mental health **AIDS**
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Biopsychosocial Update

HIV Prevention News

About Women & Men

"Growing evidence indicates that ART [antiretroviral therapy] can . . . reduce HIV infectiousness, raising the possibility of using **HIV treatment as prevention**" (p. 531), according to Kalichman et al. (2011), who "conducted a randomized clinical trial to test an **integrated behavioral intervention** designed to enhance using HIV treatment as prevention by improving medication adherence, reducing risks for other sexually transmitted infections [(STIs)], and minimizing risk compensation beliefs" (p. 531).

In reasoning their way to this synergistic approach, the investigators point out that "HIV treatment as prevention will fail when medication adherence is poor and when there are co-occurring . . . STIs . . ." (p. 531), necessitating the dual focus on adherence and sexual risk reduction. Furthermore, risk compensation beliefs can emerge in association with having an undetectable viral load (i.e., believing one is less infectious and therefore taking fewer precautions against infecting others), yet "even under optimal adherence, persons with undetectable peripheral blood viral loads will be highly infectious in their genital secretions when they have co-occurring STIs" (p. 531).

In all, 436 predominantly African American men and women living with HIV were randomized to either the behavioral intervention[1] or an attention control condition focused on more general health improvement; both conditions utilized the same operational procedures and took place in the same location. All study participants received

> a 45-minute one-on-one orientation and goal-setting session with 1 of the group facilitators before five 120-minute group sessions and a 60-minute postgroup one-on-one counseling session. The same interventionists delivered both conditions in male-female facilitator pairs. All facilitators received 2 weeks of training, delivered their first group sessions with an experienced facilitator, and received weekly supervision. [Facilitators] conducted group sessions with 8-10 participants of mixed gender and sexual orientations. (p. 532)

The investigators report that participants in "the integrated transmission risk reduction intervention demonstrated increased [ART] adherence and less unprotected intercourse with nonseroconcordant partners at 3- and 6-month follow-ups as well as fewer new [STIs] diagnosed over the 9-month follow-up period. . . . The integrated intervention also reduced behavioral risk compensation

In This Issue:

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[1] In the behavioral intervention condition, facilitators "conducted the first individual counseling session to set personal treatment and prevention goals for the upcoming group. The first group session built cohesion and trust, and in it [facilitators] discussed how risk reduction and treatment goals are related. The session included a team-building game designed to educate participants about the basics of HIV transmission, treatment resistance, and viral load. [Facilitators] covered myths and facts about infectiousness in detail. The second group session focused on understanding HIV treatment, including deciding when to start medications. . . . [D]ecisional balance exercises [were applied] to treatment decisions and sexual relationships in contexts of detectable and undetectable HIV [viral load]. Group session 3 focused entirely on sexual decision making under various nuanced conditions of moods, substance use, relationships, HIV status disclosure, treatment status, and viral load.

Group session 4 aimed to build treatment and safer sex decision skills in relation to substance use. A core activity in this session had participants wear vision-disorienting goggles to simulate intoxication while filling a pillbox with mints and then apply a condom to a penis model. [Facilitators] then trained participants in medication management and safer sex strategies, including using male and female condoms. Group session 5 emphasized treatment adherence to improve health and reduce infectiousness. [Facilitators] also offered skill-building activities for recognizing symptoms of STIs. The final individual counseling session occurred within 1 week of the last group session and delivered a personalized plan for treatment decisions, adherence, and safer sex" (Kalichman et al., 2011, p. 532).

beliefs" (p. 531). According to Kalichman and colleagues,

> results . . . suggest . . . that an integrated behavioral intervention has the potential to bolster the use of HIV treatments to avert new HIV infections.
>
> Although adherence improvements were relatively stable over the 9 months of follow-up, the sexual risk reduction outcomes were shorter lived, dissipating before 9 months after the intervention. The durability of behavioral outcomes may prove more optimistic when the intervention is delivered in clinical care[,] given the opportunities for ongoing support. . . . Although [the investigators] strived to maintain implementation simplicity, the intervention included 2 individual and 5 group sessions. Operations research is needed to examine whether the intervention can be shortened and whether it can be infused within existing clinical services, such as support groups, medication adherence groups, and case management.
>
> . . . HIV treatment used for prevention offers great hope for extending the benefits of ART to avert new HIV infections. Behavioral interventions can be bundled with HIV treatments used for prevention and offered as a unified prevention package. . . . It is incumbent on "test and treat" programs, as well as other approaches that use HIV treatment for prevention, to provide adequate resources for integrating behavioral interventions to sustain adherence, risk reduction, and STI control. (p. 537)

Wilson and Widom (2011) examined "the relationship between **childhood abuse and neglect** and sexual risk behavior in middle adulthood and whether psychosocial factors (risky romantic relationships, affective symptoms, drug and alcohol use, and delinquent and criminal behavior) mediate this relationship" (p. 236). An ethnically diverse sample of 454 men and women who had experienced documented physical abuse, sexual abuse, or neglect prior to the age of 12 years, along with 346 matched controls, participated in this prospective, longitudinal study. Participants, who resided in a midwestern American metropolitan area, were interviewed in young adulthood (average age 29 years) and again in middle adulthood (average age 41 years). The investigators found that "child abuse and neglect . . . [were] associated with increased likelihood of risky sexual behavior in middle adulthood, . . . and this relationship was mediated by risky romantic relationships in young adulthood" (p. 236). Elaborating on these findings, Wilson and Widom assert that

> victims of childhood abuse and neglect appear to be at risk for a long-term pattern of health-compromising sexual behaviors that extends into middle adulthood, when risky sexual behavior decreases for most individuals. . . . [R]isky sexual behavior appears to take place in the context of generally chaotic, unstable relationships characterized by disruptions, sexual infidelity, and lack of monogamy. . . . Taken together, . . . the construct reflects a pattern of romantic relationships lacking stability or commitment. Moreover, risky relationships were associated with delinquent and criminal behavior, suggesting that these relationship characteristics are associated with a general pattern of risky, deviant behavior. (p. 242)

The investigators suggest that this study's findings "point to romantic relationships as an important focus of intervention and prevention efforts for reducing HIV risk behavior among victims of childhood abuse and neglect. Helping victims of abuse and neglect to form healthy romantic relationships early in life may reduce risky sexual behavior that persists into middle adulthood" (p. 244).

About Women

From among participants in the *Protect and Respect* safer-sex intervention (described at length in the Fall 2010 issue of *mental health* **AIDS**), Teti and Bowleg (2011) "conducted semi-structured interviews with 16 **sexual minority** WLH/A [**women living with HIV/AIDS**] to better understand their sexual risk behaviors and corresponding HIV prevention needs. Most of the interviewees were African American (75%) and poor (75%)" (p. 69). Study participants

> discussed their risk and protective behaviors, motivations to have safer sex, and HIV and STI

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> risk perception, with regards to both their male *and* female partners. They also detailed the links between unsafe sex and substance abuse. When asked what they needed from HIV-prevention programming, the interviewees argued for both SMW [sexual minority women]-specific and non-SMW-specific HIV-prevention programming, discussed the need for prevention programs to address the context of women's risk and women's resiliency, and described the benefits of group support for sexual minority WLH/A. (p. 81)

These findings, according to Teti and Bowleg, "call attention to the fact that sexual minority WLH/A may have different prevention questions or intervention needs than those typically addressed in current HIV-prevention programs" (p. 83). The investigators offer the following recommendations:

> Sexual minority WLH/A may need specific prevention messages, discussion groups, or programs tailored to their needs and experiences. For example, SMW may need forums to discuss the accurate scientific risks associated with the sexual activities that they commonly engage in. The STI and HIV transmission risks associated with oral sex can be confusing for people living with HIV/AIDS because the facts are debated among researchers. . . . Most of the women in the sample gave numerous reasons for why they did not use dental dams [for oral sex]. Thus, in addition to accurate risk information, sexual minority WLH/A need information about alternatives to using dental dams and/or opportunities to learn sexual negotiation skills, if they want to use dental dams but have a partner who dislikes or refuses them. . . . [S]pecific programs for sexual minority WLH/A should also address the fact that it is important for women to recognize that identifying as a lesbian (or bisexual) does not make them immune to risks that they may take or have taken with men, by choice or by force or sex work. Accordingly, SMW may need specific forums (individual or group) to discuss the emotional consequences of sex work with men as well as the impact of homophobia on their lives, and the intersection of homophobia and AIDS stigma.
>
> If it is not realistic to offer specific programs or discussion groups for sexual minority WLH/A, it may be more practical to develop a checklist or guidelines to make programs for all WLH/A friendly and relevant to SMW. The checklist could include important issues to consider, such as the following:
>
> 1. Do not assume that all women have male partners now or will have male partners in the future.
> 2. Explain clearly risks and prevention solutions for all types of relationships and not just male partners.
> 3. Explain clearly the HIV and STI risks for oral sex.
> 4. Use examples and language that support different partner types.
> 5. Give space to women to discuss their personal stories.
> 6. Ensure safety and confidentiality for all participants.
>
> . . . [Finally], prevention programs for women focus on the skills women need to be healthier but honor women's strengths less frequently. . . . WLH/A want to be seen as multifaceted but normal everyday people with common strengths and challenges to those around them. Programs that focus only on women's challenges risk demoralizing and demotivating women and may miss opportunities for women to share successful, healthy strategies. (pp. 83-84)

