mental health **AIDS**

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Biopsychosocial Update

HIV Prevention News

About Women & Men

The Healthy Living Project Team (2007) conducted a randomized, controlled trial involving 936 men and women living with HIV in four U.S. cities: Los Angeles, Milwaukee, New York, and San Francisco. Participants were assigned to either a 15-session, individually delivered, cognitive behavioral intervention designed to "**help** ... **people to cope with the challenges of living with HIV,** ... **particularly not transmitting the virus**" (p. 213),[1] or to a control condition, in which no active psychosocial interventions were delivered until the trial had concluded. "Both groups completed follow-up assessments at 5, 10, 15, 20, and 25 months after randomization ... [and t]ransmission risk, as measured by the number of unprotected sexual risk acts with persons of HIV-negative or unknown status, was the main outcome measure" (p. 213). The investigators report that the intervention

> was successful in helping [people living with HIV] reduce unprotected sexual intercourse with HIV-negative or unknown status partners. At the 20-month assessment, or 5 months after completion of the intervention, the intervention group had reduced transmission risk acts by an average of 36% compared with the control group. Although the early part of the intervention, which addressed general coping skills, did not establish a significant treatment effect at the 5-month point, a positive intervention effect was seen around the time of the [second] module[, which dealt with] applying coping effectiveness skills to specific sexual situations involving potential for HIV transmission[,] at 10 months. This intervention effect increased over time, as seen in the 15- and 20-month assessments.
>
> Unfortunately, the treatment effect in terms of a reduction of HIV transmission risk acts was not maintained at 25 months. Nonetheless, significant reductions in transmission risk acts from baseline levels were observed for the intervention and control groups at 25 months.[2] The attenuation of the intervention effect over time in this study is consistent with results from other randomized controlled trials of behavioral interventions. ... This finding highlights how HIV is now more like a chronic disease, requiring ongoing case management over time as HIV-positive persons enter new relationships or new life challenges. A "booster" model seems warranted. (p. 218)

The Healthy Living Project Team concludes that "[c]ognitive behavioral intervention programs can effectively reduce the potential of HIV transmission to others among [people living with HIV] who report significant transmission risk behavior" (p. 213). Importantly, "[a]lthough this intervention was delivered as 15 sessions for research purposes, the same content was adapted to 8 sessions when delivered to the lagged control partici-

[1] "The Healthy Living Project experimental intervention ... consisted of 15 90-minute individual counseling sessions grouped into 3 modules, each consisting of 5 sessions. Module 1 (stress, coping, and adjustment) addressed quality of life, psychologic coping, and achieving positive affect and supportive social relationships. Module 2 (safer behaviors) addressed self-regulatory issues, such as avoiding sexual and drug-related risk of HIV transmission or acquisition of additional sexually transmitted diseases, and disclosure of HIV status to potential partners. Module 3 (health behaviors) addressed accessing health services, adherence, and active participation in medical care decision making. Intervention sessions followed a standard structure and set of activities but were individually tailored to participants' specific life contexts, stressors, and goals" (p. 215).

[2] "[E]ven through the control arm did not receive the specific theory-guided intervention, the effect of repeat assessments of sexual behavior (just asking about unprotected sex) may serve as a cue for risk reduction for subjects" (p. 218).

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pants. The intervention is intensive and would only be feasible for complex cases in which less intense provider-based or group interventions do not seem to be sufficient for reducing transmission risk" (p. 219).

About Men Who Have Sex With Men

In San Francisco, Offer et al. (2007) elicited narratives from 26 gay and bisexual men recently infected with HIV, who described the circumstances surrounding their own seroconversion. The investigators had particular interest in exploring

> participants' **attributions of responsibility for HIV prevention** before and after they became infected. Before becoming infected with HIV, responsibility for prevention was often attributed to HIV-negative individuals themselves. These retrospective attributions revealed themes that included feelings of negligence, a sense of consequences, followed by regret. After seroconversion, responsibility for HIV prevention was primarily attributed to HIV-positive individuals themselves. Themes within these attributions included pledges to avoid HIV transmission, a strong sense of burden related to the possibility of infecting someone, and risk reduction strategies that they implemented in an attempt to avoid HIV transmission. (p. 24)

Offer and colleagues suggest that,

> [i]n addition to acknowledging the burden of responsibility that HIV-positive individuals face, programs can work with these individuals to ... identify possible approaches to managing the burden of responsibility with interventions that reduce stress and increase social support. Another suggestion is to include general stress reduction skills such as role-playing various situations that participants identify as stressful. HIV prevention messages that stress the importance of community or social levels of responsibility for HIV prevention in addition to shared responsibility among partners might also serve to support HIV-positive individuals and reduce their sense of burden for HIV prevention. Furthermore, external factors (such as lack of sexual experience, substance abuse, and daily survival) shown in these results to impede the participants' ability to enact feelings of responsibility need to be addressed in order to improve the chances of success of program participants. (p. 34)

About Persons With Severe Mental Illnesses

Analyzing data from structured interviews with 96 **women with severe mental illness** [SMI], Randolph et al. (2007) found that

> nearly two-thirds had not used condoms during sexual intercourse in the past 3 months, more than two-thirds had sex with multiple partners, and almost one-third had been treated for a sexually transmitted infection (STI) in the past year. Women who reported fewer sexual risk context factors, such as having sex with someone the participant did not know or transactional sex, had fewer sexual partners. Larger social support networks were associated with less frequent sex after drug use. In turn, women who less often had sex after using drugs had unprotected intercourse less frequently. (p. 33)

Randolph and colleagues conclude that "sexual risk reduction programs for ... women [with SMI] would greatly benefit from the inclusion of elements that help these women increase their social support networks, reduce alcohol and substance use, and recognize dangers associated with particularly risky situations" (p. 45).

Similarly, Meade and Sikkema (2007) conducted structured interviews with a convenience sample of 152 adults with SMI and found that "[t]he majority was sexually active (65%), and many reported **unprotected intercourse** (73%), **multiple partners** (45%), and **sex trading** (21%) in the past year. ... [S]exual behaviors were differentially associated with nonpsychotic disorder, psychiatric symptoms, substance abuse, childhood sexual abuse, romantic partnership, and social support ..." (p. 153). "Social support emerged as both a risk and protective factor: Participants with greater social support were *more* likely to have multiple partners and engage in sex trading, but *less* likely to have unprotected intercourse" (p. 164).

> The findings of this study underscore the need for routine risk assessment, HIV/STI testing,

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and sexual risk reduction interventions for adults with SMI. Cognitive-behavioral group interventions can effectively promote short-term risk reduction but are limited by their relatively weak and diminishing effects over time ... . Moreover, they have not been widely disseminated from clinical trials into mental health care settings ... . In addition to teaching HIV risk reduction skills, interventions must address psychiatric and psychosocial risk factors. In particular, mental health programs must prioritize effective treatment of substance abuse and sexual trauma. To further improve outcomes, interventions will likely need to occur on multiple levels and within the context of integrated services that address the multiple needs of persons with SMI. Integration of HIV prevention services into ongoing mental health services is a cost-effective strategy ... . Community-level interventions may also be necessary to create social norms supportive of HIV risk reduction ... . (pp. 165-166)

About Adolescents & Young Adults

Burrow, Tubman, and Gil (2007) "examine[d] patterns of sexual risk behavior and co-occurring general and race/ethnicity-specific risk and protective factors in a community sample of **African-American youth** (*n* = 436)" (p. 447) who were between the ages of 18 and 23 years. Youth were **clustered according to levels of self-reported sexual risk behavior** during the preceding year. Analysis

> revealed significant between-cluster differences ... in number of past year sex partners, with members of Cluster 2 (*n* = 47) reporting significantly higher mean scores than members of Cluster 1 (*n* = 21), both of which were significantly higher than Cluster 3 (*n* = 54) and Cluster 4 (*n* = 246)[; a fifth cluster (*n* = 42) included all lifetime abstainers]. ... Significant group differences were also detected between each of the four clusters with regard to alcohol use before or during sexual encounters, with Cluster 1 reporting the highest scores, Cluster 3 reporting the second highest scores, followed by Cluster 2 and Cluster 4. With regard to co-occurring sexual behavior and drug use, Cluster 1 reported significantly higher scores than any other cluster, while Cluster 4 reported the lowest scores. (pp. 452-453)

Additionally, "[m]ales were over-represented in clusters reporting the highest numbers of past year sex partners and high levels of substance use before or during sex (i.e., Clusters 1 and 2)" (p. 453). Burrow and colleagues suggest that "[m]embers from each cluster identified in this study could benefit from differentiated HIV/STI prevention efforts targeting unique, cluster-specific vulnerabilities" (p. 459).

