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Keeping the Spirit of Community Partnerships Alive in the Scale Up of HIV/AIDS Prevention: Critical Reflections on the Roll Out of DEBI (Diffusion of Effective Behavioral Interventions)

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Abstract

DEBI, or the Diffusion of Effective Behavioral Interventions is the largest centralized effort to diffuse evidence-based prevention science to fight HIV/AIDS in the United States. DEBI seeks to ensure that the most effective science-based prevention interventions are widely implemented across the country in community-based organizations. Thus, this is a particularly timely juncture in which to critically reflect on the extent to which known principles of community collaboration have guided key processes associated with the DEBI rollout. We review the available evidence on how the dissemination of packaged interventions is necessary but not sufficient for ensuring the success of technology transfer. We consider additional principles that are vital for successful technology transfer, which were not central considerations in the rollout of the DEBI initiative. These issues are: (1) community perceptions of a top-down mode of dissemination; (2) the extent to which local innovations are being embraced, bolstered, or eliminated; and (3) contextual and methodological considerations that shape community preparedness. Consideration of these additional factors is necessary in order to effectively document, manage, and advance the science of dissemination and technology transfer in centralized prevention efforts within and outside of HIV/AIDS.

Keywords

Community partnerships; HIV/AIDS prevention interventions; Diffusion of Effective Behavioral Interventions (DEBI); Technology transfer; Power relations

As with other centralized health prevention efforts for violence, substance abuse, and tuberculosis, evidence-based interventions for HIV/AIDS prevention need to be replicated, disseminated, and implemented in order to maximize their impact on communities across the nation. Given new data that suggest an exacerbated epidemic among men who have sex with men (MSM), heterosexual women and men in communities of color, and youth, community-

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focused effective interventions are urgently needed in the fight against HIV/AIDS (CDC 2005a, 2007). Such efforts will improve the scope and speed of the response to the epidemic.

In response to this need, HIV/AIDS prevention intervention efforts have been intensified in the third decade of the epidemic, and the U.S. Centers for Disease Control and Prevention (CDC) has taken a large leadership role. In a relatively short period of time, the CDC has set evidence-based standards for best practice in HIV/AIDS prevention interventions, collected science-based interventions that were most successful, published a compendium of HIV prevention interventions showing evidence of effectiveness, and has scaled up the dissemination and implementation of effective interventions in communities at risk for HIV (see CDC 2005b, 2006). The latest of these various initiatives, called DEBI, stands for the Diffusion of Effective Behavioral Interventions. DEBI is the largest dissemination initiative for HIV prevention that has ever arisen in the history of the US response to the epidemic.

Other similar centralized diffusion efforts have been developed at the federal level. For example, to respond to the growing number of cases of tuberculosis in the U.S., the CDC launched a campaign in 2000 for TB elimination. The TB diffusion effort is based upon the same principles of intervention replication, dissemination, and translation that are used within the HIV/AIDS DEBI program (see Division of Tuberculosis Elimination (DTBE), National Center for HIV, STD, and TB Prevention (NCHSTP), & CDC 2003, 2005c). Another example of a major diffusion effort in the U.S. is the Substance Abuse and Mental Health Services Administration (SAMHSA) Center for Substance Abuse Prevention (CSAP) system. This system evaluated community-based interventions that are focused on mental health and substance abuse prevention, and focused on the dissemination of these interventions. Indeed, SAMHSA has created the National Registry of Evidence-based Programs and Practices (NREPP), which contains myriad interventions that have been reviewed for their effectiveness (SAMHSA 2006).

The DEBI program for HIV/AIDS prevention is the central focus of this paper, and our comments emphasize the extent to which principles associated with the community collaborative process (Bowser and Mishra 2004; Israel et al. 1998) are being adhered to in this type of centralized diffusion effort. We have drawn our ideas and recommendations from our expertise in HIV prevention, our long-term experiences working with racial, ethnic, and sexual minority communities, and the available literature on researcher-community partnerships. While this paper focuses on DEBI, the principles used to comment on this diffusion effort are relevant to many other centralized public health efforts.