Operario, Nemoto, Iwamoto, and Moore (2011) "examined prevalence and correlates of unprotected sex with a primary male partner in a [multi-ethnic, low-income, convenience] sample of . . . 174 **transgender women**" (p. 674) in San Francisco and found that

> 41% reported HIV positive status and 13% had another [STI] during the past year. Approximately one-third (34%) of the sample reported having had unprotected sex with a male primary partner during the past 3 months; by contrast, only 6% reported having had unprotected sex with a non-primary partner during the past 3 months. Factors associated with unprotected sex with a primary partner included living with the partner, drug use, alcohol use, and education level. In addition, self-efficacy to use condoms was associated with lower unprotected sex with a primary partner, and perceived discrimination was associated with higher unprotected sex with a primary partner. (p. 680)

The investigators note that "35% of transgender women in HIV-discordant primary partnerships had unprotected sex with their male primary partner during the past 3 months, and 18% of transgender women in HIV-positive concordant primary partnerships had unprotected sex with an outside partner during the past 3 months" (p. 674). Operario and colleagues believe that these findings

> underscore a need for prevention interventions to address the relationship context for HIV trans-

> mission in transgender women and their male primary partners. Several couples-focused HIV interventions have been shown to reduce risk behavior in members of a committed relationship. . . . Couples-focused intervention modalities include couples HIV testing . . . and couples behavioral counseling. . . . Although HIV prevention programs involving both members of a committed relationship might require additional effort compared with programs that involve one member only, couples-focused interventions offer an opportunity for both members to discuss their perceptions and attitudes toward HIV, develop mutual risk-reduction goals, and reinforce one another's behaviors. (p. 680)

The investigators also encourage clinicians to address sex with concurrent partners outside transgender women's primary relationships:

> One emerging challenge in couples-focused HIV interventions is the potential need to counsel partners to reduce sexual risk with concurrent partners outside of the primary partnership. . . . To address HIV risk in couples that do not practice monogamy, it is important for interventions to explicitly acknowledge and distinguish between sex within the primary relationship versus sex with outside partners, and to encourage the formulation of explicit agreements about safer sex in both contexts. Another challenge in couples-focused HIV interventions is to encourage disclosure of HIV-positive status if partners had not already done so. Protocols to facilitate disclosure of concurrent sex partnerships or HIV-positive status need to be developed with extreme sensitivity, in order to minimize risk for interpersonal partner conflict. (p. 680)

Tool Box

Resources

McBride, D.F., & Bell, C.C. (2011). Human immunodeficiency virus prevention with youth. *Psychiatric Clinics of North America, 34*(1), 217-229.
"The present article delineates: (1) the risk factors that are conducive to risky behaviors, (2) the protective factors that can prevent risky behaviors, and (3) various prevention programs that have been found effective in preempting these behaviors in youth" (p. 218).

Mustanski, B.S., Newcomb, M.E., Du Bois, S.N., Garcia, S.C., & Grov, C. (2011). HIV in young men who have sex with men: A review of epidemiology, risk and protective factors, and interventions. *Journal of Sex Research, 48* (2-3), 218-253.
"Epidemiological studies have found that young men who have sex with men (YMSM) represent the majority of young people infected with HIV annually in the United States. . . . The purpose of this article is to review the existing YMSM literature on HIV epidemiology, correlates of risk, and intervention research. . . . In terms of intervention research, the article suggests that promising future directions include Internet-based intervention delivery, integration of biomedical and behavioral approaches, and interventions that go beyond the individual level to address partnership, structural, community, and network factors" (p. 218).

Operskalski, E.A., & Kovacs, A. (2011). HIV/HCV co-infection: Pathogenesis, clinical complications, treatment, and new therapeutic technologies. *Current HIV/AIDS Reports, 8*(1), 12-22.
"In this review, we summarize the newest studies regarding the pathogenesis of HIV/HCV [hepatitis C virus] coinfection, including effects of coinfection on HIV disease progression, HCV-associated liver disease, the immune system, kidney and cardiovascular disease, and neurologic status; and effectiveness of current anti-HIV and HCV therapies and proposed new treatment strategies" (p. 12).

Puffer, E.S., Kochman, A., Hansen, N.B., & Sikkema, K.J. (2011). An evidence-based group coping intervention for women living with HIV and history of childhood sexual abuse. *International Journal of Group Psychotherapy, 61*(1), 98-126.
"Women living with HIV/AIDS and a history of childhood sexual abuse often exhibit sexual trauma symptoms and elevated rates of HIV-risk behaviors. In this paper, we describe a coping skills group intervention [*Living in the Face of Trauma*] that reduced traumatic stress and sexual-risk behavior in a recent ran-

Finally, Operario and colleagues speak to

> other factors associated with unprotected sex with a primary partner, identified here, [that] should be taken into account when designing interventions for transgender women. These factors include length of relationship which might confer a sense of complacency regarding HIV, and alcohol and drug use, behaviors which might undermine perceptions of risk and intentions to practice safer sex. Interventions should also aim to improve condom use self-efficacy, which fosters a sense of control in negotiating safer sex, and address perceived discrimination in transgender women, which might contribute to a heightened need for intimacy and affirmation from sex partners. (p. 681)

About Adolescents & Young Adults

Extending their research on a model first presented in the Winter 2009 issue of *mental health* **AIDS**, Koniak-Griffin, Lesser, Takayanagi, and Cumberland (2011) conducted a randomized controlled trial "to evaluate the efficacy and sustainability of a couple-focused . . . HIV . . . prevention intervention in reducing unprotected sex and increasing intent to use condoms and knowledge about AIDS" (p. 306). In all, 168 primarily Latino couples between the ages of 14 and 25 years domized clinical trial. We focused on clinical issues that emerged among female participants receiving the intervention. Clinical observations showed that recognizing connections between trauma, psychological distress, and high risk behaviors was a new and powerful experience for many participants. Participants successfully applied psycho-educational material, expressing an increased sense of power and control over their relationships and behaviors as they developed more adaptive cognitive and behavioral skills. Women expressed high levels of satisfaction with the intervention. Recommendations for clinical practice are provided" (p. 98).

Safren, S.A., Blashill, A.J., & O'Cleirigh, C.M. (2011). Promoting the sexual health of MSM in the context of comorbid mental health problems. *AIDS & Behavior, 15*(Suppl. 1), S30-S34.
"Despite the moderate efficacy of HIV prevention interventions for at risk gay bisexual, and other men who have sex with men (MSM), MSM continue to represent the largest group of new HIV infections and the largest number of individuals living with HIV in the U.S. . . . We consider the following observations critical to identifying priorities for HIV prevention among MSM: (1) gay , bisexual and other MSM have higher rates of mental health problems than general population estimates; (2) these mental health problems co-occur with each other and interact synergistically to increase HIV risk; and (3) comorbid mental health problems may compromise the impact of prevention programs, and integrating treatment of mental health issues into prevention programs may improve program efficacy" (p. S30).

Schouten, J., Cinque, P., Gisslen, M., Reiss, P., & Portegies, P. (2011). HIV-1 infection and cognitive impairment in the cART era: A review [Editorial review]. *AIDS, 25*(5), 561-575.
"With the introduction of combination antiretroviral therapy [(cART)] . . . HIV-associated dementia . . . largely disappeared in clinical practice. However, in the past few years, patients . . . with systemically well controlled infection . . . started to complain about milder memory problems and slowness, difficulties in concentration, planning, and multitasking. Neuropsychological studies have confirmed that cognitive impairment occurs in a substantial (15-50%) proportion of patients. . . . So what may be going on in the CNS [central nervous system] after so many years of apparently controlled HIV-1 infection is an urgent and important challenge in the field of HIV medicine. In this review we summarize the key currently available data. We describe the clinical neurological and neuropsychological findings, the preferred diagnostic approach with new imaging techniques and cerebrospinal fluid analysis. We try to integrate data on pathogenesis and finally discuss possible therapeutic interventions" (p. 561).