> Specifically, African-American youth engaging in the highest levels of sexual risk behaviors also were assigned significantly more psychiatric diagnoses. Group comparison using these data revealed that [members of] a small subgroup of ... youth (Cluster 1) were often three or more times more likely to have a history of a diagnosed externalizing disorder, in particular antisocial personality disorder, conduct disorder, and/or a substance use disorder, than were members of the largest cluster reporting the lowest levels of sexual risk behavior (Cluster 4). ...
>
> Youth in Cluster 1 are highly vulnerable to negative sexual health outcomes since their sexual behavior may occur in peer contexts where substance use and other health risk behaviors are normative ... . Prevention strategies for working with these youth should focus on reducing specific psychiatric symptoms. ... In addition, the high levels of co-occurring substance use reported by this cluster must be included as a critical prevention target to reduce risk for STI and HIV exposure and transmission among individuals representative of this cluster ... .
>
> Members of Cluster 2 reported the highest numbers of past year sexual partners ... and are thus at risk for negative sexual health outcomes, despite reporting among the highest rates of protected intercourse. Youth in this cluster reported more than four times the average number of sex partners reported by members of Cluster 3 or 4. Members of Cluster 2 also reported disproportionately high prevalence rates of conduct disorder and antisocial personality disorder, suggesting a potential for callousness toward others. Ostensibly, intervention programs primarily encouraging abstinence may fail to engage youth representative of this subgroup. Instead, identifying more immediate issues and values that are important to these youth may enable researchers to influence meaningful levers for change ... . For example, one could challenge adolescents' views regarding the importance of relationships as contexts for sexual intercourse to encourage reduction of numbers of sexual partners ... .
>
> Cluster 3 was distinguished by the lowest rates of protected intercourse and higher rates of co-occurring alcohol use, foregoing key strategies for reducing STI transmission and unplanned pregnancy ... . Therefore, the relative failure of Cluster 3 to utilize self-protective strategies (in fewer

than 40% of sexual episodes) could be addressed through prevention strategies rigorously promoting STI risk reduction behaviors. However, such messages may be undermined by high levels of co-occurring alcohol use by members of Cluster 3 and/or their partners. Thus, additional instruction regarding the disinhibiting influence of alcohol upon adaptive sexual decision making needs to be included in prevention strategies targeting Cluster 3 youth.

Cluster 4, the largest subgroup in the sample, reported the lowest multivariate patterns of sexual risk behaviors, yet its members remain at risk for negative sexual health outcomes. On average, nearly 30% of sexual intercourse episodes reported by Cluster 4 were unprotected. The majority of these young adults also engaged in sexual intercourse with one or more partners during the past year. ... Selective prevention programs that focus intensively on specific issues (e.g., co-occurring substance abuse) may not readily engage members of this subgroup, in particular youth who reported little alcohol or other drug use. Interventions targeting members of this subgroup may be more effective employing a comprehensive universal approach toward reducing risk for HIV transmission. In addition, given the similarity of youth in Cluster 4 to those abstaining from sexual intercourse with regard to levels of psychosocial adjustment, abstinence-oriented messages may be more relevant and viable for these youth. (pp. 457-458)

Continuing this focus on tailoring interventions, investigators in the United Kingdom (Ingledew & Ferguson, 2007) surveyed 200 sexually experienced undergraduates between the ages of 18 and 21 years to test a model in which "**personality traits influenced motives for having sex**, which influenced self-determination of safer sex, which influenced riskier sexual behaviour" (p. 291). In the final model, "autonomous [i.e., self-determined] motivation for safer sex reduced riskier sexual behaviour, whereas controlled motivation had no effect. Agreeableness reduced riskier behaviour by increasing autonomous motivation for safer sex, an effect mediated by intimacy motive for having sex. Conscientiousness reduced riskier sexual behaviour by increasing autonomous motivation for safer sex. Enhancement motive for having sex increased riskier behaviour" (p. 291). Expanding on these findings, Ingledew and Ferguson observe that

> [p]ractising safer sex (as distinct from participating in sex per se) is unlikely to be inherently fulfilling in the first instance, that is to say is unlikely to be truly intrinsically motivated. On the contrary, individuals are likely to be extrinsically motivated for safer sex to begin with. The health promotion objective then becomes to progress along the behavioural regulation continuum, towards more integrated regulation of behaviour. As far as possible, this should happen *before* individuals are sexually active. Progress along the continuum can be facilitated by autonomy supportive interventions [e.g., motivational interviewing] ..., but some people may need more facilitation than others. It seems that agreeable individuals are inclined to progress along the continuum because they can satisfy their intimacy motive through safer sex. Much existing health promotion emphasises this caring aspect of safer sex. For less agreeable individuals, effective health promotion might emphasise protecting oneself rather than caring for others ... . It seems that conscientious individuals are also inclined to progress along the continuum, perhaps because they can more readily link the safer sex goal with their other goals. Perhaps less conscientious individuals need more help with this aspect of goal setting. For those with a high enhancement motive, health promotion might emphasise ways of increasing the pleasurableness of safer sex. Generally, health promotion should adopt a functionalist perspective ..., in which interventions are tailored to individuals' enduring predilections. (p. 311)

This same perspective may apply equally to affective states. Shrier, Shih, Hacker, and de Moor (2007) explored the affective experience of 67 heterosexually active adolescents (ages 15 to 21 years) following sexual intercourse. "[W]ithin 3-hour intervals during … self-identified waking hours" (p. 357.e3), study participants "used a handheld computer to report current affect and recent sexual intercourse in response to random signals. Participants also completed a report after sexual intercourse" (p. 357.e1). Youth in this study

> completed 1385 random and 392 event reports. There were 266 unique coital reports (median 2.6/participant/week); 94% were with a main partner and 49% involved condom use. Youth were more likely to report positive affect and less likely to report negative affect when they were also reporting recent sexual intercourse, as compared to noncoital reports. In multivariate analyses, participants had greater odds of reporting well being and alertness and lower odds of reporting stress and anger following sexual intercourse compared to other times. (p. 357.e1)

According to Shrier and colleagues,

[t]here are at least two important implications of this work for safer sex intervention. First, efforts to modify adolescent sexual behavior need to consider possible **affective benefits of sexual intercourse**. Awareness that one may feel better after sexual intercourse may motivate or reinforce continued sexual activity[.] ... Safer sex messages may be more appealing and considered more seriously by youth if these messages are more balanced and reflective of adolescents' own experiences in presenting the advantages as well as disadvantages of sexual intercourse and if they discuss alternative means of achieving the affective benefits associated with sexual intercourse. Affectionate sexual behaviors such as hand-holding and kissing have been associated with positive relationship qualities in late adolescent couples ... and thus may offer a means of accomplishing sexual development tasks related to intimacy while minimizing risk.

