Published in final edited form as:

Subst Use Misuse. 2014 August ; 49(10): 1270–1277. doi:10.3109/10826084.2014.891622.

Use of Sexual Risk Assessment and Feedback at Intake to Promote Counselor Awareness of Subsequent Client Risk Behavior during Early Treatment

Bryan Hartzler¹, Blair Beadnell², and Donald A. Calsyn^{1,3}

¹Alcohol and Drug Abuse Institute, University of Washington, Seattle, Washington, USA

²School of Social Work, University of Washington, Seattle, Washington, USA

³Department of Psychiatry and Behavioral Science, University of Washington, Seattle, Washington, USA

Abstract

Background—Sexual risk is an important, oft-neglected area in addiction treatment.

Objectives—This report examines computerized sexual risk assessment and client feedback at intake as means of enhancing counselor awareness of client risk behavior during early treatment, as well as any clinical impact of that counselor awareness.

Methods—In 2009–2011, new clients at both opiate treatment and drug-free treatment programs endorsed in a computer-assisted assessment at intake 90-day retrospective indices for: being sexually active, having multiple partners, having sex under drug influence, and inconsistently using condoms. Clients were randomly assigned in a 2:1 ratio to receive or not receive a personal feedback report, and those receiving a report chose if a counselor copy was also distributed. Ninety days later, retained clients ($N = 79$) repeated the assessment and their counselors concurrently reported perceptions of recent client risk behavior.

Results—Based on client reports, pretreatment risk behaviors were prevalent among men and women and remained so during treatment. A general linear model revealed greater counselor awareness of subsequent client risk behavior with mutual distribution of intake feedback reports to client and counselor, and at the opiate treatment program. A repeated-measures analysis of variance indicated that counselor awareness did not predict change in temporally stable patterns of sexual risk behavior.

Conclusions/Importance—Findings document that computerized intake assessment of sexual risk and mutually distributed feedback reports prompt greater counselor awareness of clients' subsequent risk behavior. Future research is needed to determine how best to prepare counselors to use such awareness to effectively prompt risk reduction in routine care.

Copyright © 2014 Informa Healthcare USA, Inc.

Address correspondence to Bryan Hartzler, PhD, Alcohol and Drug Abuse Institute, University of Washington, Box 354805, 1107 NE 45th Street, Suite 120, Seattle, WA 98105-4631, USA; hartzb@u.washington.edu.

Declaration of Interest

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of this paper.

Keywords

sexual risk; treatment innovation; assessment; feedback report; therapeutic process

INTRODUCTION

The dissemination of empirically supported treatment innovations for substance abusers remains a salient topic, and this extends to risk reduction efforts for human immunodeficiency virus (HIV) and other sexually transmitted illnesses (STI). Extant literature documents elevated HIV/STI transmission among substance abusers (Kral et al., 2001; Strathdee et al., 2001), which result from unsafe injection practices, impaired use of preventative “safe sex” strategies, and the interplay of sociocultural influences (e.g., commercial sex, criminality). Both male and female treatment seekers exhibit high rates of risky sexual acts, including those undertaken with new partners, during intoxicated states, and without condoms (Engstrom, Shibusawa, El-Bassel, & Gilbert, 2011; Rondonelli et al., 2009). Enrollment in addiction treatment may prompt cessation of drug use that reduces sexual risk, but the resulting sexual abstinence is often only a short-term solution. Durable sexual risk reduction is thought to require that substance abusers be actively targeted by screening and intervention efforts (Albarracin et al., 2005). Though multisite studies conducted via NIDA’s Clinical Trials Network (CTN) document effectiveness of gender-focused structural interventions (Calsyn et al., 2009; Tross et al., 2008), implementation barriers (i.e., staffing costs, logistical compatibility) deterred participating CTN clinics from sustained use of these interventions (Campbell et al., 2011). This appears another reflection of widely cited “science-to-practice gaps” (IOM, 1998), suggesting the addiction treatment field may benefit from practical innovations that promote therapeutic discussion of sexual risk in routine care.