Valcour, V., Sithinamsuwan, P., Letendre, S., & Ances, B. (2011). Pathogenesis of HIV in the central nervous system. *Current HIV/AIDS Reports, 8*(1), 54-61.
"This review highlights recent investigations of HIV-related CNS injury with emphasis on cART-era neuropathological mechanisms in the context of both U.S. and international settings" (p. 54).

Webel, A.R., & Okonsky, J. (2011). Psychometric properties of a symptom management self-efficacy scale for women living with HIV/AIDS. *Journal of Pain & Symptom Management, 41*(3), 549-557.
The nine-item HIV Symptom Management Self-Efficacy for Women Scale (HSM-SEWS) "is a reliable and valid instrument that measures the self-efficacy of symptom management behavior in women with HIV/AIDS and can be used during interventions and in research targeting this area of health care research" (p. 549).

– Compiled by
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who were coparenting a child at least 3 months of age in urban southern California were randomized to either "a 12-hour theory-based, **couple-focused HIV prevention program culturally tailored for young Latino parents**, with emphasis on family protection, skill building, and issues related to gender and power[2] or a "1 ½-hour control condition [that] provided basic HIV-AIDS information" (p. 306). According to the investigators,

> the 6-month results indicate that the couple-focused HIV prevention program was efficacious in reducing unprotected vaginal sex acts and increasing intent to use condoms and knowledge about AIDS among young Latino parents. Participants receiving the intervention showed a sharp decrease in unprotected sex acts between baseline and the 6-month evaluation; however, this pattern was followed by an almost equal increase between 6 and 12 months. No significant changes in unprotected sex or intent to use condoms were observed for couples receiving the control condition. . . .
>
> Knowledge about AIDS significantly increased for participants

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[2] "The 6-session (12-hour), couple-focused HIV prevention program (Respecting and Protecting Our Relationships) . . . was delivered in small groups of 1 to 5 couples (average, 2 couples). Eight intervention and 3 control series were conducted in Spanish and the remainder in English. . . . The highly structured curriculum emphasized protecting the family to promote safer sexual behaviors. Pairs of male and female facilitators involved participants in small-group discussions about HIV prevention . . . and attitudes and beliefs about HIV and 'safer' sex. Unique features included facilitated discussions ('talking circles') in which issues of gender norms and power were discussed in terms of effect on partner relationships and healthy sexual decision making. . . . Interactive activities (e.g., games), writing exercises, and skill-building activities (e.g., condom use and sexual negotiation) were incorporated throughout the curriculum. In separate groups, male and female participants explored issues related to sexuality , gender roles, and relationship violence. In 1 session, young parents identified people who made up their 'Palabra Circle' (circle of relationships) and how others would be affected if they became infected with HIV; then a young mother who was seropositive for HIV shared her experiences living with HIV and how her health affected her family, friends, and life plans" (Koniak-Griffin et al., 2011, pp. 307-308).

> in both groups through the 6-month evaluation. Within the 6- to 12-month interval, knowledge was maintained by participants in the couple-focused HIV program, whereas knowledge scores decreased for those receiving standard information. (p. 310)

Additionally, "female participants in both groups had higher intent to use condoms and knowledge about AIDS than male participants" (p. 306).

Koniak-Griffin and colleagues conclude that "the couple-focused HIV prevention intervention reduced risky sexual behaviors and improved intent to use condoms among young Latino parents at the 6-month evaluation. A maintenance program is needed to improve the sustainability of effects over time" (p. 306). The investigators also "recommend that recruitment efforts be directed toward the couple rather than facilitated through women, as this approach may increase enrollment of individuals in less committed relationships. Strategies for dyadic outreach should focus on how the intervention may improve couple communication and negotiation of condom use and build healthy relationships in which sharing of personal information is safe" (p. 310). Of course, "an important issue raised by these results concerns whether programs with 6 months or less of follow-up should be disseminated for replication as evidence-based models of intervention. Although establishment of intervention efficacy is essential, sustainability of program effects cannot be assumed on the basis of short-term outcomes" (p. 310).

About Men Who Have Sex With Men

Moskowitz and Seal (2011) surveyed 1,451 gay and bisexual men who attended events for men who have sex with men (MSM) in Chicago, Illinois, and Milwaukee, Wisconsin, and found that "among HIV -negative men, no relationships were found between their self-esteem and tendency to discuss their and their partners' HIV status. However, among HIV-positive men, there was a positive **relationship between self-esteem and disclosure** to receptive and insertive anal sex partners" (p. 621). Notably, although "self-esteem was an important independent predictor of HIV disclosure," it "was not influential over condom use" (p. 624). The investigators continue:

> In contrast to previous studies on condom use and self-esteem in barebacking [i.e., having intentional unprotected anal sex] . . ., teenage . . ., rural . . ., and African American . . . gay and bisexual men, the large population of mostly white, middle-aged, and educated gay and bisexual men we surveyed showed no significant results. This suggests that self-esteem may be related less with safer sex and more with the social ramifications that communicating an HIV-positive status produce (e.g., alienation, stigma, negative impressions, or intrapersonal discomfort with being HIV-positive). (p. 624)

Moskowitz and Seal suggest that clinicians

> might initiate more comprehensive discussions about HIV disclosure to casual partners, particularly when interacting with an individual exhibiting or expressing low self-esteem. Behavior modification techniques such as interpersonal skill training and scenario-based learning might help make men feel more comfortable disclosing their serostatus to casual partners. . . . Overall, [this] research suggests further evidence for the link between psychological affect and behavior enactment in HIV-positive men. The relationships described in this study should be noted when constructing and implementing future interventions to increase HIV disclosure or to increase self-esteem. (p. 625)

In an exploratory study, Lyons, Chandra, Goldstein, and Ostrow (2010) "report on interviews with [26] stimulant-using [MSM] who have participated in Crystal Meth Anonymous and other 12-step groups, focusing on those who did not have unprotected anal intercourse during a 6-month follow-up period and their reasons for doing so. The authors find 4 common themes cited: a diminished sexual drive; exclusive sex with a primary partner; greater sense of responsibility/commitment to safer sex; and most commonly of the four, an overall healthier sex life" (p. 224). Lyons and colleagues expand on these findings by recalling that

> at the baseline interview very few participants had positive things to say about their sexual experience sober. . . . At 6-month follow-up, almost half of those in the subset analyzed qualitatively are still experiencing low sex drive and/or unsatisfactory sex. On the other hand, about a third have begun to describe their sexual lives in positive terms – "enjoyable," "intimate," "healthy" – terms that were not used to describe drug-driven sex[, which they described as "exciting," "hot," or "intense"]. . . . Clinicians who have worked with MSM stimulant users have stated that their clients must go through "mourning" of the loss of stimulant-driven sex, and accept that sex will never be as good again. . . . [These] findings suggest that for at least some **men recovering from stimulant use**, sex may take on a new dimension, described as "healthy" or "enjoyable," that is

> different but not clearly inferior to stimulant-driven sex. These findings are significant for interventions because . . . in early recovery some men express the fear that they will never be able to have sex again without relapsing. . . . [T]hese findings could be adapted for motivational discussions with clients, in which discrepancy is developed . . . around whether stimulant-driven sex was truly enjoyable. Other group and individual interventions could emphasize and enlarge upon clients’ own statements about how their view of sex has changed. Finally, any behavioral intervention with stimulant users in treatment must provide hope that the individual will eventually have enjoyable sex free of stimulants. (p. 229)

HIV Assessment News

HIV Counseling & Testing

”Veterans with a history of mental health and substance abuse diagnoses, residing in assisted living facilities [(ALFs)], are more likely to have an undiagnosed HIV infection related to high-risk behaviors,” according to Jackson-Malik, McLaughlin, O’Hara, and Buxbaum (2011), who “determined (a) the cross-sectional **prevalence of HIV infection among** 65 **veterans** of unknown HIV serostatus **with mental health diagnoses** who resided in 11 community-[ALFs], and (b) whether patients who had not consented to standard physician-initiated blood testing in the previous 5 years would consent to rapid oral fluid HIV testing by nurses familiar to the subjects” (p. 81). The investigators “found an HIV prevalence of 3.1% in the subjects who agreed to be tested (*n* = 64, 98%). High test acceptance, especially in a group with little HIV screening experience, and the identified high prevalence of disease, suggest that this diagnostic method is effective. Patients’ familiarity with the nurses who conducted the testing most likely supported the success of the procedure” (p. 81). Jackson-Malik and colleagues suggest that “this pilot project may prove to be a fruitful model to scale up for use in other vulnerable, high-risk populations. . . . The advantages of rapid oral fluid testing are widely applicable to any group of patients, but this method is especially useful in those with lower rates of testing by standard methods” (pp. 86-87).