Second, the affective experience of sexual intercourse is a proximal, personally relevant factor that has been shown to influence risk for STI when it is less positive and more negative ... . Affect following sexual intercourse is also a potentially modifiable risk factor in that STI preventive interventions can aim to reduce adolescents' exposure to coital experiences that may be associated with poorer affect. ... This more targeted approach to modifying adolescent sexual risk may prove more effective than a global abstinence message in promoting healthy sexual development and reducing adverse outcomes ... . (pp. 357.e6-357.e7)

In addition to affect, clinicians may also want to target interpersonal issues experienced by adolescents and young adults. Kershaw et al. (2007) "investigated **the influence of attachment avoidance and anxiety**[3] on sexual beliefs (e.g., condom use beliefs, self-efficacy), behavior (e.g., condom use, multiple partners, unprotected sex with risky partners), and ... STIs ... among [an ethnically diverse sample of] 755 high-risk, young pregnant women (ages 14-25) recruited from urban prenatal clinics" (p. 299). Kershaw and colleagues found that "[a]ttachment anxiety predicted sexual beliefs, condom use, and unprotected sex with risky partners[,] controlling for demographic variables. Sexual beliefs did not mediate the relationship between attachment orientation and sexual behavior. Current relationship with the father of the baby did mediate the effect of attachment anxiety on multiple partners and STIs" (p. 299). According to the investigators, these results

suggest that targeting more general views of relationships (e.g., romantic attachment orientation) may facilitate change in sexual risk beliefs. If relationship conflict is more salient than HIV or STI risk, then increasing an individual's skills to talk about safe[r] sex may not be enough to produce change. If individuals reduce their romantic attachment anxiety, then they may feel more confident in their ability to bring up sensitive topics with their partner without negative consequences or loss of love. Secure attachment is associated with open communication of important issues ... . Therefore, interventions that address issues of attachment may lead individuals to be better able to implement specific HIV-relational skills (e.g., condom communication) within their relationships. (p. 308)

Kershaw and colleagues continue by stressing that

prevention programs are needed that help young couples adjust to parenthood by providing relationship skills (e.g., understanding of attachment avoidant and anxious behavior, intimacy-building, communication, support, positive interactions) as well as HIV-prevention skills. Several interventions have been developed using emotionally focused techniques that expand and change emotional responses, shift partnership interactions, and foster the creation of a secure emotional bond ... . These interventions have been shown to effectively decrease attachment anxiety and avoidance and increase relationship satisfaction and functioning. Intervention programs that integrate these techniques with HIV-prevention may result in more secure attachment, better functioning relationships, and less sexual risk behavior. (p. 309)

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[3] "Recent studies suggest that romantic attachment is best conceptualized as two separate continuous underlying dimensions (avoidance and anxiety) rather than discrete attachment styles ... . Individuals vary in their degree of attachment avoidance and anxiety. Attachment avoidance describes feelings of mistrust and [suggests] that one cannot depend on others. Individuals with high levels of avoidance tend not to ask for or give emotional or tangible support and tend to avoid intimacy. This can cause dissatisfaction and conflict among young couples ... . Attachment anxiety describes an unhealthy need to be accepted and loved by partners stemming from a negative view of self. Individuals with high levels of attachment anxiety have poor adjustment, high mental distress, [and] more anger toward partners ...[;] engage in controlling and clingy behavior ...[;] and have other problem behaviors that may exacerbate relationship conflict ... . Individuals with both high levels of avoidance and high levels of anxiety share characteristics from both dimensions of insecure attachment; they simultaneously have a lack of trust of others (avoidance) but at the same time feel an unhealthy need to be loved and supported (anxiety ...). Secure attachment occurs when levels of both attachment avoidance and anxiety are low. Individuals with secure attachment have fewer relationship problems, better communication, and are less likely to have relationship dissolution than individuals with high levels of attachment avoidance or anxiety ..." (p. 300).

Tool Box

Tailoring Evidence-Based HIV Behavioral Risk-Reduction Interventions to Local Capacity & Target Audience Characteristics

"Men who have sex with men (MSM) are the people most affected by the HIV epidemic in the United States ... as well as Canada, ... the United Kingdom, ... Australia, ... New Zealand, ... and countries of Latin America and the Caribbean. ... In 2004, almost two of three newly diagnosed AIDS cases among U.S. men were among men infected through sexual contact with other men ...; nearly half of all newly diagnosed HIV infections among men in 19 Western European countries resulted from homosexual or bisexual contact. ..."

—— Task Force on Community Preventive Services, 2007, p. S36

To support the efforts of program planners and implementers serving MSM, Herbst et al. (2007) conducted

> a systematic review of the effectiveness and economic efficiency of individual-, group-, and community-level behavioral interventions intended to reduce the risk of acquiring sexually transmitted HIV in adult ... MSM[.] ... Sexual risk behavior and condom use were the outcomes used to assess effectiveness. Intervention effectiveness on biological outcomes could not be assessed because too few studies of adequate quality have been published. The evidence found in ... [the 19 studies that qualified for this] review shows that individual-level, group-level, and community-level HIV behavioral interventions are effective in reducing the odds of unprotected anal intercourse ([UAI;] range 27% to 43% decrease) and increasing the odds of condom use for the group-level approach (by 81%). (p. S38)

These results, in turn, are the foundation upon which recommendations by the independent Task Force on Community Preventive Services have been made on the use of these interventions within domestic (i.e., United States) contexts. In short, the systematic review development team and the Task Force concluded that, "[g]iven the diversity of study and participant characteristics in this body of evidence, ... each recommended intervention should be applicable across a range of settings and MSM populations, **assuming that interventions are appropriately adapted to the needs and characteristics of the MSM population of interest**" (p. S48).

With that proviso, the Task Force encourages "HIV prevention planners, providers, and funding agencies ... to adapt person-to-person behavioral interventions to the needs and resources of their communities and to setting, participant, and cultural characteristics of their populations" (p. S36).

Make It Work!

As Stall (2007) points out,

> [t]he bulk of prevention research done with MSM has been conducted among the general population of MSM, and has not been specifically defined to meet the needs of men at gravest risk for HIV transmission. Groups at highest risk for HIV transmission for which we have as yet not specifically defined interventions include African-American MSM, substance abusing MSM, and Hispanic men, among other identifiable groups. Clearly, research to create and test interventions specifically for these groups is a public health agenda of the highest priority. That said, HIV incidence rates in these groups are so high that a strategy of waiting for interventions with evidence of efficacy for MSM at highest risk to appear in the scientific literature is not tenable. Programs with evidence of efficacy among general populations of MSM should be modified so that they are culturally appropriate and may be welcoming to the highest risk groups of MSM. Ongoing process and uncontrolled outcome evaluations of these services can serve as a stopgap measure of intervention effectiveness until such time that interventions with proven efficacy are developed for these specific populations. (p. S30)

How, then, does one modify an evidence-based behavioral intervention (EBI)?

Action Steps to Follow

"Currently, there is no CDC [Centers for Disease Control and Prevention]-recommended process or set of agreed-upon best practices for adapting EBIs to conditions different from those present in the original research. As a result, there is increasing concern that insufficient guidance may limit the effectiveness of EBIs under these new conditions. To help meet this need, the CDC Division of HIV/AIDS Prevention (DHAP) has developed draft guidance on adaptation procedures" (McKleroy et al., 2006, p. 60).

According to McKleroy and colleagues, "[i]n the broadest sense, adaptation can include deletions or additions, modifications of existing components, changes in the manner or intensity of components, or cultural modifications required by local circumstances[.] ... Adopters ... generally perceive adaptation as necessary to make the innovation more relevant for the target population and agency needs and can aid in gaining community ownership of the program ..." (p. 60).