Similar to other centralized diffusion initiatives, DEBI brings “science-based, community-and group-level HIV prevention interventions to community-based service providers and state and local health departments. The goal is to enhance the capacity to implement effective interventions at the state and local levels, to reduce the spread of HIV and STDs, and to promote healthy behaviors” (CDC 2006). Currently, fourteen interventions have been identified by the CDC as the best evidence-based HIV/AIDS prevention science and twelve have been packaged for dissemination in the DEBI program. The evidence-based interventions that are included in the DEBI initiative are referred to as EBIs (effective behavioral interventions) and will be termed EBIs throughout this paper.

While space does not permit for a detailed examination of the 14 EBIs within DEBI, additional details about individual EBIs are readily available (CDC 2006). Overall, the target populations in EBIs include high-risk groups, such as youth, gay and bisexual MSMs, heterosexually active women, HIV-positive and HIV negative injection drug users, and others. Interventions were carried out at the individual, group, and community levels. EBIs drew upon several theoretical frameworks such as: (a) Information-Motivation-Behavioral Skills (IMB); (b) structural

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theories of gender and power, and (c) community-level diffusion theories. Behavioral goals mainly focused on condom use, reduction of risk for HIV transmission and drug use, and on improving social and psychological functioning.

Criteria for what constituted "best evidence" for science-based interventions were rigorous and prescribed that the intervention must be a randomized controlled trial and have a positive, statistically significant effect (and no negative effects for relevant outcomes). Additionally, two peer-reviewed publications must have resulted from the intervention in order to be considered evidence-based (for a detailed list, see CDC criteria at CDC 2006). Interventions that meet these standards are packaged in a tool kit for distribution and intervention dissemination and are supported through CDC technology transfer efforts by offering training, technical assistance, and organizational capacity-building (CDC 2006).

Positive steps have been taken by the CDC in responding to the need for scale-up in prevention efforts, and new recognition has been given to the need for more training and guidance on the selection and adaptation of effective interventions (see Harshbarger et al. 2006; McKleroy et al. 2006; Prather et al. 2006). We now stand at an important and timely juncture in which to critically reflect on this dissemination effort given that the community collaborative process surrounding the adoption and implementation of EBIs is critical to its success. We examine the process of the roll out of DEBI in order to critically evaluate the extent to which this very large national effort embraces known and valued principles of community collaboration and to suggest areas for improvement or innovation.

We first discuss the roll out of DEBI, including issues of adaptation, dissemination, and implementation. We then consider the available evidence on how the dissemination of packaged interventions is a necessary but not sufficient criterion for ensuring the success of technology transfer. We examine three issues central to the success (or failure) of technology transfer: (1) perceptions in community settings of a top-down style of dissemination and how this impacts community buy-in; (2) the extent to which organizations perceive that their local innovations are being embraced or eliminated; and (3) determining community capacities and preparedness to adopt/adapt EBIs so as to effectively manage implementation. Beyond the guidelines offered in DEBI, these considerations will aid stakeholders in achieving dissemination and technology transfer of effective interventions.

Adaptation Issues Surrounding the DEBI Rollout

To prepare for intervention implementation, organizations that receive funding in the DEBI program are required to attend CDC training programs on the specific intervention of interest. At the CDC training, facilitators are provided with guidelines for adapting interventions that include the requirement of adherence to "core elements" in the intervention. Core elements are deemed those elements of an intervention that lead to the desired behavioral outcomes and must be implemented locally. These elements, according to the CDC website, "put an intervention's underlying theoretical constructs into operation." To ensure that the intervention is tailored to specific populations, some flexibility is allowed around some of the content of the intervention (e.g. types of messages used, delivery styles), so long as adherence to core elements is not affected (McKleroy et al. 2006).

Once community settings [Community-based organizations (CBOs) and AIDS Service Organizations (ASOs)] and health departments around the country began to adopt EBIs, numerous questions quickly emerged concerning what modifications could and could not be made to interventions. The CDC has acknowledged that in the early phase of DEBI, very little guidance was offered on how to adapt EBIs and that this lack of guidance has the potential to affect the effectiveness of EBIs (McKleroy et al. 2006). Since that time, the CDC has stepped up its guidance rather dramatically and offered additional adaptation guidance that was

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published in a recent special issue of *AIDS Education and Prevention* (McKleroy et al. 2006).