Psychological Assessment

As Burbridge, Cruess, Antoni, and Meagher (2011) describe it, the **Millon Behavioral Medicine Diagnostic** (MBMD; Millon, Antoni, Millon, Minor, & Grossman, 2001) “is a comprehensive assessment instrument developed specifically for medical populations initiating new treatments or dealing with chronic medical disease. The MBMD provides a set of summary scales [i.e., Management Guides] to assess for poor psychological adjustment and need for mental health referral, which may moderate the stress of disease and treatment and may in turn affect patient adjustment to illness as well as rate of disease progression” (p. 31).[3] Burbridge and colleagues

> evaluate[d] the use of the **MBMD Management Guides** summary scales as **potential screening tools for identifying persons at risk for accelerated disease progression** in a multi-ethnic HIV-infected sample of individuals recently initiating a HAART [highly active antiretroviral therapy] regimen. Based on three decades of research showing that psychological distress factors may be related to rates of HIV disease progression . . ., [the investigators] examined the relationship between two MBMD summary scores and three objective measures of HIV disease status in order to evaluate the measure’s utility in identifying individuals at risk for difficulties in psychological adjustment who might experience a more rapid HIV disease progression. To this end, the MBMD was administered to a heterogeneous sample of 147 HIV-infected men and women [52 MSM, 34 men who have sex with women (MSW), and 51 women] who also provided blood samples for assessment of CD4 [T-helper cell] and CD8 [T-cytotoxic cell] cell counts and HIV viral load. (p. 35)

The investigators “hypothesized that the two summary scales of the MBMD reflecting total burden across multiple domains (referred to as Adjustment Difficulties and Psych Referral), would be useful in identifying individuals at higher risk for HIV disease progression as indicated by lower CD4 and CD8 cell counts and increased viral load” (p. 31). “After controlling for age and months since HIV diagnosis,” Burbridge and colleagues “found that higher scores on the overall MBMD Psych Referral Summary Scale, reflecting a need for mental health treatment, were related to greater HIV viral load but did not relate to CD4 or CD8 cell counts” (p. 30). “Further analyses . . . revealed that this relationship was largely being driven by the MSM subgroup, with the relationship

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[3] “The Millon Behavioral Medicine Diagnostic (MBMD; Millon et al., 2001) is a self-report inventory designed for assessment of a broad range of psychosocial and behavioral factors. The MBMD consists of 165 true/false items and is usually completed in approximately 20-30 min[utes]. The MBMD produces scores on 29 content scales representing four domains including: (1) Psychiatric Indications (e.g., anxiety, depression, and cognitive dysfunction); (2) Coping Styles; (3) Stress Moderators; and (4) Treatment Prognostics, and also yields two specific summary scores derived from all of these domains, which are referred to as Management Guides. The Management Guide portion of the MBMD consists of two summary scales that indicate the likelihood that an individual will have significant difficulty adjusting to their medical condition (Adjustment Difficulties) and an indicator of whether a referral for mental health treatment is warranted (Psych Referral)” (Burbridge et al, 2011, p. 32).

between greater Psych Referral scale scores and greater viral load concentrations demonstrated for the MSM subgroup but not for the MSW or women only subgroups" (p. 35); the reason for this inconsistency across subgroups requires further evaluation. Nevertheless, Burbridge and colleagues conclude that

> this study . . . provided preliminary empirical support for the utility of the MBMD as a screening measure that may be of great clinical use in identifying individuals with HIV who may have poorer mental health status and perhaps a more rapid disease progression so that they may be targeted for preventative intervention. . . . Further longitudinal evidence for the predictive utility of the MBMD would provide support for the utilization of the MBMD in clinical settings to identify those with a risk for poorer psychological adjustment and to help determine those at the greatest risk for adverse disease outcomes. (p. 36)

HIV Treatment News

Medical Care

No studies were selected for summarization this quarter.

Psychiatric/Psychological/ Psychosocial/Spiritual Care

Psychopharmacology

Extending their research described in the Fall 2010 issue of *mental health* **AIDS**, Rabkin, McElhiney, and Rabkin (2011) "analysed data from three trials of **modafinil** [Provigil®; a wake-promoting agent] or armodafinil [Nuvigil®; a component of modafinil] for HIV -positive patients with **fatigue**, including 36 co-infected with HCV [**hepatitis C virus**], to compare treatment response and safety parameters related to HCV status" (p. 95). Among the 190 participants in these three studies, 120 were randomized to the active drug condition and 70 to the placebo condition. Rabkin and colleagues found that "HCV -positive patients reported improved energy at the same rate as HCV -negative patients did, with no evidence of

Tool Box

Positively Golden: Advances in Aging with HIV (Part 1)

"Older adults represent a growing number of individuals living with HIV/AIDS, both in terms of new infections and a growing prevalence of long-term survivors" (Emlet, Tozay, & Raveis, 2011, p. 101). In fact, "by 2015 approximately half of the adults with HIV living in the United States will be 50 years [of age] or older" (Vance, Mugavero, Willig, Raper, & Saag, 2011, p. 24). Despite these forecasts, "mental health interventions tailored specifically for [older adults living with HIV] are essentially nonexistent. . . . This is worrisome because many HIV-infected older adults live with elevated levels of depressive symptoms . . ., suicidal ideation . . ., AIDS-related stigma . . ., and comorbid health conditions (e.g., diabetes, osteoarthritis . . .). Furthermore, compared to their younger counterparts, HIV-infected older adults are less likely to use psychiatric services" (Heckman et al., 2011, p. 103).

This is the first of a two-part series. Part 1 highlights recent research findings on medical and neurocognitive concerns associated with HIV and aging. A characterization of "successful cognitive aging" with HIV is presented, as are performance-based measures to identify functional impairment attributable to aging and HIV , and cognitive remediation strategies for use with clients who exhibit cognitive decline while aging with HIV.

Part 2 (to be presented in the Fall 2011 issue of *mental health* **AIDS**) will describe a "positive aging" framework not specific to HIV disease; a strengths-based model of coping, along with three meaning-centered strategies grounded within this model: gratitude, forgiveness, and altruism; the infusion of "positive aging" concepts into qualitative and quantitative research on adults aging with HIV; and the first controlled trial to assess if an age-appropriate, coping-improvement group intervention could benefit older adults living with HIV/AIDS who present with depressive symptoms.

Health Matters

In their descriptive cross-sectional review of "electronic medical records of 1,478 adult patients seen in an HIV clinic . . . to examine **patterns of comorbidities** [health-related conditions in addition to HIV infection], and immunological and clinical characteristics **across each decade of life**," Vance, Mugavero et al. (2011) report that

> with increasing age, patients were found to have lower HIV viral loads, more prescribed medications, and a higher prevalence of comorbid conditions, including coronary artery disease, hypertension, hypercholesterolemia, hypogonadism, erectile dysfunction, diabetes, peripheral neuropathy, hepatitis C, esophageal gastric reflux disease, and renal disease. Fortunately, with increasing age, patients were also more likely to have public or private health insurance and tended to be more compliant to medical appointments. (p. 17)

One condition not listed above is **diarrhea**, "a common and quite distressing symptom among individuals with HIV/AIDS, even in the HAART [highly active antiretroviral therapy] era" (Siegel, Schrimshaw, Brown-Bradley, & Lekas, 2010, p. 354). Siegel and colleagues interviewed a convenience sample of 29 "late middle-age and older adults (i.e., age 50 years and older) . . . [t]o examine the emotional impact of diarrhea" (p. 353) among these individuals and report that

> three principal themes emerged: 1) I don't control the diarrhea, the diarrhea controls me; 2) I feel ashamed, dirty, and tainted; and 3) I fear what the diarrhea is doing to me and what it means. Their inability to control when and where their diarrhea would occur was a great source of emotional distress for participants. Almost all feared the possibility of fecal incontinence while out in public and the humiliation it would bring. To avoid this, many greatly restricted their time outside

negative effects on liver function. . . . In addition, most patients with both depression and fatigue experienced improved mood when fatigue also improved" (p. 100). The investigators conclude that " modafinil and armodafinil appear effective and well tolerated for treating fatigue among both HCV -positive and HCV-negative patients with HIV/AIDS" and "may hold promise for HIV-positive patients considering alpha interferon/ribavirin treatment for HCV" (p. 95). "Overall, the next step is to conduct a prospective trial of armodafinil with HIV-positive monoinfected and HIV/HCV-infected patients to replicate and extend [these] findings" (p. 100).