In developing its draft adaptation guidance,

> [t]he CDC strived to develop guidelines that would assist HIV programs adopt EBIs that fit their local needs while at the same time retaining fidelity to the core elements[1] thought most likely to make the intervention effective at reducing HIV risk behaviors. The CDC has narrowed the definition

[1] "*Core elements* are required elements that embody the theory and internal logic of the intervention and most likely produce the intervention's main effects. Core elements should be identified through research and program evaluation. Core elements essentially define an intervention and must be kept intact (i.e., with fidelity) when the intervention is being implemented or adapted, in order for it to produce program outcomes similar to those demonstrated in the original research" (p. 62).

of adaptation[2] to mean the process of modifying key characteristics[3] of an intervention, recommended activities and delivery methods, without competing with or contradicting the core elements, theory, and internal logic[4] of the intervention thought most likely to produce the intervention's main effects. Key characteristics are adapted to fit the risk factors,[5] behavioral determinants,[6] and risk behaviors[7] of the target population and the unique circumstances of the agency and other stakeholders. (pp. 62-63)

An additional consideration in adapting an EBI is "the need for cultural proficiency[,[8] which] ... emphasizes the importance of the implementers' practical experience with the target population and agency capacity, while still emphasizing maintaining fidelity to the core elements, theory, and internal logic of the original intervention" (p. 64).

Presently, the CDC's draft adaptation guidance consists of the following **five-step process**:

> The first action step, **assess**, involves assessing the target population, the EBIs being considered for implementation,[9] and the agency's capacity to implement the intervention.
>
> The second, **select**, is determining whether to adopt the intervention without adaptation, implement the intervention with adaptation, or choose another intervention and repeating the assess action step before moving forward.
>
> The third action step, prepare, ... involves actually adapting the intervention materials, pre-testing the adapted materials with the target population, and increasing agency capacity and developing collaborative partnerships when necessary to implement the intervention.
>
> The fourth action step, **pilot**, is pilot testing the adapted intervention or its components if it is not feasible to pilot the entire intervention and developing an implementation plan.
>
> The fifth, **implement**, is conducting the entire adapted intervention with minor revision as needed.
>
> Additionally, the guidance includes feedback loops and checkpoints to ensure each action step is addressed adequately, and to provide an opportunity to revisit earlier action steps should difficulties occur. Process monitoring and evaluation, and routine supervision and quality assurance are also important considerations for the guidance. Credible evidence collected during the adaptation process should be evaluated to determine the success of the adaptation process as well as the effectiveness of the adapted intervention.
>
> Although these five action steps are presented ... in a linear fashion, it is important to note that prevention program activities are not necessarily sequential or mutually exclusive ... . Many of the action steps and activities are interconnected and will be conducted simultaneously rather than sequentially. (pp. 63-64)

Readers desiring a more detailed presentation of the draft adaptation guidance are referred to the paper by McKleroy and colleagues, which lays out the many components of each of these action steps. Solomon, Card, and Malow (2006) also offer tips "on how to adapt an HIV prevention program proven efficacious ... to meet the

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[2] "*Adaptation* is the process of modifying an intervention without competing with or contradicting its core elements or internal logic. An intervention is modified to fit the cultural context in which the intervention will take place, individual determinants of risk behaviors of the target population, and the unique circumstances of the agency and other stakeholders, but the core elements and internal logic are not changed" (p. 62).

[3] "*Key characteristics* are important, but not essential, attributes of an intervention's recommended activities and delivery methods. They may be modified to be culturally appropriate and fit the risk factors, behavioral determinants, and risk behaviors of the target population and the unique circumstances of the venue, agency, and other stakeholders. Modification of key characteristics should not compete with or contradict the core elements, theory, and internal logic of the intervention" (p. 62).

[4] "*Internal logic* of an intervention is the explanation of the relationships among intervention activities, behavioral determinants, and the intended outcome(s) of the intervention" (p. 62).

[5] "*Risk factors* are characteristics of a behavior (including the context in which the behavior occurs) or an individual that increase the likelihood that transmission will occur, but do not in themselves cause transmission (e.g., lifetime number of sex partners, crack use, using old expired-date condoms)" (p. 63).

[6] "*Behavioral determinants* are theorized determinants of risk behavior given by behavior change theory. Some commonly described behavioral determinants are self-efficacy, skills, knowledge, attitudes, beliefs, cognitions, values, and perceived norms. Behavioral theories explain how behavioral determinants shape risk behavior and, therefore, imply how behavioral determinants can be modified to change risk behaviors. Behavioral determinants are the focus of social-behavioral prevention interventions" (p. 63).

[7] "*Risk [b]ehaviors* are behaviors that can directly expose individuals to HIV or transmit HIV, if the virus is present (e.g., unprotected sex, sharing unclean needles). Risk behaviors are actual behaviors in which HIV can be transmitted, such that a single instance of the behavior can result in transmission. Risk behaviors derive from behavioral determinants" (p. 63).

[8] "*Cultural proficiency* is a way of being that enables both individuals and organizations to respond effectively to people who differ from them" (p. 64).

[9] "Examples of such interventions are packaged by REP [CDC's Replicating Effective Programs; http://www.cdc.gov/hiv/topics/prev_prog/rep/index.htm], distributed by DEBI [CDC's Diffusion of Effective Behavioral Interventions project; http://effectiveinterventions.org/], and can be found in the CDC's *Compendium of HIV Prevention Interventions with Evidence of Effectiveness* (CDC, 1999, revised 2001)" (p. 67); see also Lyles et al., 2007, summarizing the work of the CDC's HIV/AIDS Prevention Research Synthesis Team (http://www.cdc.gov/hiv/topics/research/prs/best-evidence-intervention.htm).

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needs of groups that differ culturally from those with whom the program was initially validated" (p. 163).

At this time,

> [t]he draft adaptation guidance is being piloted with five CBOs [community-based organizations] funded through the Adopting and Demonstrating the Adaptation of Prevention Techniques (ADAPT) project. These CBOs are using the guidance to adapt HIV prevention interventions for seropositive men of color who have sex with other men. The interventions being adapted are Community PROMISE (Peers Reaching Out and Modeling Intervention Strategies for Everyone) (CDC AIDS Community Demonstration Projects Research Group, 1999), Healthy Relationships (Kalichman et al., 2001), and Popular Opinion Leader (Kelly et al., 1991). To further evaluate the utility of the draft adaptation guidance, the sites will conduct outcome monitoring on the adapted interventions. Detailed process monitoring and evaluation of the adaptation guidance will be conducted. After the 2-year pilot is completed, the panel of experts will be reconvened and findings from the project will be presented. The panel's feedback and lessons learned by the implementing CBOs will be documented and adaptation guidance will be revised and disseminated. (p. 71)

What Really Matters?

Kalichman et al. (2007) report on the process effects of modifying two key implementation characteristics of "Healthy Relationships" (mentioned above), which "was among the first interventions to demonstrate efficacy for reducing HIV transmission risks using cognitive and behavioral strategies tailored for HIV positive persons" (p. 146).

As Kalichman and colleagues describe it,

> Healthy Relationships is a small group HIV prevention program, designed for men and women living with HIV/AIDS. The intervention ... focuses on building skills for managing HIV status disclosure decisions and skills for practicing safer sex. The intervention consists of three major components focused on (a) decision-making skills for disclosure of HIV status to friends and family, (b) decision-making skills for HIV status disclosure to sex partners, and (c) safer sex negotiation and behavioral self-management skills. The intervention is delivered in multiple small groups using a series of structured interactive activities. A unique feature of the intervention is its use of scenes edited from popular films to depict real-life scenarios used in role playing exercises. (p. 146)

Two key characteristics of the original Healthy Relationships intervention (HR-O) were the formation of groups based on gender and sexual orientation (i.e., separate groups for women, heterosexual men, and MSM) and the co-facilitation of groups by a mental health professional and an HIV-positive peer counselor. To reduce barriers to the implementation of this EBI that have been associated with efforts to match these key characteristics, the intervention was instead delivered to mixed gender groups by facilitators who were neither mental health professionals nor individuals living with HIV.

"Process measures from the altered Healthy Relationships intervention (HR-A) were compared to the same measures taken in the HR-O trial. Intervention completion rates were better in the HR-A model (84%) than HR-O (70%). Results showed that HR-A was comparable to HR-O in social support, group cohesion, and group openness. Facilitators in HR-A were viewed somewhat more positive[ly] than in HR-O" (p. 145). In short, the investigators "found no empirical basis for conducting separate groups by gender or for constraining the facilitators in terms of their professional and HIV statuses" (p. 145).