One way to enhance the likelihood that recurrent discussions about sexual risk take place between addiction treatment counselors and their clients may be through clinic incorporation of computerized sexual risk assessment in intake processes. This models what occurred as part of the CTN trials (Calsyn et al., 2009; Tross et al., 2008), and offers means to automate what are time-consuming or otherwise challenging initial data-gathering processes. Such assessment also enables the generation of personal feedback reports—which might be distributed to the involved client, assigned counselor, or both—to serve as an impetus for discussion of sexual risk during initial therapeutic contacts. Other relevant examples are evident in CTN trials that have tested Motivational Enhancement Therapy (MET), in which feedback reports derived from intake assessment of pretreatment substance use were focal material for discussions about prospective client change during initial treatment sessions (Ball et al., 2007; Carroll et al., 2009; Winhusen et al., 2008). With respect to sexual risk, a progressive step is to extend the use of computerized intake assessment to include generation of personal feedback reports describing pretreatment sexual practices and outlining relevant risks. Questions persist, however, about how to prompt useful therapeutic discussions about sexual risk in routine clinical care, with counselor comfort and educational exposure serving as salient obstacles. Most addiction treatment counselors see clients as guarded about issues of sexuality, nearly half are uncomfortable working with those whose

sexual behavior puts others at risk, and one-third do not feel competent assessing sexual risk (Mitchell & Oltean, 2007). Thus, practical innovations intended to enable more routine discussion of sexual risk in addiction treatment need to be palatable to counseling staff.

Prior research broadly supports the appeal and utility of distributing personal feedback reports at treatment outset. Reviews of brief, substance-focused interventions note mere client receipt of a personal feedback report confers therapeutic benefit (Walters & Neighbors, 2005; White, 2006), and yet a dismantling study that experimentally isolated client-only feedback versus mutually distributed feedback (to counselor and client) followed by therapeutic discussion found the latter more effective (Walters, Vader, Harris, Field, & Jouriles, 2009). In our own research, initial provision of feedback reports about sexual risk to new clients increased their likelihood of later discussing issues of sexual risk with their counselor (Calsyn, Peavey, Wells, Hartzler, & Beadnell, under review). That this occurred in the context of routine care (absent a targeted structural intervention) at a community treatment setting is encouraging, though the finding was based on retrospective counselor reports—which are subject to, demand characteristics, recall inaccuracy, and other caveats. Furthermore, retrospective report that a discussion occurred reveals little about its substance or clinical impact. As discomfort and lack of familiarity with sexual risk are common among addiction treatment staff, many such discussions might rely entirely on the client to raise issues of personal relevance—to which counselor responses may conceivably range from supportive and helpful to perfunctory or even iatrogenic. Thus, there may be good reason to examine not only if discussions of sexual risk occur but also the quality of such discussions and their impact on prospective client behavior.

How might one assess the manner in which a counselor and client discuss issues of sexual risk during early treatment? In their meta-analysis of relevant interventions delivered in addiction settings, Prendergast, Urada, and Podus (2001) highlight intensity of contact as a predictor of clinical impact. Structural interventions typically offer such focused intensity, though—as earlier noted—implementation barriers deterred even well-resourced CTN clinics at which the clinical effectiveness of such interventions was established from sustaining their provision (Campbell et al., 2011). If inclusion of computerized sexual risk assessment and feedback distribution in intake processes is to prompt useful therapeutic discussions in routine care, greater contact intensity may be conceptualized as recurrent conversations over time in which a client discloses information about relevant, ongoing sexual behavior. To assess such contact intensity is a challenge, as direct methods like recording or observation of clinical sessions are impractical and introduce their own caveats (i.e., impression management). A less direct, but more practical indicator of contact intensity is an addiction counselor's awareness of ongoing client behavior. This might be measured via review of chart documentation or other methods of counselor report, but these all invite some of the aforementioned caveats. An alternative is to examine congruence in retrospective reports of client behavior later elicited independently from counselor and client.