Guidance related to adaptation will continue to be developed on an ongoing basis. The CDC has funded four major projects to assist in this effort. These projects include: (1) the ADAPT program, which is charged with studying a select group of CBOs who are implementing EBIs in order to produce firm guidelines for adapting them (also see McKleroy et al. 2006); (2) a series of STD/HIV prevention training centers that were commissioned to write a training course on selecting the correct EBI and how to adapt an EBI given an agency's capacity, resources, and target population; (3) the recruitment of hundreds of volunteer behavioral scientists through a program called Behavioral and Social Science Volunteers (BSSV) that help to support the DEBI project and are available to help CBOs and health departments to implement EBIs; and (4) funding for 20 national organizations to provide technical assistance, including a hot line where CBOs can call. Each technical assistance provider has 72 h to contact the CBO and develop an action plan with the CBO (see CDC 2006). The CDC is also developing training courses on how to adapt several of the EBIs, and will make them available to community settings.

There has also been some confusion among CBOs and prevention providers about what constitutes a core versus adaptable element of an EBI. The CDC has recognized the need for adaptation in EBIs, and has made a distinction between those interventions that have core elements added or dropped (this is termed intervention "reinvention") and those interventions that have simply been adapted (referred to as "adapted" interventions). For those interventions that are "reinvented," the CDC suggests that the EBI of interest be renamed, and considered fundamentally different from the original EBI. The new intervention, according to the CDC, will need to be tested for effectiveness (Department of Health and Human Services 2006).

While the CDC put much effort into clarifying core elements of interventions, offering trainings on adaptation, and making plans to produce new guidelines, a number of issues that constitute accepted practice in community collaborative processes have not yet been addressed. These issues include more emphasis on community definitions of problems and possible solutions, the promotion of co-learning among all partners involved, building on the strengths and resources of communities, and promoting collaborative and equitable partnerships (Israel et al. 1998). In line with these principles, we underscore several blind spots in the current initiative that can affect the success of EBIs.

Perceptions Around the Mode of Dissemination

A solid entry point into a discussion about the process surrounding the roll out of EBIs is to consider the extent to which community settings have a choice (perceived or actual) concerning the decision to select and adopt an EBI. Community settings are said to have the power to decide if they want to accept an EBI, and they can certainly reject the funds that come with adopting these programs. At the same time, the larger reality is that 38 of 50 state health departments that are funded by the CDC require their community based organizations (CBOs) and AIDS service organizations (ASOs) to use EBIs that were diffused through DEBI (McKleroy et al. 2006). It is clear that many state health departments strongly encourage organizations to adopt an EBI, and there is a broader context that consists of a rather strong need for agencies to receive funding. These contextual factors, coupled with an infusion of new funds that are available for those CBOs/ASOs that implement EBIs, leave a degree of uncertainty as to the extent to which organizations can actually "choose" whether or not to implement an EBI. Many organizations may feel that they must adopt an EBI or lose funds, particularly if they do not have the funds or capacity to evaluate their innovative programs that are already in place. Clearly, the extent to which any prevention dissemination effort has arrived

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by coercion, consent, or free choice is an important consideration to take into account when thinking about the potential or actual success of technology transfer efforts.

Ironically, this top-down approach to intervention dissemination is not congruent with the original design of several EBIs that adhered quite powerfully to the principles of participatory research during their development and implementation. Some of these core principles (Bowser and Mishra 2004; Israel et al. 1998) can help guide our understanding of how dissemination efforts must foster collaborative processes among diverse constituencies, namely community settings, community residents, researchers, and funding agencies. These principles help convey the understanding that dissemination is meaningful to communities when it: (1) fosters community definition of the specific problem that it faces and possible solutions; (2) promotes co-learning among all partners involved in the process; (3) is built on the strengths and resources of the community where the intervention is being disseminated; and (4) promotes collaborative and equitable partnerships. Despite the record of proven success in EBIs, it is indeed possible to harm relationship building with community partners and garner negative intervention effects when selecting top-down approaches for dissemination efforts. This is because inequitable distributions of power and control among funding agencies, health departments, service organizations, and prevention providers can be viewed as a disrespectful or paternalistic imposition on communities and organizations. This can affect organizational buy-in, perceived relevance, or the desire for organizations to translate the need for a change in their current prevention practices to community members that are being served (Pinto et al. 2008; Israel et al. 1998; Wandersman 2003; Yoshikawa et al. 2003).

