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How to Adapt Effective Programs for Use in New Contexts

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A wide variety of underused effective HIV prevention programs exist. This article describes sources for obtaining such effective programs and issues to consider in selecting an existing effective program for use with one's priority population. It also discusses seven steps involved in adapting an effective program to meet the needs of a new context while preserving core components (what made, or is believed to have made, the intervention effective in the first place) and best practices (characteristics common to effective programs). Although the examples presented are from the HIV prevention field, the seven-step framework is applicable to the adaptation of effective programs in other health promotion and disease prevention arenas.

Keywords: *effective programs; program selection; program replication; program adaptation; HIV/AIDS; best practices; program model; program goals and objectives; core components*

During the past two decades, a wide variety of effective HIV prevention programs have been developed and implemented. These programs use diverse approaches, such as one-on-one or couples counseling, small-group education and skills building, community-wide outreach, and social marketing. Collectively, they have been shown to be capable of preventing or reducing risky behaviors leading to the transmission of HIV among persons from a wide range of cultural and social backgrounds and a wide range of priority populations, such as men who have sex with men, women, youth, HIV-positive individuals, and members of particular racial or ethnic groups (Card, 2001; Card, Lessard, & Benner, 2007; Centers for Disease Control and Prevention [CDC], 2001; Crepaz et al., 2006; Kirby, 2007; Lyles et al., 2007). Using these well-established, effective programs can save time and money while increasing the likelihood of achieving successful outcomes (Card, 2001; Kraft, Mezoff, Sogolow, Neumann, & Thomas, 2000).

Replication is the process of reimplementing an established program in a new context in a way that maintains fidelity to core goals, activities, delivery techniques, intensity, and duration of the original study. Ideally, the established program would be replicated "as is" in the new setting, with no changes to the original. Oftentimes though, there are mismatches (discrepancies) between the characteristics of the new priority population, implementing agency, or local community and those of the original program. For example, the language, images, and examples in the original program may be outdated, or they may not be culturally appropriate for the new priority population's needs. Particular objectives, approaches, or activities may be too politically charged or controversial for the new local community. Or they may be irrelevant in the new setting. It is also possible that an agency may lack the funding, staffing, expertise, or other resources that are needed to implement the program as it was originally designed and implemented (Bell et al., 2007; Kelly et al., 2000; Solomon, Card, & Malow, 2006; Stanton et al., 2005).

Adaptation is the process of altering a program to reduce mismatches between its characteristics and those of the new context in which it is to be implemented or

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used. Increasingly, studies have shown that it is possible to adapt existing, efficacious HIV programs for new contexts and keep the successful outcomes of the original program (e.g., Gaydos et al., 2008; Lightfoot et al., 2007). Doing so however requires careful planning and execution, as it is possible to make changes that enhance a program's cultural appropriateness, local acceptance, and feasibility, while undermining its effectiveness in changing risky behaviors.

This article details a set of science-based pragmatic steps in adapting an existing, empirically validated intervention to better suit a new context, while preserving what made—or is believed to have made—it effective in the first place. Although its examples are drawn from the HIV prevention and care field, its principles and methods are extendable to the adaptation of other effective health promotion and disease prevention interventions, such as those in the teen pregnancy, substance abuse, violence, and obesity areas. The steps described below are intended to be readily implemented by program staff in everyday service provision contexts, such as community clinics and social service agencies. Other adaptation models that address both adaptation and fidelity use similar principles but are much more involved, making them more appropriate for clinical trials or academic–community collaborations (McKleroy et al., 2006; Solomon et al., 2006; Tortolero et al., 2005; Wainberg et al., 2007; Wingood & DiClemente, 2008).