This report explores counselor awareness of ongoing client behavior as an element of sexual risk intervention in the context of routine care in addiction treatment. In our parent study (R21DA022940, *Computerized Assistance for Treatment Professionals in Assessment of*

Sexual Risk), computerized sexual risk assessment with capacity to generate personal feedback reports was implemented at intake in an opiate treatment program (OTP) and a drug-free treatment program (DFTP). The primary finding was that counselors were more apt to report subsequent therapeutic discussion of sexual risk with clients to whom an initial feedback report had been distributed (Calsyn et al., under review). The current report extends beyond that parent study finding to explore counselor awareness in two ways. First, it examines the conditions under which such awareness may develop by comparing counselor–client pairings for whom an intake feedback report was mutually distributed to both counselor and client, distributed to the client only, or distributed to neither. Second, it explores the clinical impact of counselor awareness as an influence on client reductions of sexual risk behavior during the initial 90 days of treatment.

METHODOLOGY

Community Treatment Programs (CTPs)

The parent study was conducted at two CTP affiliates of the Pacific Northwest Node of the CTN. CTP #1 is a private, nonprofit OTP located in an urban area where medication-assisted treatment and support services are provided to a census of 1000+ outpatients. New clients enroll in a 90-day stabilization phase involving medical management of agonist medication dosing, attendance of an HIV education class, and weekly individual therapy with an assigned counselor. CTP #2 is a primarily publicly funded DFTP with residential and outpatient facilities located in a more rural area. Study recruitment and procedures at the DFTP were restricted to its outpatient facility, where approximately 200 new clients are admitted annually. New DFTP outpatient clients complete an initial 90-day intensive treatment phase involving attendance of weekly therapy groups, an individual therapy session with an assigned counselor, and other supplemental services (e.g., medication management, childcare) as needed.

Counselor and Client Recruitment

At both CTPs, counselors were recruited via investigator presentations at staff meetings. Interested counselors consented to participate, and attended a 2-h orientation offering: (1) a study rationale and summary of research about sexual risk among substance users, (2) exposure to sample assessment items and feedback reports, (3) suggestions for initiating discussions about sexual risk, and (4) receipt of a sexual risk assessment manual. Participating counselors were apprised that they might receive a feedback report for some of their clients, and that they would be asked to complete a brief survey for each participating client (concerning their recent sexual risk behavior) 90 days after treatment initiation. The current report examines the perceptions of 21 counselors (17 at CTP #1, 4 at CTP #2) for whom follow-up study data were available.

Clients were recruited via flyers posted in CTP common areas. Inclusion criteria were: (1) treatment admission in the past 30 days, (2) willingness to twice complete a computerized sexual risk assessment (once at intake, and again 90 days later), and (3) facility with English to enable completion of those assessments. Interested clients reviewed a study consent form with an on-site study staff person, which specified procedures for completing a

computerized assessment at intake and again 90 days later. The follow-up assessment was completed by 82% of clients enrolled in the study, with attrition often attributable to treatment discharge (though clients no longer in treatment remained eligible and were invited to complete the follow-up assessment). Notably, baseline sexual risk did not differ among clients who did versus did not complete this follow-up assessment ($p = .54$). The remainder of this report focuses on the 79 clientele retained through this follow-up study assessment. Of this group, a majority (60.8%) were male. Mean age was 39.5 years ($SD = 11.3$). Eight (10%) identified as Hispanic ethnicity, and the overall racial distribution was 69.6% Caucasian, 15.2% American Indian/Native Alaskan, 7.6% African American, 5.1% Multiracial, and 2.5% Other.