It is clear that prevention interventions and their dissemination are not simply a matter of respectfully adapting solid interventions to a new environment (or making clear which elements can and cannot be adapted). The *mode* of implementation and dissemination can and should honor the years of cumulative local knowledge creation, production, and maintenance on the ground that has existed in communities all along. We consider this in the next section.

What is "The Best" Intervention and Does DEBI Embrace, Bolster, or Erase Local Knowledge and Histories?

EBIs are the result of carefully controlled trials that have been defined as "best practice" and deemed suitable for widely varying situations and populations (Green 2001), it is important to keep in mind that new science-based randomized trials are (often but not always) tested initially by large organizations in urban areas that are usually affiliated with academic research institutions that receive research funding (Miller and Shinn 2005). There are several community settings where EBIs are implemented that are quite different from those in the original implementation and evaluation (McKleroy et al. 2006). Similarly, there are some community settings that serve populations that are different (e.g. vary by race/ethnicity, religion, region, or otherwise) from those served in the initial development and testing of an intervention (McKleroy et al. 2006). EBIs are typically implemented in community-based settings, and many of these settings serve at-risk populations, with limited capacity and resources (Rapkin and Trickett 2005; Gandelman et al. 2006). Some are located in rural areas or in inner cities, where those at risk have been marginalized and are difficult to reach, both geographically and culturally.

Given the above facts, it is not only essential to step back and consider the definition of what is "the best" intervention for organizations to adopt, but to also ask the question as to whether the process of DEBI embraces and bolsters local knowledge and histories or effectively erases it. In other words, there may be more than one kind of evidence that matters in the process of dissemination. Even if local agencies have not had the resources to conduct a massive, controlled intervention trial does not mean that they have not learned valid and accurate lessons about what works and what does not. Over-reliance on the RCT as the primary standard of

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evidence can disregard local lessons and represents a missed opportunity. At worst, there is the potential to erode prevention that has worked in underserved settings but has not been well measured.

Even when communities do select evidence-based programs, paying attention largely to how to adapt the *content* of the intervention negates myriad other issues that are relevant to consider for successful dissemination. Given the focus on adapting content within DEBI, other activities related to assessing organizational resources—cultural and skill-based infrastructure, staff skills and delivery styles) and capacity-building of these resources—have not been highlighted as much by funders until very recently (Gandelman et al. 2006). At the same time, community-based settings typically lack the funds or time to carry out these intensive assessments of their organizations (Gandelman et al. 2006).

The question remains as to the extent to which the current dissemination process embraces, bolsters, or eliminates local knowledge and histories. This issue emerges out of the tendency in the biomedical model to assume that RCT-based programs almost always have benefits over and above local interventions that have not been studied, or at least not studied in a randomized trial (Miller and Shinn 2005). It also emerges out of a long history of debates on fidelity and adaptation within community collaborative science (Bauman et al. 1991). Proponents of fidelity to randomized controlled trials value the way that these trials are standardized at the beginning of a study and do not change in the name of rigorous adherence to the original protoco1 (Rapkin and Trickett 2005). This is viewed as an accurate and scientific way to scale up and disseminate effective interventions, while deviations are viewed as diluting the value of already tested intervention. However, such a design cannot take advantage of the need for flexibility and quality improvement that may be needed when moving interventions to new settings (Bauman et al. 1991).

If centralized dissemination programs and all of the relevant stakeholders committed to such initiatives intend to honor the process of local innovation, several key questions must be addressed. For example: How can we begin to capture information about the science of adaptations, particularly lessons learned about how to adapt and innovate interventions at the local level? Should expertise on adaptation be controlled and disseminated centrally alongside the content of EBIs, or should this be available at the local or regional levels? Can and should the process of adaptation differ according to the different populations served, and what population differences matter? How, can stakeholders ensure that DEBI procedures capitalize upon local, regional, and national CBO and ASO expertise? Are organizations even aware that the CDC website contains a guidance document that is beginning to honor local knowledge and home-grown interventions, including those that rely on “practice wisdom?” What constitutes “practice wisdom” and how can organizations be made more aware of the acceptability of alternatives to the narrow list of EBIs? Despite the public health importance of addressing HIV nationally and globally, it is presently unclear to researchers, CBOs, and other stakeholders how these questions will be answered.