➤ OVERVIEW OF THE ADAPTATION PROCESS

In our framework, the adaptation process consists of the following seven steps: (1) Select a suitable effective program; (2) gather the original program materials; (3) develop a program model; (4) identify the program's core components and best-practice characteristics; (5) identify and categorize mismatches between the original program model or materials and the new context; (6) adapt the original program model, if warranted; and (7) adapt the original program materials. These steps have been synthesized from a review of the scientific literature on the adaptation of teen pregnancy, sexually transmitted infection (STI), and HIV prevention programs (Bell et al., 2007; Dévieux, Malow, Rosenberg, & Dyer, 2004; Dworkin, Pinto, Hunter, Rapkin, & Remien, 2008; Kelly et al., 2000; Kirby, 2007; McKleroy et al., 2006; Solomon et al., 2006; Stanton et al., 2005; Tortolero et al., 2005; Wainberg et al., 2007; Wingood & DiClemente, 2008). The step framework encourages practitioners to make culturally competent changes to a program to better suit a priority population, but only when needed and only when certain constraints—such as adherence to the original program's theory of change and core components as well as to the literature on best practices—are met. Ideally, a variety of key stakeholders—including local community leaders, program staff, and members of the priority population—will be involved throughout the adaptation process. Having a diverse, representative committee conduct (or at least oversee) adaptation-related activities will help to ensure that all stakeholder interests are considered and respected, that the program that is ultimately planned and implemented is maximally culturally competent, and that there is an increased likelihood of successful implementation and positive outcomes (Card et al., 2007; Card, Solomon, & Berman, 2008).

Step 1. Select a Suitable Effective Program

Some questions to consider when selecting a program for one's priority population include:

- Does the intervention have behavioral and health-status goals—such as increasing condom use, increasing use of clean needles, reducing sexually transmitted infection (STI) rates—that are relevant for and acceptable to the new population and community?
- Has the intervention shown strong evidence of having achieved one or more of these behavioral and/or health status goals?
- Does the intervention address knowledge, values, attitudes, skills, intentions, and other determinants of behavior that are relevant for and acceptable to the new priority population?
- Does the intervention use content and methods that are likely to be accessible and appealing to the new priority population?
- Does the implementing agency have access to the resources needed to acquire, plan, and deliver the program?

If the answers to the above questions show that mismatches between a candidate program and a replication

context are significant—for example, if the principal behavioral or health status goals are not relevant, or if the implementing agency does not have and cannot obtain the resources needed to implement the program—the program should probably not be selected for implementation in one's site. Less significant mismatches may however be successfully addressed through the adaptation process detailed in this article.

Credible lists of U.S.-based effective programs[1] are available from the CDC's *2008 Compendium of Evidence-Based Interventions* (http://www.cdc.gov/hiv/topics/research/prs/evidence-based-interventions.htm), Replicating Effective Programs Plus (REP+) Web site (http://www.cdc.gov/hiv/topics/prev_prog/rep/), and Diffusion of Effective Behavioral Interventions (DEBI) program (http://www.effectiveinterventions.org/), as well as from the National Institutes of Health (NIH)–sponsored effective HIV/STI prevention collections at Sociometrics known as HAPPA (HIV/AIDS Prevention Program Archive; http://www.socio.com/happa.htm) and PASHA (Program Archive on Sexuality, Health & Adolescence; http://www.socio.com/pasha.htm). Additional lists of effective youth-focused programs may be found in several National Campaign to Prevent Teen and Unplanned Pregnancy publications (Kirby, 2007; National Campaign, 2006; Solomon & Card, 2004). Although there is much overlap across these lists, they differ somewhat with respect to the number and range of programs included. This is because the lists were compiled (or updated) at different times, and they vary with respect to both program criteria (e.g., the age of program participants, the prevention approaches employed) and evaluation criteria (e.g., whether the study design involved random assignment to treatment and control groups, length of the follow-up period, minimum sample size, or type of outcomes demonstrated; Solomon & Card, 2004). The program inclusion criteria employed by several lists are shown in Table 1. In most cases, reading the brief program descriptions available through the *Compendium*, REP+, DEBI, HAPPA, and PASHA Web sites should permit program planners to assess the suitability of candidate programs for their setting, using the program selection questions listed above.