Kalichman and colleagues emphasize that this study focuses on process measures alone and that outcomes were not investigated. "Although the content of the intervention required minimal changes, it is possible that the intervention outcomes may vary as a function of group composition and facilitator characteristics. Future research is required to examine differential outcomes resulting from altering the Key Characteristics of this and other ... interventions" (p. 152).

Ends Justify Modified Means

One of the EBIs included in Herbst and colleagues' systematic review was an individual-level intervention studied by Dilley et al. (2002). In brief, Dilley and colleagues conducted a randomized, controlled trial at an anonymous-HIV-testing site involving 248 HIV-negative MSM who had engaged in at least one act of UAI with a nonprimary partner of different or unknown status and had sought repeat testing. The study was conducted to assess the impact on high-risk behavior of a single-session, cognitive-behavioral counseling intervention "focusing on self-justifications (thoughts, attitudes, or beliefs that allow[ed] the participant to engage in high-risk sexual behaviors) at most recent ... UAI" (p. 177).

Dilley and colleagues found that "[t]hree prevention strategies significantly decreased risky UAI among MSM, when added to standard client-centered HIV counseling and testing: a 90-day sexual diary, a novel counseling session focusing on self-justifications for UAI, or both. Further, the effects of these three interventions persisted to 12 months. In contrast, standard counseling alone appeared to have, at best, only a small, short-term primary prevention effect in this population of MSM who have tested several times previously" (p. 183). The investigators concluded that a single-session counseling intervention designed to reevaluate self-justifications operating during recent high-risk behavior, when employed between pretest and posttest counseling sessions, may help to decrease sexual risk behavior.

More recently, Dilley et al. (2007) repeated this study, substituting paraprofessional counselors for the li-

censed mental health professionals utilized in the original study. In this more recent study, paraprofessional counselors conducted the brief, personalized cognitive counseling (PCC) intervention during HIV voluntary counseling and testing.

> The paraprofessional counselors ... were bachelor's level-trained and California-certified HIV test counselors with a minimum of 1 year of HIV test counseling experience. Before the start of the study, they received 4 hours of didactic training on the principles of cognitive behavioral interventions and instruction on implementing the PCC, completed 4 supervised role plays of PCC sessions, and reviewed audiotapes of those role plays with the investigators to refine their technique. During the study, they received regular supervision by one of the investigators, and audiotapes of the sessions were reviewed for adherence to protocol. (p. 571)

In this study, "HIV-negative ... MSM ... were randomly allocated to PCC or usual counseling (UC) ... . The primary outcome was the number of episodes of ... UAI ... with any nonprimary partner of nonconcordant HIV serostatus in the preceding 90 days, measured at baseline, 6 months, and 12 months" (p. 569). This time, Dilley and colleagues found that

> [m]en receiving PCC and UC reported comparable levels of HIV nonconcordant UAI at baseline (mean episodes: 4.2 vs. 4.8, respectively ...). UAI decreased by more than 60% to1.9 episodes at 6 months in the PCC arm ... but was unchanged at 4.3 episodes for the UC arm ... . At 6 months, men receiving PCC reported significantly less risk than those receiving UC ... . Risk reduction in the PCC arm was sustained from 6 to 12 months at 1.9 ..., whereas risk significantly decreased in the UC arm to 2.2 during this interval ... . Significantly more PCC participants were ''very satisfied'' with the counseling experience (78.2%) versus UC participants (59.2%) ... . (p. 569)

Drawing on these findings, Dilley and colleagues conclude that the

> PCC approach could be taught to and successfully executed by experienced paraprofessional HIV antibody test counselors. Further, when compared in a randomized controlled trial with usual client-centered risk reduction counseling, the approach had a stronger and more immediate effect at reducing the incidence of UAI among high-risk repeat testing MSM. Additionally, the effect was persistent: the sharp decrease in risk behavior among the PCC group from baseline to 6 months was sustained at 12 months after the intervention, a finding consistent with the long-term effects of the same intervention when conducted by licensed mental health professionals. ... Moreover, the approach seems highly acceptable to this key behavioral risk population. (p. 573)

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(Biopsychsocial Update -- continued from Page 5)
Along similar lines, Reich and Rubin (2007) solicited **condom scripts** (i.e., vignettes in which characters make decisions regarding the use of condoms) from 25 older adolescents who had lost a parent to AIDS but were themselves uninfected. The investigators found that "[i]n equal-influence scripts, an assertive, separating, and powerful female character played opposite an excited male character. In unequal-influence scripts, a permissive, trusting and/or submissive female character was paired with an excited powerful male character. It was in these latter scripts that unprotected sex scenes were likely to occur" (p. 90). To promote condom use among AIDS-bereaved adolescents, Reich and Rubin suggest that these

> script prototypes ... provide an empirical base on which to construct discussion group and role-play materials. Exercises such as these would be designed to highlight women's catch-22 position [in safer sex negotiation, i.e., "assumed to be responsible for relationship communication and maintenance ... yet expected to be sexually passive and oriented toward men's pleasure" (p. 91),] to both women and men, stimulating an important – and unscripted – cross-sex discussion leading to script revision. ... [The investigators] argue that teens would energetically relate to intervention messages and activities derived from grounded data, because such interventions would build on what they already implicitly know. (pp. 91-92)

Reich and Rubin further suggest that, "[h]aving identified the key components of equal-influence, safe[r]-sex scripts, a ... longer term intervention goal might be to embed them in higher order scripts for casual, dating or committed relationships ... and personal identity ..." (p. 92).

Tolou-Shams, Brown, Gordon, Fernandez, and the Project SHIELD Study Group (2007)

> sought to determine if an **arrest history** could serve as **a marker for HIV risk** and substance abuse among a community-based sample of high-risk adolescents and young adults. Adolescents (*N* = 1400; mean age = 18 years) ... in three states (GA, FL and RI) provided baseline data on sexual risk, substance use, attitudes and mental health history. Participants were grouped as arrestees (*N* = 404) and non-arrestees (*N* = 996) based on self-reported arrest history. Juvenile arrestees reported more alcohol and drug use, substance use during sex, unprotected sex acts, STI diagnoses, suicide attempts and psychiatric hospitalizations than non-arrestees. (p. 87)

According to Tolou-Shams and colleagues, these findings suggest "that any contact with the legal system, however ... minor, is a marker for increased substance use, sexual risk taking and mental health difficulties. Screening for arrest history may not be routine for many clinical evaluations outside of the legal system; however, these data suggest it may be warranted to effectively identify and respond to the psychosocial and health needs of [these] adolescents and young adults ..." (pp. 89-90). "[A]dolescents with a history of legal offense have a host of mental health needs … that … [must] be addressed. Unprotected sexual activity is a co-occurring risk behavior for these youth and linking youth with an arrest history to brief, HIV prevention interventions may be essential to decreasing the spread of HIV and other STIs" (p. 89).

Finally, on two occasions, approximately 21 months apart, Wiener, Battles, and Wood (2007) interviewed 40 **adolescents who acquired HIV perinatally or through a blood transfusion**; mean age of the interviewees was 16.6 years at Time 1 and 18.3 years at Time 2. At Time 1, the investigators found that 28% of the interviewees reported that they were sexually active. At Time 2, the percentage increased to 41%. Interestingly, knowledge regarding sexual transmission risk behaviors was relatively low among these interviewees, but increased with age. Nevertheless, both self-efficacy for and reported **use of condoms** were relatively high, although "almost one fifth of the sexually active sample had either become pregnant or gotten someone pregnant in their lifetime[,] suggest[ing] ... inconsistent condom use" (p. 476). Moreover, "health status as reflected by the level of severe immunosuppression (absolute CD4 counts below 200 cells/mm^3) did not preclude adolescents from being sexually active" (p. 476).