Service Engagement, Retention, & Utilization

Wohl et al. (2011) "conducted a randomized controlled trial of a motivational Strengths Model **bridging case management intervention** (BCM)[4] beginning approximately 3 months prior to and continuing 6 months after release versus a standard of care prison-administered discharge planning program (SOC) **for** [104] **HIV-infected state prison inmates**" (p. 356) in North Carolina. The investigators found that BCM was as effective as SOC for released prisoners "in terms of accessing medical care over the year following release. Further, there were no statistically significant differences of either re-incarceration or social service use between the study groups. Importantly, [the investigators] observed high rates of accessing nonurgent medical care in both study arms. At 6 months following release, approximately 90% of participants in each arm had at least one clinical care appointment" (p. 362).

According to the investigators, these results

> raise questions about the value

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[4] "The Strengths Model of case management focuses on the identification of the talents, resources, and goals of the client in an open, nonjudgmental environment and, unlike traditional case management services, is largely directed by the client rather than the case manager" (Wohl et al., 2011, p. 357).

> the home or where they would go to ensure access to a restroom. Others felt shame and perpetually "dirty" even when not dealing with a bout of diarrhea. Many also worried about the effect the diarrhea would have on their health and whether it signaled progression to end-stage disease. (p. 353)

Siegel and colleagues sensitively observe that "physicians . . . should recognize that diarrhea might be an embarrassing problem for some patients to discuss and may have to inquire about it directly. Patients who may already feel devalued because of their older age (especially when they sense ageism) or because they have a stigmatizing disease may be even more reluctant to bring up this symptom" (p. 367). The investigators go on to stress "the need to aggressively manage diarrhea in HIV-infected adults, [including the consideration of 'dietary, complementary, and alternative medicine options for alleviating the symptom' (p. 367)], as the social and emotional consequences can be profound" (p. 353). "Given that HIV-infected older adults [may] already perceive themselves as lacking sufficient social support, . . . symptoms that potentially exacerbate this social isolation are of particular concern" (p. 367). Therefore, when diarrhea "cannot be effectively controlled, physicians and social service agencies should address the isolation by providing home-based opportunities for social support and interaction" (p. 353). "These might include home access to computers for social networking with other patients and 'online support groups' for those who fear traveling due to potential incontinence" (p. 367).

Free Your Mind

Although "the effects of HIV and aging on cognition are not uniform" (Hardy & Vance, 2009, p. 268), cross-sectional studies suggest that advancing age and HIV infection do not interact to adversely affect cognitive functioning (Cysique, Maruff, Bain, Wright, & Brew, 2011; Valcour, Paul, Neuhaus, & Shikuma, 2011). Longitudinal studies are needed to confirm these findings.

Given the fact that cognitive outcomes vary among adults aging with HIV, Malaspina et al. (2011) examined "factors associated with freedom from neurocognitive impairment in older HIV-infected adults. Participants included 74 middle-aged and older (mean age 51 years), HIV-infected individuals with a mean estimated duration of infection of 17 years who underwent comprehensive neuropsychological [(NP)], psychiatric, and medical evaluations" (p. 110). In this study, **successful cognitive aging** (SCA) "was defined as the absence of neurocognitive impairment across seven functional domains as measured by both performance-based tests and self-report of cognitive difficulties in daily life" (p. 115). The investigators found that 32% of this cohort met criteria for SCA and that

> compared to the group that did not meet these criteria, successful cognitive agers had significantly lower lifetime rates of major depressive disorder and current affective distress (e.g., depression, anxiety). Moreover, the SCA group evidenced better everyday functioning outcomes, including medication adherence, lower self-reported rates of declines in activities of daily living, and superior abilities related to medication management and dealing with healthcare providers. SCA was not related to demographic composition, HIV disease or treatment factors, medical comorbidities, or histories of substance use disorders. (p. 110)

"Findings from this preliminary study suggest that approximately one-third of older persons with HIV were free of cognitive impairments, which is associated with more favorable emotional, psychosocial, and everyday functioning" (p. 110).

Showing by Doing

On the topic of medication adherence, Thames et al. (2011) examined "the independent and synergistic [combined] **effects of aging and cognitive impairment upon medication and finance management** " (p. 205) among a sample of 51 adults living with HIV.

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Within this sample, 28 adults were less than 40 years of age and 28 were age 55 years or older; 30 were classified as cognitively unimpaired and 21 were classified as cognitively impaired. The performance-based measures employed in this study were theColumbia Medication Management Task–Revised (MMT–R) and Advanced Finances (originally described by Heaton et al., 2004)[1]. The investigators report that

> older HIV+ adults performed worse than younger HIV+ adults on measures of medication and finance management and that cognitive status impacted medication management independent of age effects. However, there were no differences between global cognitive status groups (i.e., impaired vs. unimpaired) on financial management. Of greatest interest, [Thames and colleagues] found [that] . . . older HIV+ adults with cognitive impairment performed worse than all other age/cognitive status groups. Although previous studies have typically found older age to be associated with higher rates of medication adherence . . ., when older adults present with neurocognitive impairment they appear to demonstrate the lowest adherence rates of any group. . . .
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> [NP] domains of attention/working memory, verbal fluency and naming, learning and memory, spatial processing and executive functioning were associated with performance on the MMT–R for the total sample. . . . However, when examining these associations as a function of age, . . . there were no significant relationships between NP domains and MMT–R performance among younger adults. . . . This suggests that the NP/MMT–R performance relationships observed among the entire sample were primarily driven by the older adult group. . . .
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> Advanced Finances was positively correlated with spatial processing and executive functioning for the entire sample. However, when examining these relationships within age groups, [the investigators] observed differential age-linked contributions of NP functioning to performance on finance management. For younger adults, performance on Advanced Finances was positively associated with verbal fluency whereas for older adults, performance was positively associated with visuospatial processing, a domain also associated with more advanced stages of dementia. Although [the investigators] expected similar neurocognitive domains to be associated with task performance for both age groups, . . . findings suggest that neurocognitive functioning may contribute differentially to functional performance as individuals age. Older adults may actually be less vulnerable to functional impairments than younger adults in finance management due to greater years of experience in handling finances. Perhaps it is not until cognitive impairment becomes more severe . . . [that] deficits in overlearned behaviors [become] observable among older adults. (p. 206)

With regard to the differential impact of cognitive decline on task performance in these two different areas, Thames and colleague speculate that

> finances, similar to other overlearned behaviors such as driving, may be less vulnerable to the impact of early cognitive decline than more relatively novel activities such as complex medication management. Usually, when managing finances, one is responsible for a single checking account; whereas for managing medications, multiple medications are involved[,] rendering medication management a more cognitively demanding task. . . . Perhaps it is not until patients develop more severe cognitive impairments that we can observe a decline in overlearned behaviors. Overall, [this] sample performed relatively well on Advanced Finances compared to

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[1] The MMT–R required participants "to respond to questions about five different medications based upon labels, the number of pills in each bottle, and directions on package inserts. Questions required participants to determine information such as when a refill was needed, which medications need to be taken with food, how many pills are required to take the correct dosage, and how to correctly place pills in a pill box based on the instructions on the labels. In addition, the revised version of this task added questions ask[ing] . . . about the participant's own medication management, such as whether or not the participant receives assistance with remembering to take medications, or if [the participant has] recently run out of medications without a prior refill. . . .

The Advanced Finances task . . . provides participants with blank checks, a checkbook register, a check to deposit, deposit slips, three bills to pay (phone, gas, credit card), a calculator, and paper and a pencil. Participants are asked to pay each bill, log transactions in their checkbook register, and pay as much of their credit card bill as possible while leaving exactly $100 in their checking account. Scores on the task were determined based on the participant's ability to correctly complete checks and calculate totals in the checkbook register, while remembering to leave $100 in their account for necessities during the rest of the month. Participants who had never had a checking account or balanced a checkbook were excluded from this task" (Thames et al., 2011, pp. 202-203).