Step 2. Gather the Original Program Materials

The first step in the program adaptation process is to acquire all the original materials for the intervention of interest, such as a statement of the goals and objectives of the program, a summary of the underlying theory of change or rationale for the program, the curriculum or protocol guide, a teacher or facilitator manual, student or participant workbooks, and any videotapes, CD-ROMs, or DVDs that were used in implementing the program. These materials can be requested from the original program developer, the CDC's DEBI program, or Sociometrics' HAPPA and PASHA collections. The cost of obtaining program materials varies (with an average cost of about $200 for a complete program replication kit containing all the materials needed to replicate a program), depending on both the number of items needed to implement the program and the nature of these materials. For example, materials that can be downloaded directly from the Internet tend to be cheaper to obtain than those that need to be copied and mailed, such as brochures and videos (HAPPA and PASHA offer 49 effective pregnancy/STI/HIV prevention programs in user's choice of printed and downloadable formats). The availability of program implementation training also varies; training for a number of programs in the CDC's *Updated Compendium of Evidence-Based Interventions* and REP+ Web site is available through the DEBI program.

Step 3. Develop a Program Model

A program model (or logic model) is a diagram or chart that depicts an intervention's priority population, long-term goals, mid- and short-term objectives, program components (strategies, activities, or services provided to the priority population to achieve these goals and objectives), and arrows showing how all these elements are causally linked (Card, Brindis, Peterson, & Niego, 2001). The primary purpose of developing the program model as part of the adaptation process is to understand the relationships between the original components and key outcomes of the selected intervention and help assess whether these relationships are still logical and robust once the model has been adapted for a new context. Sometimes a program developer can supply the program model along with the other materials gathered in Step 1. If not, the model is not too difficult to develop from such materials or from the journal article that first described the program and provided the evidence for its effectiveness. (A tutorial on program model development can be obtained from www.socio.com/programmodelcourse.)

First, assemble the building blocks of the program model (Table 2). Once these elements have been specified, the model can be put together by adding arrows to show—reflecting the program's theory of change—which program components are hypothesized to lead to which short-term objectives, which short-term objectives are hypothesized to lead to which midterm objectives, and which midterm objectives are hypothesized to lead to the long-term goal(s). Figure 1 shows an example of a

TABLE 1
Criteria for Program Inclusion: Selected Lists of Effective HIV Prevention Programs

CDC's 2008 Compendium of Evidence-Based Interventions (http://www.cdc.gov/hiv/topics/research/prs/evidence-based-interventions.htm)

Original *Compendium* criteria (http://www.cdc.gov/hiv/resources/reports/hiv_compendium/section4.htm#AppendixA):

- *Study location/timing:* Conducted in the United States and reported from 1988 onward
- *Intervention approach:* Behavioral or social interventions (excluding policy studies and occupational or blood supply exposure studies) that focused on sex-related risk behavior, drug-related risk behavior, HIV testing behavior, and/or HIV-related health outcomes
- *Quality of study design:* Random assignment to intervention and control groups, a well-matched comparison group, or statistical adjustment for nonequivalence of groups
- *Strength of evidence:* Positive results on at least one key behavioral or health outcome, evidenced by a statistically significant difference between intervention and control or comparison conditions; no statistically significant negative findings for key behavioral or health outcomes

New best-evidence intervention *Compendium* criteria developed in 2004 (Lyles et al., 2007; http://www.cdc.gov/hiv/topics/research/prs/efficacy_best-evidence.htm):

- *Study location:* Conducted in the United States
- *Intervention approach:* Individual or small-group behavioral interventions that focused on sex-related risk behavior, drug-related risk behavior, HIV testing behavior, and/or HIV-related health outcomes (excluding substance abuse treatment, needle exchange programs, school-based programs, and interventions focused *only* on HIV testing and/or partner counseling)
- *Intervention description:* Clear description of key aspects of the intervention
- *Quality of study design:* Prospective design, concurrent comparison arm, random or minimally biased study arm assignment
- *Quality of implementation and analysis:* At least 3-month postintervention follow-up assessment, at least 70% retention rate at follow-up for each arm, analysis of subjects per original study arm assignments, analysis of subjects regardless of intervention exposure, identical pre and post measures, analytic sample of at least 50 participants per study arm, etc.
- *Strength of evidence:* Positive results on at least one key behavioral or health outcome, evidenced by a statistically significant difference between intervention and control or comparison conditions; no statistically significant negative effects in original study or any replication study
- *Other:* No evidence that additional limitations resulted in a fatal flaw