Study Design and Procedures

All procedures were approved by the UW institutional review board. The study design was informed by preliminary qualitative data gathered in the parent study, in which counseling staff and a subset of clients at CTP #2 participated in focus groups and offered reactions about the computerized sexual risk technology. A prominent theme in all focus groups was concern for client right to privacy, with strong sentiment that clients be afforded a choice about whether their personal sexual risk information was shared with counseling staff (Calsyn, Hartzler, Wells, & Peavy, 2011). As a consequence, the parent study employed a three-group design that included both random assignment and self-selection regarding receipt of client feedback reports. Enrolled clients were first randomly assigned in a 2:1 ratio to receive a pretreatment personal feedback report ($n = 54$, 68.3%) or to not receive such a feedback report ($n = 25$, 31.7%). Those receiving a personal feedback report then chose whether or not their counselor received a report copy. Of the 54 clients afforded this choice, 29 (53.7%) opted for their counselor to receive a report copy. After completion of the follow-up sexual risk assessment, all study clients received a personal feedback report (no counselor copies were provided). Personal feedback reports were based on client responses to the computerized sexual risk assessment, with comparative feedback about personal sexual risk followed by risk reduction suggestions adapted from interventions tested in CTN 0018/0019 (Calsyn et al., 2009; Tross et al., 2008). An on-site study staff person was hired at each clinic to distribute feedback reports when appropriate and collect brief surveys from participating counselors as clients completed their 90th treatment day.

Measurement

Sexual risk behavior was assessed using an audio computer-assisted structured interview method demonstrated to elicit accurate reporting of high-risk behavior (Metzger et al., 2000). The feasibility of this interview method is additionally evident from its prior use in paired CTN trials (Calsyn et al., 2009; Tross et al., 2008), wherein gender-specific versions of the Sexual Experiences and Risk Behavior Assessment Schedule [SERBAS; (Meyer-Bahlburg, Ehrhardt, & Exner, 1991)] comprehensively assessed sexual risk behavior (i.e., frequencies of specific sexual acts, number and type of partners with whom specific sex acts occurred, cooccurrence of sex and substance use, use of condoms and other risk-reduction practices). For the current study, this content was abbreviated to focus on retrospective 90-day client report via open response format. A brief counselor survey, completed 90 days after each client's initiation of treatment, utilized a simple binary response format (yes/no)

to assess counselor perception of a client's involvement *during* treatment: (1) in any sexual activity, (2) with multiple sexual partners, (3) in sexual activity under drug influence, and (4) in unprotected sexual activity (defined by absence of condom use). To enable examination of counselor awareness in these areas, corresponding client responses from abbreviated SERBAS interviews completed at follow-up were transformed to match the binary response format of the counselor survey. For the current report, a measure of counselor awareness was computed based on counselor–client reporting congruence for each of the four noted domains (0,1), tallied as a summary score (range: 0–4). A higher summary score reflects more congruent counselor and client reports of client behavior in the first 90 days of treatment.

Data Analysis

Initial descriptive statistics specified gender-specific and aggregate sample prevalence rates for each of the four focal sexual risk behavior domains, both at intake and after 90 days of treatment. The intent of this report's primary analyses was to test: (1) if counselor awareness of client behavior during early treatment (as evidenced by reporting congruence summary scores) differed by feedback condition, and (2) to what extent this counselor awareness was associated with client reduction of sexual risk in early treatment relative to reported pretreatment behavior. However, the parent study design included nesting considerations (e.g., clients within counselor caseloads; counselor caseloads within CTPs) that required conduct of preliminary analyses. Two random effects analysis of variance (RE-ANOVA) were run to identify to what extent caseload- and clinic-level factors contributed to variance in counselor awareness. In each RE-ANOVA, an intra-class correlation (ICC) was computed, and their interpretation informed decisions (as later described) to exclude counselor characteristics and include clinic as a predictor in subsequent analyses. For the primary study analyses, a general linear model (GLM) was computed with feedback condition (mutual, client-only, neither) and clinic (CTP #1, CTP #2) as predictors of counselor awareness. Then, a repeated measures analysis of variance (RM-ANOVA) tested counselor awareness and clinic as predictors of temporal change in a composite client sexual risk-taking score (sum of the four aforementioned sexual risk behaviors) as reported at intake and after 90 treatment days. A .05 alpha level was adhered to in all inferential statistical analyses.