Indeed, given our collective experiences with hundreds of organizations, there is much positive feedback from communities regarding DEBI projects and the support that is offered to them for implementing EBIs (Pinto et al. 2008). There are also many valid concerns and some vocal discontent within communities on the topics of power inequities, adaptations, and the elimination of local knowledge. These responses should not be surprising as researchers have already detailed that this is quite common when prevention dissemination efforts overvalue a singular approach (Miller and Shinn 2005). As a group of scholars who are facing the eyes and ears of our own community collaborators, we are cautious concerning the fact that DEBI is being promoted as a nearly exclusive approach and, perhaps, without consideration of the unintended consequences that surround important process issues. It remains vital to recognize

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the urgent need for centralized diffusion efforts to use known and widely accepted participatory principles (listed earlier) to guide the science of dissemination.

Viewing Adaptation and Dissemination as a Flexible and Participatory Process: Advancing the Science of Dissemination in DEBI

In order to achieve necessary flexibility in the process of dissemination, researchers must first honor local knowledge and determine phases of community preparedness for adaptation and implementation of science-based interventions (McKleroy et al. 2006; Miller and Shinn 2005). Before any EBI can be chosen for a target group in a particular community, all stakeholders involved in the decision-making process ought to consider issues of preparedness. We recommend that preparedness be assessed at both the community level and the agency-level.

Below we discuss four domains of community preparedness for the adaptation and implementation of packaged interventions. Currently, it is important to note that the CDC does offer advice for community organizations that centers on how to select an intervention, adapt it, prepare for the intervention, and pre-test it (McKleroy et al. 2006). Current research on DEBI has also begun to critically consider the need for assessing community needs and agency capacity (Gandelman et al. 2006). These concepts of preparedness are important but also may obscure other important elements of community capacity and preparedness that are linked to known principles of community-based participatory research and empowerment evaluation (Fetterman et al. 1996). Instead, we focus on preparedness with an eye on examining some of the basic principles of community collaboration that we mentioned at the outset.

Each domain of preparedness that we consider below consists of states of preparedness that are not necessarily on a continuum. These additional domains involve: (1) community knowledge and understanding of the central problem(s) at hand; (2) community perceptions about research processes and products; (3) community preparedness and interest in taking action for solving health-related problems; and (4) balance between science-based interventions and informed community action. Since communities and community-based settings are composed of myriad social, cultural, and political groups and constituencies, these are dynamic sociopolitical structures that are in constant development. Thus, the domains of preparedness noted below ought not be viewed as static entities but rather as time sensitive elements that can be used to characterize different segments of a community (or community setting) at a given time. Table 1 shows how each aspect of preparedness proposed here follows a specific principle of participatory research that can be used to guide dissemination efforts.

Community Knowledge and Understanding of the Problem—A community's ability to identify and address social and public health issues reflects the knowledge, skills, values, leadership and the community's ability to organize around health issues (Goodman et al. 1998). Communities may over time consistently expand their ability to achieve health-related goals (Chavis 1995). However, when community settings engage in the implementation of EBIs, it is necessary for stakeholders to be aware of how communities conceptualize and understand the health issues at hand. Stakeholders will find communities with different conceptualizations and understandings of health problems, including the extent to which HIV/AIDS affects community members and the extent to which this is conceived of as only a health-related problem. The aspects of preparedness listed below can help stakeholders to better identify where their communities fall on this continuum so as to engage community members appropriately (Oetting et al. 1995):

- Precontemplative and disengaged from the problem.
- Recognition of the problem and trying to understand reasons for the problem.

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- Early theory-based explanations for the problem.
- Theory development—from rudimentary data to well-developed theory—where the problem is identified, tested and well understood.

Following this framework, funders, researchers, and community representatives would engage at-risk communities in defining the problem(s) at hand so as to hear and help the community understand the extent of the problem and discuss possible solutions. In this process, all of the above groups would move together from a state of pre-contemplation to one of theory-building and better understanding of the health problem affecting the local community. Table 1 summarizes these points.