New "promising evidence" *Compendium* criteria developed in 2004 (http://www.cdc.gov/hiv/topics/research/prs/efficacy_promising-evidence.htm):

- *Study location:* Conducted in the United States
- *Intervention approach:* Individual or small-group behavioral interventions that focused on sex-related risk behavior, drug-related risk behavior, HIV testing behavior, and/or HIV-related health outcomes[a]
- *Intervention description:* Clear description of key aspects of the intervention
- *Quality of study design:* Appropriate and concurrent comparison arm or similar historical comparison group; random, minimally biased, or moderately biased subject assignment
- *Quality of implementation and analysis:* At least 1-month postintervention follow-up assessment for each study arm, at least 60% retention rate at follow-up for each arm, analysis of subjects per original study arm assignments or exclusion of subjects if contamination occurred, identical pre and post measures, analytic sample of at least 40 participants per study arm, etc.
- *Strength of evidence:* Positive results on at least one key behavioral or health outcome, evidenced by a statistically significant difference between the intervention and control or comparison condition; no statistically significant negative effects in original study or any replication study
- *Other:* No evidence that additional limitations resulted in a fatal flaw

Note: *REP* creates program packages for *Compendium* interventions; *DEBI* coordinates package dissemination and provides training and technical assistance (http://www.cdc.gov/hiv/topics/prev_prog/rep/).

(continued)

TABLE 1 (continued)

HIV/AIDS Prevention Program Archive (HAPPA; http://www.socio.com/happa.htm)

Selection by a Scientist Expert Panel according to the following criteria (Card, 2001; http://www.socio.com/happa.htm):

1. *Location:* Conducted in the United States
2. *Scientific rigor of evaluation:* Appropriate design and methods, with comparison group
3. *Follow-up assessment*: Must have occurred after the end of the intervention period, preferably 3 to 6 months or longer
4. *Demonstrated positive impact:* Impact on one or more of the following HIV-related behaviors and/or health out comes for one or more subgroups of persons:
   - sexual risk behaviors
   - drug injection risk behaviors
   - prenatal and perinatal transmission risk behaviors
   - STI/HIV infection rates

Program Archive on Sexuality, Health & Adolescence (PASHA) (http://www.socio.com/pasha.htm)

Selection by a Scientist Expert Panel according to the following criteria (Card, 2001; http://www.socio.com/pasha.htm):

1. Location: Conducted in the United States
2. Age of intervention participants:
   - Pregnancy prevention programs must have targeted youngsters 10 to 19 years of age.
   - For STI/HIV prevention programs, interventions targeting college students were also considered.
3. *Scientific rigor of evaluation:* Appropriate design and methods, with comparison group
4. *Follow-up assessment:*
   - For pregnancy prevention programs, follow-up assessment must have occurred at least 6 months beyond the end of the intervention period
   - For STI/HIV prevention programs, follow-up assessment must have occurred at least 3 months beyond the end of the intervention period
5. *Demonstrated positive impact:* Impact on one or more of the following
   - Fertility-related behaviors
   - Sexual STI/HIV risk behaviors
   - Pregnancy, birth, or STI/HIV infection rates

For programs aimed at children aged 15 years or younger, demonstrated positive impact on fertility-related and/or STI/HIV-related refusal/negotiation skills, intentions, values, and attitudes was accepted as preliminary evidence of program promise.

a. Other best-evidence intervention approach criteria may also apply; it is unclear from the available source information.

simplified program model for an HIV prevention program for African American women.

Step 4. Identify the Program's Core Components and Best-Practice Characteristics

This step involves identification of core components and best-practice program characteristics that should be preserved when the program is adapted.