> These results suggest that by late adolescence, a substantial number of youth with HIV acquisition early in life are sexually active and have moderate to high levels of condom use and moderate to high ... condom[-]use self-efficacy. Importantly, overall condom [-]use self-efficacy was significantly correlated with sexual risk behavior knowledge, establishing an important link between knowledge of HIV sexual transmission risk behaviors and ... [individuals'] confidence in their ability to use condoms, a critical behavior in preventing HIV transmission. In contrast, the lowest self-efficacy scores in the cohort were observed for the ability to totally abstain from sex or abstain from sex even if all their friends are having sex, reinforcing the need for both abstinence and condom-based prevention messages. (p. 476)

According to Wiener and colleagues,

[t]hese results highlight the critical need to provide risk reduction education to adolescents who acquired HIV early in life regardless of whether or not they are currently sexually active and irrespective of their disease status. ... For adolescents who are sexually active or considering becoming sexually active it is important ... to attempt to facilitate both condom use negotiation and diagnosis disclosure to sexual partners so that further sexual transmission of the virus can be avoided. ... This is particularly important among adolescents who may fear the consequences of disclosure of their diagnosis and lack: (a) the skills to discuss such sensitive topics with their partners, (b) confidence in their ability to abstain from sex, or (c) adequate knowledge of safer sex behaviors to prevent further transmission of the virus. This suggests that interventions designed to reduce the risk of sexually transmitting HIV by this population require developmentally appropriate psychological and social approaches that target perceptions of peer influence and emotional well being ... . (pp. 476-477)

HIV Assessment News

HIV Counseling & Testing

MacKellar et al. (2007) surveyed 2,788 men who have sex with men (MSM), ages 23 to 29 years, who were attending MSM-identified venues in six US cities, regarding their ***perceived* lifetime risk for acquiring HIV**, their risk behaviors, and the results of their most recent HIV test. This last query served to identify men with *unrecognized* HIV infection (i.e., not reporting a positive HIV test result that was received earlier in this study). The investigators found that, "[o]verall, approximately one quarter of young MSM perceived themselves at moderate/high risk for acquiring HIV. Adjusting for demographic, prior testing, and behavioral characteristics, moderate/high perceived risk had the strongest association with unrecognized HIV infection. However, half of the 267 young MSM with unrecognized infection perceived themselves at low lifetime risk for acquiring HIV, and many young MSM with low-risk perception reported considerable risk behaviors" (p. 263). On the basis of these findings, MacKellar and colleagues suggest that

> perceived lifetime risk, measured as susceptibility to HIV infection, may be a more valid and reliable predictor of actual risk (i.e., unrecognized infection) than [are] surrogate behavioral measures. Thus, to help increase testing and reduce the high prevalence of unrecognized HIV infection among young MSM, providers of HIV prevention services should consider incorporating clients' perception of HIV susceptibility within risk-assessment practices. For those men who report perceiving themselves at moderate/high risk for acquiring HIV, providers should underscore the urgency for HIV testing, and assess and resolve personal testing barriers. ... The use of rapid HIV tests ... may be a particularly effective strategy to increase testing and provision of test results to high-risk MSM ... .
>
> ... [T]o increase testing and reduce the prevalence of unrecognized HIV infection, ... providers should intensify efforts to assess and clarify HIV infection risks and perceptions of young MSM, particularly those who are black and Hispanic. ... Health-care providers should routinely recommend HIV testing for clients at increased risk for infection; HIV-test providers should routinely assess and clarify personal infection risks and encourage follow-up testing for clients with ongoing risk behaviors ... .
>
> In providing HIV test results to clients, providers should be aware of the potential influence a negative result might have on perceived susceptibility, and subsequent behavioral and HIV-infection risks. ... [S]ome persons may underestimate current or future HIV infection risks because of tendencies to anchor perceptions on prior negative test results ... . While [these investigators] found that MSM who received a negative test result in the past year were less likely to perceive themselves at moderate/high lifetime risk and to acquire HIV ..., seven percent of these men were HIV-infected [and] unaware [of their serostatus]. ... For MSM who test HIV-negative, test providers should consider assessing what effect a negative test result might have on their client's perceived future infection risks, and if needed, counsel young MSM that a negative test result offers no assurance that they will remain free from HIV infection. (pp. 268-269)

Psychiatric Assessment

Carrico et al. (2007) examined rates and correlates of **suicidal ideation** among a diverse sample of 2,909 people living with HIV in four U.S. cities (Los Angeles, Milwaukee, New York, and San Francisco).

> Approximately one-fifth (19%) of participants reported thoughts of suicide in the past week. ... [P]articipants who were not heterosexual, rated HIV-related symptoms and medication side effects as more severe, reported regular marijuana use, and described elevated affective symptoms of depression were those who were more likely to report suicidal ideation. Conversely, participants who identified as Hispanic/Latino, individuals in a primary romantic relationship, and those who reported greater self-

Tool Box

Books & Articles

Card, J.J., Lessard, L., & Benner, T. (2007). PASHA: Facilitating the replication and use of effective adolescent pregnancy and STI/HIV prevention programs. *Journal of Adolescent Health, 40*(3), 275.e1-275.e14.
"This article provides an update on an innovative resource for promoting the replication of effective teen pregnancy and STI [sexually transmitted infection]/HIV prevention programs. The resource is called the Program Archive on Sexuality, Health & Adolescence (PASHA). ... Fifty-six programs have been selected by PASHA's Scientist Expert Panel as 'effective' in changing one or more risky behaviors associated with adolescent pregnancy or STI/HIV. Complete program and evaluation materials from 35 of these programs are now currently available through PASHA, five are pending, 12 are publicly available from other sources, and only four are not publicly available. ... The resource can be used by adolescent pregnancy and STI/HIV prevention practitioners to put what works to work to continue the lowering of the nation's adolescent pregnancy and STI/HIV rates" (p. 275.e1).

Fernandez, F., & Ruiz, P. (Eds.). (2006). *Psychiatric aspects of HIV/AIDS.* Philadelphia: Lippincott Williams & Wilkins.
From the publisher: "This comprehensive text focuses on psychiatric issues associated with HIV/AIDS and provides clinicians with a basic understanding of epidemiology, virology, transmission, and medical treatments inclusive of occupational exposures. Psychosocial, spiritual, and sociocultural aspects of HIV/AIDS are covered, describing implications of HIV/AIDS across minority groups. The treatment section allows clinicians to organize an effective psychiatric treatment plan for all mental disorders associated with HIV/AIDS. Issues of adherence, prevention, and public well-being are emphasized throughout. The management of medical problems such as delirium, dementia, and pain ... in ... patients with co-morbid substance abuse[,] as well as end[-]of[-]life care[,] is also included. In addition, requests for physician[-]assisted suicide are sensitively addressed from a biopsychosocial perspective."

Lightfoot, M., Rotheram-Borus, M.J., & Tevendale, H. (2007). An HIV-preventive intervention for youth living with HIV. *Behavior Modification, 31*(3), 345-363.
"Based on ... [our] experiences in delivering a small-group intervention to YLH [youth living with HIV], we developed an intervention that capitalized on the successful elements of our previous intervention (Teens Linked to Care) and addressed the challenges in delivering a HIV-preventive intervention to YLH. The CLEAR (Choosing Life: Empowerment, Action, Results) intervention consists of 3 modules, each containing six 1.5-hour sessions, for a total of 18 sessions. The first module focuses on reducing substance use, the second on decreasing sex risk behaviors, and the third on maintaining physical health by improving attendance at medical appointments and adhering to medication regimens" (p. 350).

Mason, S., & Vazquez, D. (2007). Making Positive Changes: A psychoeducation group for parents with HIV/AIDS. *Social Work with Groups, 30*(2), 27-40.
"The Making Positive Changes Program uses groups to enhance social support and to provide education on issues that affect families with HIV. Sessions focus on one of two major topics – self-care and parenting – with consumer involvement in planning and facilitation. Challenges included those typical to group work but also specific to HIV/AIDS, especially stigma. As the program develops, consumers will increasingly participate in and guide group implementation" (p. 27).