Community Perceptions Around Science-Based Interventions—The HIV epidemic has disproportionately affected racial and ethnic minorities in the both the US and globally. Although research has shown that effective interventions may have decreased the risk for HIV infection among minority populations, a history of racial prejudice in the US, the history of Tuskegee within the scientific research enterprise, and minority communities' perceptions of racist or classist attitudes may hamper trust in community relationships and may also hamper the acceptability of these interventions (Pinto and Mckay 2006a, b; Washington 2007). More recently, low involvement of minority populations in health-related research and programs has been documented in the literature (NIMH 1997; Escobar-Chaves et al. 2002). African-Americans, for example, report higher levels of mistrust (Biafora et al. 1993), and communities in general show different degrees of acceptance that can be influenced by suspicion, anger, and fear towards proposed interventions.

With respect to EBIs then, some anger and fear is understandable and in fact may be fostered in the process of adopting EBIs. This is because both within and across community based settings, stories are shared about whether interventions are available for their target groups and if not, whether current EBIs could be adapted to a new racial/ethnic group, gender, or sexual orientation. There is only a limited number of EBIs, and there are many groups that do not yet have their needs met directly through the program. This, coupled with the fact that guidance on adaptations was slow to arrive created an understandably negative reaction concerning what may have felt like a reinvigoration of histories of a lack of involvement of minority communities. Researchers, funding agencies, community organizations, and community members can combat these tendencies by engaging in dissemination efforts that promote more co-learning among all partners involved in the process. Communities may find themselves at different levels of preparedness as it relates to their ability (or desire) to understand, value, and embrace scientific knowledge as follows:

- Fearful of scientific knowledge and rejects its products (e.g. EBIs).
- Suspicious of scientific knowledge or its adequacy to speak to the specific complexities of a local population, with reluctance to use its products.
- Understands and values scientific knowledge and trusts its usefulness and relevance.
- Understands the value of prevention interventions and embraces it.

Communities whose voices have not been heard in both research and in dissemination efforts may either disengage from practices deemed to be necessary once interventions are adopted, or reject needed resources to adopt an EBI. By establishing respectful collaborative partnerships around the dissemination of EBIs, stakeholders can help communities understand, trust, and value behavioral prevention interventions (see Table 1 for summary) and to improve negative perceptions around science which may hamper the adoption or adaptation of EBI.

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Community Interest and Buy-In—Successful implementation of health programs requires community participation in all phases of program development and implementation (Wandersman et al. 1996). Practitioners in community settings and community members may have little exposure to science-based interventions (i.e. lack of resources). Some groups will need to be mobilized—convinced, trained, and inspired—around the goals and processes that accompany EBIs. The degree to which communities mobilize around the dissemination and actually take action will depend on the recognition of the strengths and resources of the community. Stakeholders may begin to identify, before implementation, the extent to which communities are ready to take action around EBIs by examining the following continuum:

- No action has ever been considered.
- Early action based on the current state of understanding of the problem.
- Conflicting action, including action against implementation, predicated on conflicting understanding of the health problem.
- Action is organized and refined based on current state of community understanding of the problems and solutions.

In a collaborative process, stakeholders may choose to meet communities where they are in terms of preparedness, and not assume that every community is ready for interventions. By valuing strengths (e.g. prevention knowledge, staff, leaders, interventions), stakeholders can help communities to organize around health issues before starting prevention programs.

Balancing Science and Community Action—A process of balance and reconciliation between science and action may enhance the ability of community residents to be committed to an intervention and to work closely with community settings to help the entire community overcome a health problem. Therefore, stakeholders ought to assess the extent to which community members are committed to an intervention and can maintain a particular intervention in their community. The following template can be used to assess preparedness in this area:

- Appraisal of local interventions alongside of approved science-based interventions.
- Examine the potential organizational resources that are available: financial, skills-based, space-based, or asset-based agency strengths.
- Determine staff skills needed to carry out interventions and assist with capacity building strategies where needed.
- Identify a core group of committed people who can maintain and monitor an intervention, including people whose primary interests involve individual client outcomes, support for local agencies, and integrity of science: all three sets of concerns should be valued.