> of intensive aftercare programs for improving linkage to care and services for HIV -infected releasees. Although such programs exist in several states and positive outcomes have been reported, there has not been rigorous comparative study of the efficacy of such programs. In this trial, an intensive post-release motivational case management intervention did not provide measurable benefits over a pre-release program in which basic discharge planning services, including referrals to medical clinics, completion of medication access forms and investigation of housing options, were provided by prison nurses dedicated to the care of those with HIV and other infectious diseases. (p. 363)

Wohl and colleagues conclude that

> an intensive and motivational case management program spanning incarceration and release was not associated with a greater likelihood of accessing care, receiving major social services or preventing re-incarceration compared to a [less intensive] pre-release discharge plan-

> the MMT[,] suggesting that Advanced Finances may have been an easier task. Indeed, if this were the case, it suggests that certain functional abilities are more susceptible to decline with advanced age and cognitive impairment. This information would highly benefit the clinician who is challenged with determining whether a patient’s cognitive abilities have declined over the course of age and illness. (p. 207)

Thames and colleagues contend that these findings underscore

> the importance of using performance-based measures to detect functional limitations associated with aging and HIV. . . . Given the limited reliability of self-report, performance-based measures of everyday functioning capacity appear to have stronger ecological validity than traditional NP tests and can be easily included in a[n] overall patient assessment given their relatively brief administration times. Furthermore, such functional measures may be useful for creating cognitive rehabilitation programs designed to help individuals compensate for their IADL [instrumental activities of daily living] dysfunction. Future research should explore the efficacy of these measures for such potential use. (p. 207)

Every Day, in Every Way

For individuals experiencing cognitive declines while aging with HIV, Vance and Struzick (2007) recommend “ a multimodal approach . . . to improve cognitive functioning” (p. 65). “Based upon gerontological and HIV research, several prevention and intervention strategies can be implemented” (p. 71). These strategies may include “reducing alcohol and substance use; improving nutrition; diminishing the effects of comorbidities; increasing social contact; reducing depression and stress levels; engaging in cognitively stimulating activities; applying cognitive remediation therapies; and incorporating psychopharmacological interventions [into treatment planning]” (p. 51).

With regard to **cognitive remediation**, Vance and Struzick are aware of

> only one cognitive remediation technique [that] has been used specifically with older adults with HIV. . . . Originally developed for use in patients with Alzheimer’s disease, the Spaced Retrieval method is a memory strategy in which participants practice learning and recalling new information over progressively longer periods of time until information is finally consolidated into long-term memory. For instance, participants are required to recall when they should take their medications at 30 seconds, then 1 minute, then 2 minutes, and so on up to 16 minutes. With each successful trial, the interval of time is doubled until the participant can successfully recall the information after 16 minutes. This is the point at which the information is considered to be consolidated into long-term memory. In addition, external aids were also made available to assist in the recall of information. . . . Although this cognitive remediation technique is not designed to improve overall memory function, it represents an effective strategy for improving everyday functioning in lieu of existing memory problems. (pp. 64-65)

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> ning program without post-release follow-up. While there may be other benefits of continued case management following prison release that were not measured [e.g., post-release medication adherence, viral suppression], these findings call into question the value of intensive aftercare programs for HIV-infected prison releasees. (p. 363)

Even more telling in this regard is the finding that “at 4 weeks following release, at which time those prescribed antiretrovirals would have exhausted their supply of medication provided on release, only two thirds of the BCM participants and half the SOC participants had seen a healthcare provider. . . . These observations point to a continued need to develop strategies to engage HIV-infected releasees in care *immediately* after release” (p. 362; emphasis added).

Two recent publications examined the process of **adolescents transitioning to adult HIV care**:[5]

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[5] Two descriptive papers on this topic (Fair, Sullivan, & Gatto, 2010; Maturo et al., 2011) were highlighted in the Spring 2011 issue of *mental health* **AIDS**.

- Valenzuela et al. (2011) interviewed a convenience sample of 10 young adults living with HIV who were between the ages of 24 and 29 years and predominantly female "to better describe the experiences of **behaviorally infected youth** with regard to their perception of adolescent HIV care, the transition process, and their experience of adult HIV care, as well as their recommendations for improving the transition experience for other youth with HIV" (p. 135). According to the investigators,

> participants described adolescent care as a place where they grew in their acceptance of their status, knowledge about HIV, and how to care for themselves. . . . In contrast, participants described adult care as a period where they developed skills for increased independence (i.e., making healthier choices, taking a more positive attitude, and giving back in their community or previous clinics).
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> . . . [T]he young adults in this study had strong attachments to adolescent healthcare providers. . . . [F]indings suggest that this relationship is very important during the initial transition process, to help youth "test the waters" with adult providers and not to give up on finding helpful care if [the] transition does not go smoothly at the first adult care setting attended. Other themes . . . were youths' worries and anxiety around transition; need for significant preparation time; and adjustment to increased provider expectations and demands in an adult care setting. . . . Furthermore, some participants . . . reported difficulty in retelling their medical history to new providers. The reasons for this may be unique to this population (i.e., trauma associated with the HIV infection and diagnosis) and should be assessed prior to transition. . . . These challenges highlight the likely benefit of care systems where the adolescent and adult care systems are more integrated and allow for youth to develop relationships with adult providers before a formal transition occurs. (pp. 138-139)

Study participants "recommend[ed] a clearer transition process, with collaborative planning among youth and health-care teams, more time to prepare for transition, more options for individualized services, and more help coordinating and linking services, especially since adult services were described as fragmented and difficult to access. Mental health services were especially challenging to arrange" (p. 139). Valenzuela and colleagues concur, concluding that "findings support the development of a clear and structured transition process to address patients' fears and worries through early communication, planning, and coordination for adult healthcare" (p. 134).

- Wiener, Kohrt, Battles, and Pao (2011) also "explore[d] the experiences of youth living with HIV who transitioned from pediatric to adult care" (p. 141) through brief telephone interviews with 59 youth, all but one of whom **acquired HIV either perinatally or through a transfusion**. Interviewees averaged 22 years of age and had completed the transition process. Self-reporting revealed that these respondents were

> relatively healthy but not without medical and psychosocial challenges. Almost a third of this sample ha[d] . . . been hospitalized over the [previous] 3 years[,] demonstrating that close medical and psychiatric monitoring is vital. Almost a quarter of the participants over the age of 18 . . . [we]re not working or in school. This finding suggests that preparation for transition should include an assessment of vocational needs, educational plans, encouragement of work experiences, and a vision for future employment along with life skills training. . . . The need to help these youth "catch up" academically and emotionally by reducing dependence on their families . . . [became] necessary for day-to-day living as well as for transitioning care. . . . This theme was highlighted by participants who reported difficulty with relaying their own medical history, their expressed desire to keep their primary caregivers involved in their care, and reluctance by either primary caregivers or pediatricians to give up control of their healthcare.
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> The interplay between HIV and psychiatric symptomatology also contributes to the complexity of the transition process. . . . With almost 10% of the total cohort reporting having had a psychiatric hospitalization over the [previous] 3 years, and the high use of concurrent psychotropic medications, the availability of mental healthcare appears to be a critical component to a successful transition.
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> . . . [Additionally,] 15% of this cohort ha[d] . . . biological children of [their] own. While it is encouraging that all of the children born . . . [we]re HIV negative, these were unplanned pregnancies and safe sex was not practiced. The need to incorporate secondary prevention messages into primary care for this population is crucial. . . .
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> In terms of disease parameters, a trend was found toward lowered CD4 counts for participants who transitioned to adult care.