Core components are those elements of the intervention that are responsible (or believed to be responsible) for its effectiveness (Kelly et al., 2000; Solomon et al., 2006). These components are identified by program developers and evaluators through an analysis of the program's underlying theory, research studies comparing different versions of a program, and experience with the program. With respect to program theory, Fishbein and colleagues (2001) have noted that the formal theories that underlie effective HIV prevention programs collectively focus on eight factors that influence behavior: skills to perform the behavior; attitudes toward the behavior; perception of social pressure to perform the behavior; perception of the behavior's consistency or inconsistency with self-image; emotional reaction to performing the behavior; self-efficacy, or confidence in one's ability, to perform the behavior under different circumstances; intention to perform the behavior; and presence of environmental factors that constrain the

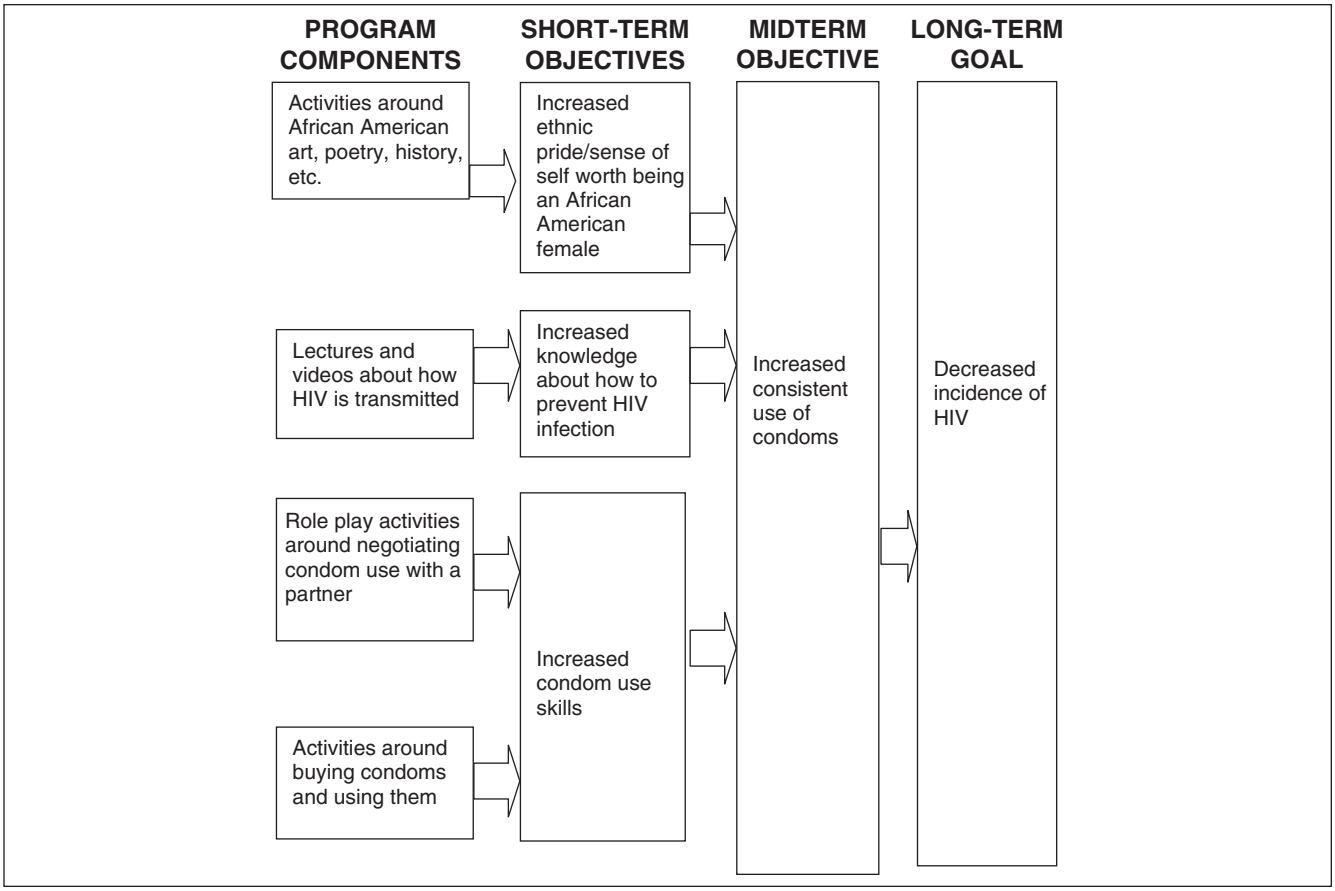

FIGURE 1 A Simple Program Model

TABLE 2
The Building Blocks of a Program Model

Priority population: The group (or groups) of people that a program is designed to help and/or educate in some way. Priority populations are commonly defined in terms of gender, race/ethnicity, age, and other key demographic, geo graphic, and/or personal features.

Long-term goals: The long-term changes that the program seeks to effect in a particular priority population. These changes usually focus on health status (such as HIV incidence or prevalence rates).

Midterm objectives: The midterm changes that program staff seek to effect in a particular priority population that are hypothesized to lead to achievement of the long-term goal(s). These changes usually focus on reducing risky behav iors (such as unprotected intercourse or sharing of needles for drug-injecting).

Short-term objectives: The short-term changes that program staff seek to effect in a particular priority population that are hypothesized to lead to achievement of the midterm objectives. These changes usually focus on knowledge, skills, attitudes, values, and intentions.

Program components: The strategies, activities, and services (defined in terms of content, length, and frequency) that make up a program and are hypothesized to result in achievement of the short-term objectives. Program components could include education and behavioral skills-development workshops, media campaigns, clinical services (e.g., HIV testing), street-based outreach efforts (e.g., needle exchange), etc.

Source: Adapted From Card, Solomon, & Berman (2008).

behavior. Similar factors have been shown to influence behavior in other health prevention and promotion areas (e.g., see Dusenbury & Falco, 1995). Program components that address these factors, in accordance with the program's underlying theory, should be considered core components.