By integrating a balance between research and action, stakeholders can help communities to decide when, how, and what interventions to adopt and to implement. Scientists and funders will need to be flexible as to how community settings will use their chosen interventions. Here, balancing research and action fosters the needed commitment for a core group of stakeholders to monitor and maintain a chosen intervention (see Table 1 for summary).

Conclusion and Next Steps

We have argued that understanding community preparedness and documenting a science of adaptation and implementation are vital steps that can help researchers and practitioners work together. It is necessary to understand how all parties can engage one another to identify and implement interventions that match community's needs (Gandelman et al. 2006). All

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stakeholders in the dissemination process have different implicit theories, preferences, and perspectives regarding intervention adaptation and implementation. These perspectives may not be the same, but it is vital to understand that each should inform the other.

Stakeholders who draw on the principles of collaboration and quality improvement, who attempt to adhere to core contents of EBIs, and who also use psychological, social, and behavioral data to adapt the interventions to local needs will be best able to galvanize community participation to help decrease HIV infection. By assessing different levels of community and community setting preparedness for implementation of EBIs, stakeholders will better position themselves in helping their communities to appropriately select and implement EBIs. Appropriateness here means not only the most effective interventions, but also the interventions that best suit the social, cultural and political values and resource in communities. By attending to these elements of community collaboration and preparedness, stakeholders will have a better chance of sustaining interventions in communities that are more meaningful to practitioners and community members.

The CDC has agreed that EBIs were created with little assistance on how to adapt them and we have already underscored that new large initiatives have now been funded to further assist CBOs, prevention providers, and health departments. However, guidelines and published research on DEBI to date have not fully considered how to mitigate the effects of a largely top-down process, cope with the extent to which local knowledge has been honored or rejected, or how to improve efforts that bolster organizations who have local programs that are strong but not yet evaluated. This process risks reducing the dialogue to one that excludes community input. What the agreed upon standard should be for a more inclusive stance towards the scientific process has not yet been determined, but it is certain that it should be sought out in alliance with communities. Some models have been proposed within our own research team, including comprehensive dynamic trials that are concerned with both outcome and process evaluations (Rapkin and Trickett 2005). This approach values the processes of development, implementation, and evaluation of interventions as good indicators of effectiveness. The comprehensive dynamic trial takes a broader view of the relationship between researchers and communities. Here, randomized trials of interventions are best seen as embedded experiments that can be used to offer evidence to guide specific decisions in a process of evidence-guided program development and implementation (Rapkin and Trickett 2005).

Top-down approaches, which dictate adherence to protocols, may not be the optimal way to help disadvantaged communities. Carefully evaluated participatory program development should be an integral part of the scientific process. We are not advocating doing away with evidence-based interventions or centralized dissemination efforts, nor are we suggesting that listening to communities should result in myriad untested interventions. We indeed embrace rigorous evidence of effectiveness. However, different criteria for evidence are needed to adequately learn from the iterative processes between researchers and communities. The next generation of HIV interventions ought to incorporate new research paradigms and theory-directed adaptation and quality improvement research within the program itself. This has the best chance to promote solid technology transfer. Research on how to make interventions the most effective when we disseminate them can enhance the relevance, timing, success, and sustainability of prevention efforts.

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Table 1

Elements of community preparedness for intervention dissemination

Participatory research	Community assets	Elements of preparedness
Fosters community definition of the specific problem that it faces and possible solutions	Conceptualization and understanding of the health problem	Developed theory that identifies the problem, defines and tests it
Promotes co-learning among all partners involved in the process	Knowledge and perceptions around science-based interventions and community experiences of prevention	Understanding of and embracing of behavioral prevention interventions, and quality assurance methods to monitor and improve intervention efficacy
Draws on the strengths and resources of the community where an intervention is being disseminated	Interest and buy-in for collaboration to explore and innovate prevention interventions	Organized action grounded both in the current state of science and community knowledge of problems and solutions
Promotes collaborative and equitable partnerships	Recognize the balance between a participatory understanding of science and informed community action	Maintenance and monitoring of interventions by a core group of committed stakeholders, including community advocates, public health officials, practitioners, and scientists