RESULTS

90-Day Prevalence of Sexual Risk Behavior at Intake and During Early Treatment

Table 1 lists full sample and gender-specific prevalence rates for the four sexual risk indices at intake and 90 days later. At intake, 79% of the sample had recently been sexually active, 17% revealed having had multiple partners, 53% indicated having sex while under drug influence, and 54% noted inconsistent condom use. Men were more apt to report involvement with multiple partners, whereas women were more likely to report having been sexually active, having had sex under drug influence, and inconsistently use of condoms. In the 90 days that followed treatment initiation, sample endorsement rates were reduced for several of these sexual risk behaviors. For instance, 72% of the sample now reported recent sexually activity, with similar rates of endorsement by men and women. Just 10% now

reported involvement with multiple partners, with endorsement still predominately by men. Reduced prevalence (35%) was also evident in reports of sexual activity under drug influence, largely a product of lesser female endorsement. In contrast, prevalence of inconsistent condom use slightly increased to 57%, a pattern that was consistent among both men and women in the sample.

Caseload- and Clinic-Level Influences on Counselor Awareness

Table 2 lists relevant analytic results of the two RE-ANOVA that evaluated influences on counselor awareness at a caseload- and clinic-level, respectively. As earlier noted, the purpose of these preliminary analyses was to determine appropriate constructs to be later included in two primary study analyses examining if counselor awareness varied by the study's three feedback conditions and to what extent counselor awareness impacted temporal change in client sexual risk behavior (GLM and RM-ANOVA, respectively). The initial RE-ANOVA specified caseload-level influences as minimal ($ICC = .02$), indicating that counselor awareness did not vary between counselors and thereby obviating the need to account for counselor characteristics in the subsequent GLM and RM-ANOVA analyses. The second RE-ANOVA revealed clinic-level influences ($ICC = .10$) to be at the low end of a range commonly accepted as salient for linked units in a nested design (Bauer & Curran, 2012). In other words, this indicated sufficient between clinic variance in counselor awareness and that necessitated the retention of clinic as an additional predictor in the subsequent GLM and RM-ANOVA analyses.

Predicting Counselor Awareness and Its Clinical Impact

In the initial primary study analysis examining influences of counselor awareness, the GLM revealed as significant predictors both feedback condition, $F(2,78) = 5.89, p < .01$; and clinic, $F(1,78) = 4.39, p < .05$. The feedback condition $\times$ clinic interaction was nonsignificant. With respect to feedback condition, counselor awareness was greater when counselor–client pairings had mutually received the feedback report at intake ($M = 3.17, SD = .85$) than for the client-only feedback report distribution ($M = 2.72, SD = .98$) and no feedback report distribution ($M = 2.40, SD = 1.16$) conditions. As pertains to clinic, counselor awareness was greater for counselor–client pairings forged at the OTP ($M = 2.92, SD = .98$) than at the DFTP ($M = 2.37, SD = 1.12$). Attempts to subsequently improve the overall model fit via inclusion of a series of client-level predictors failed to identify any that were additionally useful.¹

For the subsequent primary study analysis that evaluated the association of counselor awareness on temporal change in client involvement in sexual risk behavior, composite sexual risk-taking summary scores computed from retrospective 90-day client reports completed at intake and at the 3-month follow-up were examined. The corresponding RM-ANOVA revealed only a slight, nonsignificant reduction in this composite indicator of sexual risk taking at the 90-day follow-up ($M = 1.72, SD = 1.24$) relative to that observed at

¹This GLM was subsequently re-run with additional inclusion of each of three client-level predictors: 1) baseline sexual risk, 2) gender, and 3) treatment status at follow-up. In each instance, the client-level predictor did not reach statistical significance, did not alter the strength or direction of the established predictors, nor did it improve the overall model's prediction of variance in congruence summary scores.

intake ($M = 2.01$, $SD = 1.22$). The RM-ANOVA also indicated that counselor awareness, clinic, and their interaction, failed to predict temporal change in sexual risk taking (all F -values < 1.72 , p -values $> .20$).