Meade, C.S., & Weiss, R.D. (2007). Substance abuse as a risk factor for HIV sexual risk behavior among persons with severe mental illness: Review of evidence and exploration of mechanisms. *Clinical Psychology: Science & Practice, 14*(1), 23-33.
"The objectives of this article are to (a) document the rate of HIV infection among persons with co-occurring SMI [severe mental illness] and SUD [substance use disorder], (b) review studies examining substance abuse as a risk factor for sexual risk behavior among persons with SMI, (c) identify mechanisms through which substance abuse may influence sexual risk behavior, (d) discuss how the co-occurrence of SMI and SUD may have additive or synergistic effects on HIV sexual risk behavior, and (e) provide recommendations for clinical practice" (p. 24).

Miller, R.L., Jr. (2007). Legacy denied: African American gay men, AIDS, and the black church. *Social Work, 52*(1), 51-61.
"This qualitative study used narrative data to examine the religious education and spiritual formation of 10 African American gay men living with AIDS and to describe their experience of religiously sanctioned homophobia, heterosexism, and AIDS phobia of the black church in the context of its historical opposition to societal prejudice and oppression. Examining how African American gay men living with AIDS manage their religious and spiritual involvement, sexual orientation, and disease status may help ... [clinicians] understand the challenges such men may experience. It might also help ... [clinicians] offer culturally relevant and emotionally restorative ... interventions for clients experiencing such losses" (p. 51).

Noar, S.M. (2007). An interventionist's guide to AIDS behavioral theories. *AIDS Care, 19*(3), 392-402.
"Although numerous individual-level AIDS behavioral theories (ABTs) exist in the literature, there is currently no consensus as to which theory is most precise in explaining or predicting HIV

efficacy for coping were less likely to report suicidal ideation. (p. 1199)

Carrico and colleagues conclude that "[a]lthough longitudinal investigations are necessary to replicate these findings, results from the present study will assist with identifying HIV-positive individuals who may be at an increased risk of suicidal ideation so that they may ... be assessed regularly and referred for psychological treatment when appropriate" (p. 1202).

risk behavior. In the absence of empirical evidence favoring one ABT over another, how should an interventionist go about choosing a theory for one's particular prevention efforts? The current article provides an overview of and conceptually compares 13 ABTs in an attempt to provide guidance regarding this critical decision. A variety of criteria upon which one might judge ABTs are proposed and discussed, including empirical support for variables that make up the theory, whether or not theories are belief-based, AIDS-specific, message-based, intervention-based and behavior or behavioral-change focused. While all of the theories have strengths and weaknesses, the task for an interventionist is to choose the theory of best fit for one's particular prevention efforts. The suggestions provided in the current article may help with such a choice" (p. 392).

Rutledge, S.E. (2007). Single-session motivational enhancement counseling to support change toward reduction of HIV transmission by HIV positive persons. *Archives of Sexual Behavior, 36*(2), 313-319.
"Using two case examples, this article presents an overview of motivational interviewing in a single counseling session as a promising treatment for addressing ambivalence about safer sex with HIV+ persons" (p. 313).

Scheid, T.L. (2007). Specialized adherence counselors can improve treatment adherence guidelines for specific treatment issues. *Journal of HIV/AIDS & Social Services, 6*(1-2), 121-138.
"This paper describes the role played by specialized adherence counselors and provides a summary of the guidelines that were developed throughout the course of this project. Strategies are offered for helping with diverse adherence problems ... [and are] directed towards clinicians working on the front line to improve adherence" (pp. 121-122).

Shoptaw, S., & Reback, C.J. (2007). Methamphetamine use and infectious disease-related behaviors in men who have sex with men: Implications for interventions. *Addiction, 102*(Suppl. 1), 130-135.
"Methamphetamine [meth] use is highly prevalent in MSM [men who have sex with men]. Strong associations between [meth] use and HIV-related sexual transmission behaviors are noted across studies of MSM and correspond to increased incidence for HIV and syphilis compared to MSM who do not use the drug. Behavioral treatments produce sustained reductions in [meth] use and concomitant sexual risk behaviors among [meth]-dependent MSM" (p. 130). For these reasons, Shoptaw and Reback recommend "[b]rief screening of [meth] use for MSM who seek physical, mental health and substance abuse services ... . Behavioral interventions that address [meth] use may range from brief interventions to intensive out-patient treatments" (p. 130).

Steele, R.G., Nelson, T.D., & Cole, B.P. (2007). Psychosocial functioning of children with AIDS and HIV infection: Review of the literature from a socio-ecological framework. *Journal of Developmental & Behavioral Pediatrics, 28*(1), 58-69.
"[B]eyond the direct effects on children's neurocognitive and psychological functioning, HIV infection may disrupt many of the social support systems that children depend on for optimal development. Further, unlike many other illnesses, children with HIV infection are more likely to experience parental illness and possible death, social stigmatization, and the prospect of lifelong adherence to complicated medical regimens. Families face difficult decisions regarding disclosure of the illness both to the child and to others within and outside of the family. Children who are disclosed to about their illness generally evidence better adjustment. Similarly, appropriate disclosure outside of the immediate family may confer some benefits to the child in terms of psychological and physical health. However, research into the larger social ecologies of youth with HIV remains lacking, limiting the conclusions that can be drawn regarding longer term outcomes" (p. 58).

Welle, D.L., & Clatts, M.C. (2007). Scaffolded interviewing with lesbian, gay, bisexual, transgender, queer, and questioning youth: A developmental approach to HIV education and prevention. *Journal of the Association of Nurses in AIDS Care, 18*(2), 5-14.
"This article introduces an approach to scaffolded interviewing that builds narrative and relational 'platforms' for young people's self-development and facilitates health communication, trust and rapport, and HIV awareness. ... In scaffolded interviewing, three kinds of platforms or supportive structures serve to scaffold enhanced health communication and HIV awareness: (a) the interview design (a strategic sequencing of life history and HIV-related questions), (b) the developing relationship between interviewer and study participant, and (c) the young person's own narration of a 'real' and developing self" (p. 5).

Wiener, L., Mellins, C.A., Marhefka, S., & Battles, H.B. (2007). Disclosure of an HIV diagnosis to children: History, current research, and future directions. *Journal of Developmental & Behavioral Pediatrics, 28*(2), 155-166.
"This paper provides a systematic review of research on disclosure of pediatric HIV infection. ... While no consensus on when the diagnosis of HIV should be disclosed to a child or the psychological outcomes associated with disclosure was found, clinical consensus on several issues related to working with families was identified. We apply this literature to clinical practice and suggest avenues and directions for future research" (p. 155).

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Neuropsychological Assessment

Parsons, Rogers, Hall, and Robertson (2007) administered **a brief, motor-based assessment of neurocognitive functioning** (Timed Gait, Grooved Pegboard, and Fingertapping), as well as a comprehensive neuropsychological test battery, to 327 adults living with HIV. The investigators found that this group of fine and gross motor tests ... [was] significantly correlated with a larger more comprehensive battery and accounted for a significant amount (52 per-

cent) of the variance in this larger battery. The level of predicted variance increased to 73 percent when two additional measures of motor processing speed [Digit Symbol and Trailmaking A and B] were added. Moreover, there were significant relationships between the set of international, [language-independent,] motor-based measures and those tests comprising the functional domains of verbal memory, language, figural memory, executive functioning, and attention. These findings suggest that a brief assessment of motor functioning may represent a sensitive estimate of the general neurocognitive functioning of individuals with AIDS dementia complex. It also suggests that a motor-based battery may be administered as a strong indicator of neurocognitive performance without losing all of the explanatory power of larger batteries that cover multiple domains. (p. 64)

HIV Treatment News

Medical Care

Pence, Miller, Gaynes, and Eron (2007) examined **the relationship between psychiatric comorbidity and immunologic/virologic response** among 198 antiretroviral-naive men and women receiving care in an academic medical center in the southeastern U.S.

