interventions*. She holds a Ph.D. in clinical community psychology from the University of South Carolina.

Elizabeth Ward, M.B.B.S., M.Sc. (*Forum Member*), is a medical epidemiologist with years of public health experience in the Jamaican government health system. Dr. Ward is a consultant at the Institute of Public Safety and Justice at the University of the West Indies and chair of the board of directors of the Violence Prevention Alliance Jamaica. She was formerly the director of disease prevention and control of the Health Promotion and Protection Division in the Ministry of Health. She has coordinated program development, research, and data analysis and has been responsible for disease prevention and control. She spearheaded the development of the Jamaica Injury Surveillance System, which tracks hospital-based injuries island-wide. Additionally, Dr. Ward has contributed to the development of Jamaican government policies as a task force member for the National Security Strategy for Safe Schools and as a member of the working groups for the security component of the National Development Plan, the National Strategic Plan for Children and Violence, and the Strategic Plan for Healthy Lifestyles.

Daniel W. Webster, Sc.D., M.P.H., is co-director of the Johns Hopkins Center for Gun Policy and Research and associate director of the Center for the Prevention of Youth Violence at the Johns Hopkins Bloomberg School of Public Health. He has been a core faculty member of the Johns Hopkins Center for Injury Research and Policy since 1992. Dr. Webster has published articles on firearm policy, youth gun acquisition and carrying, the prevention of gun violence, intimate partner violence, and adolescent violence prevention. He has studied the effects of a variety of violence prevention interventions, including state firearm policies, community programs to change social norms concerning violence, public education and advocacy campaigns, and school-based curricula. Dr. Webster teaches "Understanding and Preventing Violence" and co-teaches health policy evaluation and research methods. He also directs the Injury Control Certificate Program at Johns Hopkins.

Alys Willman, Ph.D., is a social development specialist for the Social Cohesion and Violence Prevention team at the World Bank. She leads analytical and project work on urban violence, youth violence, and gender-based

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violence for the team. She is the co-author of *Violence in the City* (2011) and *Societal Dynamics and Fragility* (2012), and has authored various other books and articles on urban violence, youth violence, and illicit economies. Current work includes projects in Central America and East Asia, and supporting knowledge exchange within and outside the World Bank. Prior to joining the Bank, she taught at the New School University and worked with international nongovernmental organizations and bilateral agencies in Colombia, Cuba, Guatemala, Mexico, Nicaragua, and Peru. She holds a doctorate in Urban and Public Policy from The New School University in New York.

Phelan Wyrick, Ph.D., is a senior policy advisor to the Assistant Attorney General for OJP in the U.S. DOJ. He joined the Department in 1998, and has held senior positions in NIJ and OJJDP. In 2012, he was awarded the Attorney General's Distinguished Service Award for leading the development of the CrimeSolutions.gov website. In 2007, he was awarded the Attorney General's Award for Outstanding Contributions to Community Partnerships for Public Safety for his work on gang violence reduction. Dr. Wyrick leads OJP's Evidence Integration Initiative and is the department co-chair for the Defending Childhood initiative. Prior to joining the Department, Dr. Wyrick served as a research associate in the City of Westminster Police Department in Orange County, California. He received his doctorate in applied social psychology from the Claremont Graduate University.

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