DISCUSSION

The current report provides a preliminary look at practical innovations intended to increase the focus on sexual risk in routine care during the initial months of addiction treatment. A computerized sexual risk assessment instrument with capacity to generate personal feedback reports was implemented as part of intake processes at two community clinics. The efficacy of sexual risk interventions that include personalized feedback (Carey et al., 1997; Naar-King et al., 2006; Parsons, Rosof, Punzalan, & Di Maria, 2005; Picciano, Roffman, Kalichman, Rutledge, & Berghuis, 2001) is well established. Current findings indicate that: (1) the mutual distribution of client feedback reports to client *and* counselor at intake enhanced counselor awareness of clients' subsequent sexual risk taking in early treatment, (2) such awareness was greater among OTP than DFTP counselors, and (3) this awareness was not substantively associated with change in what were otherwise fairly stable temporal patterns of client involvement in sexual risk behavior.

The collective study findings offer bases for both hope and concern. Inclusion of relatively simple computerized sexual risk technology in routine clinic intake procedures does appear feasible in many community settings (Calsyn et al., 2009; Calsyn et al., under review; Tross et al., 2008). Of course, the hope is that its potential for minimizing sexual health risks of clients during their critical early months of treatment can be realized. One might imagine that, by implementing such technology, clinics may use computerized intake assessment data to identify those clients for whom immediate referral and distribution of relevant concrete resources (e.g., condoms and other prophylactic products) are most needed. Receipt of personal feedback reports may prompt some clients to seek out relevant information that corrects misconceptions, normalizes concerns, and outlines preventative practices. And counselor receipt of feedback reports may help willing counselors "break the ice" about sexual issues that pose a risk to a client's broader recovery efforts, and thereby enable such issues to be openly discussed when appropriate as treatment unfolds. The current findings suggest these latter hopes are achievable; however, they also underscore needs for greater staff training. While counselors who are aware of their clients' ongoing sexual risk behavior during treatment are better positioned to intervene, this alone appears insufficient. Counselors need to be armed not only with tailored sexual risk data about their incoming clients but also with knowledge, skills, and resources to deliver relevant components (i.e., condom distribution, psychoeducation, skills training) of empirically supported sexual risk interventions (Prendergast et al., 2001). The alternative, which has historically been mutual avoidance of sexual risk discussions by addiction counselors and their clients (Mitchell & Oltean, 2007), will only perpetuate substantial public health concerns.

The emergence of clinic as a predictor in study analyses is consistent with site differences highlighted in CTN trials (Ball et al., 2007) and more broadly in multisite investigations [for review, see (Spirito et al., 2009)]. As this study involved counselors and clients from just two clinics, interpretation of site differences is tenuous. This pair of clinics varied in several

known dimensions—like characteristics of clientele (e.g., primary drug of abuse), treatment process (e.g., frequency/mode of clinic contact), organizational features (e.g., treatment philosophy, size), and local sociocultural elements (e.g., population density). Any and all of these attributes may reasonably impact the willingness of counselors and clients to discuss issues of sexual risk. What is clear from current data is counselors at a large urban OTP were in general more aware of their clients' involvement in sexual risk behavior during the initial months of treatment than were those at a smaller, rural DFTP. Notably, clinic did not interact with other variables included in these analyses, suggesting no differential clinic benefits: (1) in raising counselor awareness based on to whom client feedback reports were distributed, or (2) in altering rates of client involvement in sexual risk behavior over time. More broadly, site effects are a useful, cautionary reminder that generalizability should not be assumed in processes of disseminating treatment innovations. Rather, contextual adaptation is a likely necessity (Fixsen, Naoom, Blase, Friedman, & Wallace, 2005; Rogers, 2003), as are conducive workplace norms promoting staff acceptance when innovations involve computer-assisted processes (Buti et al., 2013).