> Probabilities [of having (1) any mood, anxiety, or substance use disorder; (2) clinically relevant depression; (3) alcohol abuse/dependence; and (4) drug abuse/dependence] were based on responses to questions on a ... screening instrument (Substance Abuse and Mental Illness Symptoms Screener [SAMISS]) and other clinical and sociodemographic characteristics and were derived using predictive logistic regression modeling from a separate validation study of the SAMISS compared with *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition*[,] diagnoses. (p. 159)

Pence and colleagues

> found an association between patients' predicted risk of having a mood, anxiety, or substance use diagnosis and virologic response to HAART [highly active antiretroviral therapy]. Patients initiating HAART who had a higher predicted probability of psychiatric morbidity took longer, on average, to achieve virologic suppression and were quicker to demonstrate overall virologic failure. Associations between risk of psychiatric morbidity and time to virologic rebound and immunologic failure were consistent in direction, although not statistically significant. Predicted probabilities separately predicting presence of diagnoses of depression, alcohol abuse, and [substance abuse] demonstrated similar relations. (p. 163)

Although the investigators hypothesized "that reduced medication adherence may explain part or all of the observed association between psychiatric morbidity and clinical response to HAART, ... [they] were unable to test this hypothesis in the current study" (p. 164). Regardless of mechanisms operating to reduce virologic response, however, Pence and colleagues contend that "[t]hese findings argue for the importance of identifying and treating comorbid psychiatric illness in patients initiating HAART to optimize their HIV clinical outcome" (p. 165).

Psychiatric/Psychological/Psychosocial/Spiritual Care

Adherence to Treatment

In Canada, Lima et al. (2007) studied 563 individuals initiating HAART to assess **the impact of adherence on the relationship between depressive symptoms and mortality**. Among these individuals, "51% had depressive symptoms at baseline and 23% ... were less than 95% adherent in the first year of follow-up. The overall all-cause mortality rate was 10%. Multivariate analysis showed that individuals with depressive symptoms and adherence < 95% were 5.90 times ... more likely to die than adherent patients with no depressive symptoms" (p. 1175). In other words, Lima and colleagues "found that depressive symptoms were strongly associated with higher mortality among ... individuals initiating HAART. This relationship was the strongest among non-adherent individuals with depressive symptoms. Efforts to diagnose and treat depression, especially in individuals with sub-optimal adherence[,] may be an important strategy for reducing psychiatric morbidity, as well as improving adherence and potentially [improving] disease outcomes" (p. 1181).

Gruber, Sorensen, and Haug (2007) reviewed 17 prospective studies on psychosocial predictors of HAART use among people living with HIV. "Unstable housing and lack of HIV-specific social support predicted low HAART adherence in the studies where they were tested. The most consistent predictor of adherence problems across all populations and measures was active substance use, particularly cocaine use. Younger age and less than high school education were not consistently predictive. Depression predicted adherence problems measured by self-report but not by electronic monitoring" (pp. 23-24). According to Gruber and colleagues, "[t]he most certain way to identify unstable housing and stimulant use is during comprehensive psychosocial needs assessments" (p. 32). The investigators point out that, although clinicians may work in settings in which people are more likely to disclose their **unstable housing** and **stimulant use**,

> [i]n some settings, people are reluctant to disclose the[se] major ... risk factors [for nonadherence]. ... To screen most broadly for possible HAART adherence risk without asking people to disclose sensitive information, one can use a brief indicator reflective of both established and less established risk factors. One such tool is the 4-item version of the Perceived Stress Scale (French et al., 2005). It asks four simple questions: "In the past month, how often have you felt (a) unable to control the important things in your life, (b) confident in your ability to handle ... [your] personal problems, (c) that things were going your way, and (d) that difficulties were piling up so high that you could not handle them." Each question is rated "never/rarely, sometimes, often, or mostly/always" (p. 591). This measure does not require clients to disclose details they may prefer to keep private. Despite its simplicity and generality, people in the top quartile are more likely to have adherence problems than those in the bottom quartile ... (French et al., 2005, p. 594). (in Gruber, Sorensen, & Haug, 2007, pp. 31-32)

Side effects also have the potential to impede antiretroviral adherence. Johnson and Neilands (2007) assessed self-reported side effects attributed to antiretroviral therapy, perceived health status, and **neuroticism** (i.e., a "tendency to experience negative, distressing emotions and to possess associated behavioral and cognitive traits" [p. 70]) among a convenience sample of 258 adults receiving antiretrovirals. The investigators found that "individuals ... who report greater symptoms of neuroticism also report greater frequency and severity of side effects from their medications. Further, higher levels of neuroticism are associated with poorer perceived health indirectly through side effect perceptions despite reported laboratory measures of disease progression that do not suggest their disease is more advanced than those with lower symptoms of neuroticism" (p. 74). Johnson and Neilands suggest that "assessing level of neuroticism may allow early detection of future problems with side effect reporting and the increased likelihood of future elevation of symptoms of anxiety and depression. Subsequent interventions may involve proactively addressing patient expectations about side effects and using multi-disciplinary informational and supportive approaches to help patients understand and manage adverse effects from treatment" (p. 74).

Coping, Social Support, & Quality of Life

Siegel and Schrimshaw (2007) administered a series of self-report measures to an ethnically diverse sample of 138 women living with HIV/AIDS to examine whether "the perception of having experienced growth as a result of a stressful event, often termed **benefit finding**, moderates the effects of stress (both physical symptomatology and social conflict) on psychological distress and well-being" (p. 421). The investigators

> found benefit finding to have both main and moderating effects on the distress and well-being of women living with HIV/AIDS, suggesting that it may serve as a protective psychosocial resource. ... [W]ith regard to main effects, higher benefit finding was associated with fewer depressive and anxious symptoms and greater positive affect. Significant interaction terms suggest this association is especially true for those with high numbers of HIV-related physical symptoms. ... [A]mong women who perceived few benefits, high levels of physical symptoms were associated with greater depressive symptoms and anxious symptoms. However, for women who reported greater benefit finding, physical symptoms were either unrelated or weakly related to depressive and anxious symptoms. (p. 429)

Importantly, "[b]enefit finding was not found to moderate the effects of social conflict. These findings suggest a potential mechanism (i.e., stress buffering) by which benefit finding could promote psychological adjustment. Further, the finding that benefit finding only moderated the growth-inducing stressor (e.g., the illness), but not the effects of other stressors (e.g., ... conflict), suggests possible limits to the stress-buffering role of benefit finding" (p. 421).

With regard to the clinical application of these findings, Siegel and Schrimshaw observe that

> intervention to facilitate benefit finding – either through cognitive behavioral therapy ... or through expressive writing ... – has already proved effective in other patient populations and may be extended to HIV-positive women. ... [However,] the perception of a few benefits may be insufficient to buffer stress. Rather, interventions may need to promote high levels of benefit finding ... to buffer stress. Thus, while interventions may promote finding benefits, these benefits may translate into improved mental health for only specific subgroups of women. Further, the finding that benefit finding does not buffer the negative effects of other stressors suggests that interventions to promote benefit finding will not ameliorate distress from other causes (e.g. poverty, conflict). (p. 431)

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Tool Box

A Note on Content

This publication has been developed to help the frontline provider of HIV-related mental health services, allied professionals, and consumers stay up-to-date on research-based developments in HIV care. The contents for the "Biopsychosocial Update" are drawn from a variety of sources including, but not limited to: the *CDC HIV/STD/TB Prevention News Update* (http://www.cdcnpin.org/news/prevnews.htm); the *Kaiser Daily HIV/AIDS Report* (http://report.kff.org/hivaids/); and information e-mailed by Florida International University researcher Robert M. Malow, Ph.D., ABPP. Other sources are identified when appropriate.

It is presumed that readers have at least a fundamental understanding of medical, psychiatric, psychological, psychosocial, and spiritual considerations when assessing and intervening with people who are living with HIV/AIDS and their families. For additional background information on these aspects of care, the following resources may be of assistance:

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