> . . . [T]his finding is most probably associated with poor adherence as 44% of these youth reporting challenges with adhering to a medication schedule. . . . With fewer medical appointments and less personal "engagement" in the adult setting, it is not surprising that adherence challenges were reported. In order to maximize adherence during the transition process, strategies are needed that consider young adults' cognitive capacities, emotional maturity, reduced dependence on adult caregivers for supervision and administration of medications, and personal beliefs about the long-term effects of HAART. (pp. 149-150)

Wiener and colleagues highlight some of the HIV-specific barriers to successful transition voiced by study respondents. One of these is

> a perceived change in stigma upon transitioning to adult care. The adult care setting typically has a more diverse client base including persons who typically acquired their HIV infection behaviorally rather than vertically. Newly transitioning young adults would benefit from being prepared for coming into contact with people whose age, sexual orientation, mode of transmission, and severity of illness may be different from their own.
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> . . . [Also noted is the fact that t]he number of youth whose biological parents are deceased is unique to this population. Anxiety may be associated with having to break ties with providers with whom these youth have had close relationships and who may have known their parents before their death, which may compromise a successful transition. . . . The need to anticipate and work through this loss is an identified gap in the transition process . . . . A coordinated approach, where communication between pediatric and adult providers takes place prior to and, if clinically indicated, after the transition takes place, can reduce the sense of loss and a feeling of abandonment. . . .
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> The results of this study suggest that achieving transition readiness requires a proactive and developmental approach. . . .To help youth navigate the adult healthcare setting, it is vital for them to be both permitted and encouraged to take an increasingly more active role in their healthcare. . . . Early in adolescence, part of the office visit could be spent alone with the provider so an accurate assessment can be made of the youth's strengths, maturity, and knowledge of his or her health status and of sexual risk. Remembering past medical history and all the medications the youth may have received can be overwhelming so creating a healthcare summary document that includes their treatment summary, toxicities, allergies, hospitalizations, as well as relevant social and family history with the pediatric provider can empower the youth with knowledge about himself or herself. Psychologically, this becomes an important, useful, and symbolic "transitional object" from pediatric care to adult services as it can later be updated with the adult provider. As participants reported resenting the amount of time it takes to review their history and complete forms, this document can also help reduce the reassessment time across providers. (pp. 150-151)

Wiener and colleagues conclude that "without adequate preparation, the transition process can be compromised with potentially serious health consequences. . . . Of youth who transitioned to adult care, immune function (CD4) trended downward, 45% found the transition more difficult than anticipated, and 32% could not find emotional support services. Youth identified the need for increased continuity of care, assistance with logistics, improved communication with providers and caregivers, and individualized management of their transition process" (p. 141). In short, "youth living with HIV seek adult providers that can provide developmentally appropriate transition interventions that address loss, disclosure, and sexual behavior along with medical needs " (p. 141). To these ends, the investigators assign tasks to providers as follows:

> It is the role of the pediatric provider to assess readiness, help foster autonomy, and ensure that a care provider is identified and records are transferred prior to transition. It is the role of the adult provider to recognize that a successful transition will require care that is as personal and flexible as possible, addresses mental health and specialty care needs, considers the youth's strengths as well as the losses already experienced, and is consistent . Most importantly, a commitment to the merit of transition planning by providers on both the pediatric and adult teams is of fundamental importance. (pp. 151-152)

With regard to another population in need of services, Saint-Jean et al. (2011) "analyzed data from a survey of [a convenience sample of 96] HIV-positive **Haitian immigrants** seeking care at an HIV primary care clinic [in Miami, Florida,] to investigate **factors that may facilitate or prevent** this population from regularly using primary health care services" (p. 491). In this study, "**regular use of HIV primary care** . . . was operationalized as completion of four or more HIV primary care visits during the previous 12 months" (p. 486). The investigators found that "approximately three-fourths [of study participants] did not graduate from high school and reported an annual income of up to $5000." Nevertheless, 79% "completed four or more visits in the past year" (p. 486). Importantly, "participants without formal education or those with high psychological distress were significantly less likely to have used HIV primary care regularly than those who attended school or who were less distressed, respectively" (p. 486). Yet, "despite the fact that low education and poor mental health status are potential barriers to adequate health care utilization for this population . . ., the great majority of participants had managed to stay connected to care and to take their antiretroviral medicines." The fact that "most of the participants . . . had been assigned a case manager" (p. 491) was considered crucial to engagement and retention efforts. Saint-Jean and colleagues conclude that

> this preliminary study offers valuable insights into the circumstances of a . . . group of HIV - positive Haitians, and the factors that may hinder adherence to life-saving care by this population. The findings emphasize the need for health care practitioners to pay close attention to the education levels of their Haitian patients as well as their mental health status. The data also suggest that once these individuals are linked to care and offered assistance with their daily challenges there is a high likelihood that they will maintain an adequate level of adherence to care. (p. 492)

Adherence to Treatment

"The medical and pharmacologic innovations in HIV treatment have simplified dosing schedules and reduced side effects, . . . making aspects of adherence easier now than in the past. Despite these improvements, many people still struggle to achieve adherence levels required to suppress the virus" (p. 109), according to Finocchario-Kessler et al. (2011), who "assessed baseline **predictors of high ART adherence** (≥ 90%) measured by electronic drug monitors (EDM) at 12 and 24 weeks after [study] enrollment . . . among a diverse urban sample of [204] HIV-infected participants . . . recruited from community clinics in a large midwestern [U.S.] city" (p. 103). The investigators found that many

> established predictors of adherence were identified in univariate analysis including depression, perceived stress, alcohol use, CD4 and viral load counts, frequency of dosing, social support, self-efficacy and experience with ART. Several novel variables were also predictive of high ART adherence in the univariate analyses, including autonomous support from friends and family to make [one's own informed and responsible] decisions regarding treatment, autonomous regulation, motivation to adhere, and positive coping styles, while religious/spiritual beliefs (i.e., perceiving God as in control of one's health) predicted lower ART adherence.
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> The multivariate analyses identified the best set of independent predictors of adherence at each time point. Higher autonomous support from friends and family and the absence of any alcohol use emerged as key independent predictors both in the short and long run of better adherence. Having a higher CD4 count was the only other predictor of better adherence in the short run. Higher motivation to adhere, an active coping style, a lower perception of God as in control of one's health, and lower perceived stress were the best predictors of higher adherence. (p. 108)

Finocchario-Kessler and colleagues offer a number of comments related to these findings. Regarding the adherence measure used in this study the Brief Motivation Scale (BMS)[6] "predicted those with nearly a three-fold increased odds of having high adherence at 24 weeks. . . . While this is a newly created and validated measure, it offers promise as a brief (4-item) objective measure easily incorporated into an initial treatment consultation to aid providers in identifying which patients may need referral for additional support services. The BMS should be confirmed through use with varied populations" (p. 109).

As for support from family and friends for autonomous decision making, the investigators suggest that "support groups could be an effective setting to foster autonomous support for peers' ability to make positive choices regarding their HIV treatment, and to help individuals identify positive sources of support. Similarly, programs for family members might focus on the development of the attitudes and skills necessary to provide autonomous support and communicate confidence in . . . [patients' abilities] to make the best choices for their health" (p. 109).

On the question of clients' religious/spiritual beliefs, Finocchario-Kessler and colleagues explain that

> the potential impact of religious/spiritual beliefs on health out-

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[6] "Motivation to adhere was measured with the novel 4-item BMS[,] which was developed for this study. . . . Patients were asked to rate their level of commitment, need, readiness, and reasons to adhere (e.g., 'I will stick exactly to my medication schedule') using a 10-point scale" (Finocchario-Kessler et al., 2011, p. 106).

> comes may depend on individuals' interpretation of their role in determining their health; [whether they] view . . . God as a source of inspiration and strength to do what needs to be done versus abdicating full responsibility to God. While the belief that "it[']s all in God's hands" may provide comfort for someone overwhelmed by life's circumstances or who feels powerless to . . . [e]ffect change, religious fatalism is particularly problematic for health outcomes, such as ART adherence, that require a high degree of patient involvement. (p. 109)

The investigators suggest that " by inquiring about religious/spiritual beliefs related to treatment during consultations, providers can encourage patients' ability to affect their health and potentially identify someone more inclined to play a passive role in their treatment" (p. 109).