Core components information based on research studies and program developers' and evaluators' experience with the program is available for effective HIV prevention interventions in the DEBI collection and can also be obtained by contacting original program developers or evaluators. For example, Together Learning Choices (TLC) is an effective intervention for young people, aged 13 to 29, living with HIV; the program is delivered in small groups. The DEBI Web site (http://effectiveinterventions.org/go/interventions/together-learning-choices) lists the following as TLC's core components: Help clients develop awareness and identify feelings, thoughts and actions; teach, model, and practice four core skills (emotional regulation, SMART problem solving, goal setting, and assertiveness); reinforce positive client behavior through the use of thanks tokens; help clients identify their ideal self to help motivate and personalize behavior change; and deliver sessions in highly participatory, interactive small groups.

Should information regarding core components for the selected program be unavailable, the next best option is to identify and preserve those *best practice* elements in the original intervention that reflect characteristics common to effective programs. Table 3 lists examples of these characteristics for different priority populations; scientific sources for the best practices are also given in the table. It is important to bear in mind that not all effective programs intended for use with these populations have all of these features. Moreover, incorporation of these features will not guarantee that a program will be effective. However, their presence may increase the likelihood of achieving positive outcomes in the new context (Kirby, 2007; National Campaign, 2006).

Step 5. Identify and Categorize Mismatches Between the Original Program Model or Materials and the New Context

Having developed a program model and identified its relevant core components and best-practice characteristics, the next step of the adaptation process is to identify (list and describe) mismatches between the original program and the new context. Mismatches can be found in (a) program goals or objectives; in (b) characteristics of the priority population, such as age or developmental level; cultural beliefs, norms, and values; language background; literacy level; in (c) characteristics of the agency implementing the program, such as philosophy; staff credentials and expertise; staff cultural competence; or in (d) characteristics of the community in which the program is being implemented, including social factors, such as cultural norms and values; bureaucratic factors, such as laws, regulations, or policies; and physical factors, such as access to transportation (Castro, Barrera, & Martinez, 2004; Dévieux et al., 2004).