"While the side-effect burden associated with available HIV treatments has lessened over recent years with the development of new drugs, a truly side effect-free ART regimen has not yet been developed. Therefore, treatment side effects are likely to remain a substantive threat to adherence. Interventions aimed at mitigating the impact of side effects on treatment adherence offer promise to help optimize treatment outcomes for the growing numbers of people living with HIV" (p. 90), according to Johnson, Dilworth, Taylor, and Neilands (2011), who "examine[d] the effect of the Balance Project intervention, a five-session, individually delivered **HIV treatment side effects coping skills intervention** on antiretroviral medication adherence" (p. 83). A convenience sample of 249 men and women on ART "with self-reported high levels of ART side effect distress were randomized to intervention or treatment as usual. The primary outcome was self-reported ART adherence as measured by a combined 3-day and 30-day adherence assessment" (p. 83). As described by the investigators,

> the Balance Project experimental intervention . . . consisted of five 60-min[ute] individual counseling sessions with each session designed around topics relevant to ART side effects coping. . . . Intervention sessions followed a standard structure and set of activities, but were individually tailored to participants' specific life contexts, stressors, and goals. . . . Participants in the control condition received no active psychosocial interventions. . . . Facilitators were master's[-]level clinicians with expertise in HIV-related issues, were trained using standard materials, and were "certified" if supervisors' observations and quality assurance ratings indicated skilled implementation. . . . Follow-up assessment interviews were scheduled at 3 (second baseline interview), 6, 9, and 15 months for both the intervention and control groups. (p. 84)

Johnson and colleagues report "a significant difference in rates of nonadherence between intervention and control participants across the follow-up time points such that those in the intervention condition were less likely to report nonadherence" (p. 83). These findings

> support the five-session Balance Project intervention to promote ART adherence among HIV-positive adults experiencing high levels of perceived ART side effects. Follow-up analyses suggest that the intervention may have been particularly effective in influencing individuals' efforts to access information and social support for coping with HIV treatment side effects. . . . Consistent with the evidence that side effects are associated with nonadherence, these results demonstrate that efforts to improve patients' side-effects management skills have the potential to reverse the negative impact of perceived side effects on ART adherence.
>
> The current intervention, although individually delivered, was relatively low dose compared to other behavioral interventions in health care contexts. . . . A low-dose intervention may be readily implemented in clinics and agencies that provide health care and support to persons living with HIV. There is also the potential for elements of the intervention to be delivered prior to the initiation of ART. Such interventions may offset the harmful effect of anticipated side effects on future rates . . . [of] ART uptake by giving side-effects management skills to people prior to initiating therapy. Preemptive intervention may be considered in the context of building patients' readiness for ART and may result in greater ART uptake and subsequent adherence and maintenance of ART in the face of side effects that may develop. This intervention approach may also be particularly useful if there is a need to change ART regimens following treatment failure, a context in which there may be a higher perception or actual increased probability of significant side effects during the initial period of a new regimen. (p. 89)

Using Medicaid claims data from eight U.S. states, Walkup et al. (2011) "examined **relationships between adherence to bipolar medication and to [ART]**, measured by medication fills, among patients with diagnoses of bipolar disorder and HIV infection. . . . The unit of analysis was person-month (N = 53,971)," and "the average observation period for the 1,687 patients was 32 months" (p. 313). Walkup and colleagues "found a temporal association between receipt of bipolar medication and subsequent receipt of [ART] in an analysis that controlled for several potentially confounding background demographic and clinical variables" (p. 314). "Patients possessed antiretroviral drugs in 72% of the person-months. When a bipolar medication prescription was filled in the prior month, the rate of antiretroviral possession in the subsequent month was 78%, compared with 65% when bipolar medication was not filled in the prior month. . . . Odds of antiretroviral possession were 66% higher in months when patients had a prior-month supply of bipolar medication" (p. 313). Despite a number of limitations to these data, including the fact that "it cannot be determined from prescription claims whether a patient ingests a medication" (p. 315), the findings suggest that

> among persons with HIV and serious mental illness, adherence to a psychoactive medication regimen can improve adherence to [ART]. . . . Because of the central clinical importance of antiretroviral adherence, it seems appropriate that patients with bipolar disorder and HIV have individualized and ongoing assessments of their capacity to adhere to [ART]. Adherence may fluctuate with clinical status. The findings underline the importance of psychopharmacological treatment in this population, both to benefit bipolar symptoms and to promote antiretroviral adherence. (p. 315)

Serostatus Disclosure

Murphy, Armistead, Marelich, Payne, and Herbeck (2011) report on the *T*eaching, *R*aising, *A*nd *C*ommunicating with *K*ids (TRACK) program, "a longitudinal pilot-trial intervention designed to **assist mothers living with HIV** (MLHs) **to disclose their serostatus to their young children**" (p. 203), who were between the ages of 6 and 12 years. The investigators recruited 80 African American or Latino mother-child dyads in greater Los Angeles and randomized the dyads to a standard care control group or the intervention group, which consisted of three one-to-one sessions and a single follow-up phone call. "The sessions focused on preparing MLHs for disclosure through behavioral exercises[7] using Derlega's model . . . of HIV disclosure.[8] Both MLHs and their child[ren] were assessed across multiple time points (baseline, 3, 6, and 9 months) regarding disclosure of HIV status, and specific outcome variables (i.e., relationship context, mother's health, child's mental health, and family outcomes)" (p. 203). The investigators found that "MLHs in the intervention group were 6 times more likely to disclose their HIV status than those in the control group . . ., with 33% disclosing in the intervention group compared with 7.3% in the control group. MLHs in the intervention group showed increases in disclosure self-efficacy across time, increased communication with their child, and improvement in emotional functioning. Children of MLHs in the intervention group exhibited reductions in depression and anxiety, and increases in happiness" (p. 203). Murphy and colleagues conclude that the TRACK intervention was "successful in helping MLHs disclose their HIV status to their children, with positive outcomes noted for both MLHs and their children" (p. 203). Mothers in the intervention group

> were significantly more likely to disclose, and the majority did it right after the intervention ended. . . . The majority of the MLHs who disclosed felt that they had managed well the main stumbling blocks to disclosure, all of which are targeted within intervention sessions. For example, the vast majority of disclosing MLHs reported they kept an appropriate emotional tone during the disclosure process and were ready to answer the typical questions that children ask during disclosure. A slight majority worked with the child to prepare a list of "safe people" with whom the child could talk. Thus, the intervention appeared to be effective in preparing at least a portion of the intervention MLHs not only to disclose but also to make the disclosure in an effective manner. (p. 212)

Of interest is the finding that

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[7] "Session 1 addressed children's typical development (including at what age they are able to keep secrets, age-appropriate chores and self-care skills, and social development); pros and cons of disclosure; and improving family routines as a foundation for disclosure. Session 2 focused on improving mother-child communication, including a self-evaluation of the mother's communication strengths and weaknesses; advice and quotes from other mothers on disclosure; quotes from children on their own reactions to disclosure, noting developmental age of each child reaction; and disclosure preparedness. Session 3 included behavioral practice for disclosure, during which the facilitator role-played the child, a self-evaluation of the disclosure role-play exercise, and information on issues to address after disclosure. This last session closed with a final discussion on disclosure readiness and positive reinforcement from the facilitator" (Murphy et al., 2011, p. 206).

[8] The TRACK pilot intervention is based on "Derlega, Winstead, Greene, Serovich, and Elwood's (2004) model of HIV disclosure . . ., which for TRACK was applied to the family context. The first factor in the model is the social environment in which the MLH and child live; the second factor focuses on individual, temporal, and relational contexts. These factors affect the endorsement of reasons for and against disclosure, which then leads to disclosure outcomes for both the mother and child. . . . [T]he intervention targets the relationship context, including intrafamilial communication and parenting skills, specifically as they apply to disclosure. By significantly improving parent skills and self-efficacy in these areas, the intervention was expected to increase steps toward disclosure and disclosure itself, as well as positively affect outcomes associated with disclosure (i.e., mother and child functioning)" (Murphy et al., 2011, p. 204).

> MLH satisfaction and emotional functioning improved in the intervention group, regardless of disclosure status. Similarly, the children of intervention group MLHs showed better scores for anxiety, depression, and happiness regardless of whether they were the child of an MLH who had disclosed or not. Thus, it appears that the intervention skills the MLH learned in the intervention influenced these mental health indicators; the skills (e.g., parent-child communication) proved beneficial for these families even if the MLH did not reach the point of disclosure. (pp. 212-213)

Of course, "the full theoretical model (Derlega et al., 2004) could not be tested in this small pilot trial . . .[, which] only focuses on the changes in the relationship context variables and the disclosure outcomes from the model. The relationship context, including intrafamilial communication and parenting skills, was of particular interest because these factors could potentially be influenced by a behavioral intervention. A full-scale trial of the intervention is needed to test the full model"(p. 213).

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Tool Box

A Note on Content

This publication is designed to help frontline providers of HIV-related mental health services, allied professionals, and consumers stay up to date on research related to HIV care in developed-world settings. The content for the “Biopsychosocial Update” is drawn from a variety of sources including, but not limited to the *CDC HIV/Hepatitis/STD/TB Prevention News Update* (http://www.cdcnpin.org/news/NewsList.asp); *Kaiser Health News* (http://www.kaiserhealthnews.org); and information provided 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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Health and Human Services
Substance Abuse and Mental Health
Services Administration (SAMHSA)
www.samhsa.gov

mental health **AIDS** is available online!
Go to: http://samhsa.gov/HIV/mhaids.aspx