Step 6. Adapt the Original Program Model, if Warranted

If a long-term goal or a mid- or short-term objective is being eliminated (e.g., for lack of relevance to new context), then those components (activities and services) serving *only* the eliminated goal(s) or objective(s) can be eliminated. If there is no change to the goals or objectives, but one or more program components are found to be discrepant with what is acceptable to the new priority population or context, then substitute components serving the same goal(s) or objective(s) can be penciled into the program model. For example, if the program depicted in Figure 1 were to be adapted in a community serving white females instead of African American females, the short-term objective "Increased ethnic pride/sense of self-worth being an African American female" would be irrelevant. Elimination of this short-term objective would cause the program activities around African American art, poetry, history etc. to be eliminated from the adapted program model as well.

Step 7. Adapt the Original Program Materials

Once the adapted program model has been finalized, the materials for implementing the program can be revised as needed. Curriculum or protocol guides, teacher or facilitator manuals, student or participant workbooks, videos, brochures, posters, and other materials should be carefully reviewed for reducing mismatches and addressing datedness. In doing so, consider the following five questions.

1. Is the language of the materials appropriate for the priority population, considering their developmental level, cultural norms and values, language background, and literacy level? Language barriers can present a significant challenge to HIV prevention program implementation. In some cases, program materials, including recruitment materials, will need to be translated into another language. Translation of the materials into the original language by a second translator (back-translation) can help to ensure accuracy

TABLE 3
Checklist of Best-Practice Characteristics Common to Effective Behavioral HIV Prevention Programs[a]

Common Characteristics of Behavioral Prevention Programs	
Programs for any population	• Are based on formal behavioral and/or social theories • Build relevant sexual and/or drug-related risk reduction skills • Are culturally tailored for their priority population(s) (CDC, 2001; Kelly & Kalichman, 2002; Kirby, 2007)
Additional Common Characteristics of Behavioral Prevention Programs for Specific Priority Populations	
Programs for men who have sex with men (MSM)	• Incorporate multiple (i.e., four or more) delivery methods, such as counseling, group discussions, lectures, live demonstrations, and role-plays • Are delivered over multiple sessions spanning a minimum of 3 weeks (Herbst et al., 2005)
Programs for women	• Emphasize gender influences (e.g., power imbalances) on HIV risk • Are peer-led • Involve multiple sessions (Exner, Seal, & Ehrhardt, 1997; Mize, Robinson, Bockting, & Scheltema, 2002; Wingood & DiClemente, 1996)
Programs for people who inject drugs	• Provide equivalent content on sex- and drug-related HIV risk • Include use of multiple theories and methods • Include role modeling and social support enhancement (Copenhaver et al., 2006; Des Jarlais & Semaan, 2005; van Empelen et al., 2003)
Programs for HIV-positive persons	• Focus on reduction of specific sexual risk behaviors • Are delivered by health care providers or counselors on a one-on-one basis • Are delivered in an intensive manner (i.e., over 20 hr of contact during 10 or more sessions) • Are delivered in settings where HIV-positive persons receive routine services or medical care • Address a myriad of issues related to mental health, medication adherence, and HIV risk behavior (Crepaz et al., 2006)
HIV education curricula for youth	• Focus on specific behaviors that prevent HIV (e.g., abstaining from sex, using condoms) • Include multiple activities to change specific risk and protective factors that affect the sexual behaviors • Create a safe environment for youth • Involve participants actively and help them personalize the information • Use activities that are appropriate for youths' age and sexual experience • Cover topics in a logical sequence • Secure at least minimal support from authorities • Select educators and facilitators with desired characteristics, train them, and provide ongoing monitoring and support (Kirby, 2007)

a. Not all effective programs for particular populations have all of the indicated characteristics. Also, incorporation of these characteristics does not guarantee program effectiveness.

(Marín & Marín, 1991). Further, it is important to be aware that even people who "speak the same language" may use distinct geographic or social dialects. For example, Puerto Ricans, Mexicans, and Colombians speak dialects of Spanish that differ somewhat with respect to pronunciation, vocabulary, and even grammar. Another common language barrier is low literacy rates, thereby limiting the utility of existing written or text-based prevention materials (Implementing AIDS Prevention and Care [IMPACT] Project, 2002). Persons' developmental levels and cultural norms and values should also be taken into consideration, particularly when dealing with more sensitive topics like sexual behavior and substance use. For instance, less explicit language should be used when talking about barrier methods with younger age groups that are not yet sexually active. Ideally, input should be solicited from the priority population and other stakeholders, and revised program materials pilot-tested, so as to ensure that language (as well as other features—see Item 3 below) are appropriate.

2. Is the research-based information included in the program up-to-date? Statistics and other science-based information presented to participants should be both up-to-date and relevant. For example, HIV incidence and prevalence rates vary by population and region, and trends regarding infection in the United States have shifted over the years. The epidemic-related statistics presented in effective interventions that were developed a decade ago would need to be updated prior to program implementation. A good source for up-to-date statistics is the Web site of the CDC.
3. Are the images and examples in program materials up-to-date and culturally appropriate? Do they help participants to personalize the information? Participants should be able to relate in some way to the images and examples in the program (Kirby, 2007). Videos, true stories, and hypothetical vignettes should be about people who look and act like them. This is particularly important for programs designed to increase perceptions of personal risk. Another way to personalize the information is to incorporate exercises where participants are asked to write or share their feelings about what they just saw or heard. Again, input from the priority population and other stakeholders should be solicited regarding how to revise the images and examples; if possible, the new materials should be pilot tested prior to implementing the program.
4. Do the staff training materials reflect the changes made to the content and delivery format of the adapted program? Preexisting training curricula offered by program developers or distributors may not fully prepare staff for the adapted version of the program. Additional training time may be needed to adequately prepare staff in new content or delivery formats. Any facilitator manuals used by staff to run the program should also be revised accordingly.
5. Do the evaluation materials continue to be appropriate? Process evaluation instruments (facilitator checklists, other forms of record keeping) and outcome evaluation instruments should also be adapted in accordance with the revised program. Updating the evaluation instruments is particularly important if the goals and objectives have to be revised in any way. If at all possible, the adapted program should be reevaluated to test if the program continues to be effective in the new context. Even if outcome evaluation is not feasible, most sites should be able to evaluate the program's implementation, to determine whether activities or services were delivered as planned, whether the intended population was reached, and how satisfied participants were with the program. Although not a substitute for outcome evaluation, process evaluation can provide some preliminary evidence of program success and can help staff to improve the program for future participants.

SUMMARY

The replication of effective interventions is fraught with tension between maintaining fidelity to the original program while being sensitive to the culture and needs of the new priority population and implementation context. This article describes a step-by-step framework for practitioners to use to select and make changes to existing, evidence-based HIV prevention programs to better suit the needs of new contexts, while preserving the theory of change and core components that made them effective in the first place. Other adaptation models that address both intervention fit and fidelity use similar principles but are much more involved (McKleroy et al., 2006; Solomon et al., 2006; Tortolero et al., 2005; Wainberg et al., 2007; Wingood et al., 2008). The current framework is geared toward practitioners in resource-limited settings for whom such approaches may not be feasible. Among its unique and salient features is that it offers specific points of consideration (e.g., questions to consider when selecting a program to implement or when adapting program materials) and examples (e.g., types of mismatches that may be encountered and addressed) to facilitate decision making at each step. As with other models, practitioners who use this framework are encouraged to document their decision-making process concerning any changes made to an existing intervention as well as to conduct and disseminate the results of process and outcome evaluations of

the adapted program, as implemented in their new setting. This will not only benefit the organization that undertook the adaptation but the entire field of translation research and practice as well.

NOTE

1. Several reviews have identified programs that have shown positive results in reducing behavioral risks for HIV among youth (Alford, Cheetham, & Hauser, 2005; Kirby, Laris, & Rolleri, 2005; Paul-Ebhohimhen, Poobalan, & van Teijlingen, 2008) and adults (Bollinger, Cooper-Arnold, & Stover, 2004; Eke et al., 2002; Hong & Li, 2009; Shahmanesh, Patel, Mabey, & Cowan, 2008) in developing country settings. Although examples in this article are U.S.-based, the adaptation principles and processes described here can be applied to programs irrespective of their place of origin or replication locale.

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