The study has several caveats, which suggest caution in interpreting results and inform suggestions for future research. One important limitation is the lack of random assignment for counselor receipt of feedback reports, a choice informed by our initial pilot data indicating strong sentiments from clients and counselors alike that access to such private information be allowed only with client consent (Calsyn et al., 2011). Characteristics of the client sample also reflect potential limitations for the broader generalizability of study findings. Although no differences were observed between completers and those lost to follow-up, an 18% attrition rate merits acknowledgement. Likewise, the study's requirement that participating clients have facility with English may limit its generalizability. Another caveat is the dichotomous nature in which sexual risk behaviors were conceptualized (absent, present), which was necessitated by the format of the counselor survey employed by the parent study. Nevertheless, the binary measurement approach lacked the sensitivity of alternative scaling approaches. Further caveats are the inclusion of only two clinics and a relatively small aggregate sample size. While it is difficult to know just how limiting any of these elements of study design are, replication of study findings is needed. As in this study, such research may employ methods to minimize the potential influence of impression management—like absence of feedback about counselor- or client-based data provided to clinic management, and use of computerized assessment methods previously shown to hold utility in gathering sensitive information (Metzger et al., 2000). With respect to clinic as a unit of analysis, future research might recruit a small set of clinics matched on organizational features of interest for which it may then be powered at a clinic level, or a sufficiently large set of clinics to enable site to be a random effect in statistical models (Nunes et al., 2010).

Caveats notwithstanding, this study examined computerized sexual risk assessment and feedback at intake as means of spurring greater counselor awareness of subsequent client risk taking in treatment and prompting reduction of such risk by those clients during the critical early months of treatment. More evidence supporting the feasibility of this technology in community treatment settings was accumulated, and a fairly simple mechanism (i.e., mutual distribution of client feedback reports to counselor and client) of

promoting greater counselor awareness of prospective client risk behavior was identified. Even so, study findings suggest that additional obstacles need to be overcome to substantively reduce sexual risks of addiction treatment clientele in early treatment. Future research is needed that examines the utility of counselor training processes that may enable adoption and implementation of common techniques included in empirically supported sexual risk interventions. Furthermore, the impact of such techniques, when employed in the context of routine care rather than as part of structural interventions tested in controlled treatment trials, also merits examination in future research. Such scientific advances, taken together with widespread availability of computer-assisted assessment and feedback innovations, may better address this oft-neglected area of sexual risk.

Acknowledgments

The authors thank the participating clinics, and their counselors and clientele in particular, for contributing to this work.

This work was supported by grants from the National Institute on Drug Abuse, specifically R21 DA022940 (*Computerized Assistance for Treatment Professionals in Assessment of Sexual Risk*, Calsyn, PI) and K23 DA025678 (*Integrating Behavioral Interventions in Substance Abuse Treatment*, Hartzler, PI).

Biographies

Bryan Hartzler, PhD, is a Research Scientist in the Alcohol and Drug Abuse Institute at the University of Washington, and current recipient of an early career development award (K23 DA025678, *Integrating Behavioral Interventions in Substance Abuse Treatment*) funded by the National Institute on Drug Abuse. His research focuses on dissemination and implementation of treatment innovations for substance abusers, with particular focus on practitioner training in empirically supported therapeutic methods.

Blair Beadnell, PhD, is a research scientist at the University of Washington (Seattle, WA) and the Director of Research and Evaluation Services at Prevention Research Institute, Inc. (Lexington, KY). His research interests include risk and protective factors for risky

behaviors such as substance abuse and risky sex, testing of promising intervention approaches, and use of advanced quantitative methods.

Don A. Calsyn, PhD, (1950–2013) was a psychologist, researcher, and mentor. As a professor in the Department of Psychiatry and Behavioral Sciences at the University of Washington, much of his recent work occurred via affiliation with the UW Alcohol and Drug Abuse Institute as an investigator in the Pacific Northwest Node of the National Drug Abuse Treatment Clinical Trials Network. His professional career spanned five decades, and resulted in 100+ publications that contributed to innovation and scientific understanding in areas of opioid substitution treatment, contingency management, HIV/AIDS, and sexual risk reduction.

GLOSSARY

Clinical Trials Network (CTN)

An enterprise in which the National Institute on Drug Abuse, treatment researchers, and community-based service providers cooperatively develop, validate, refine, and deliver new treatment options through the conduct of multisite treatment trials that involve staff and patients of affiliated community treatment programs

Drug-Free Treatment Program (DFTP)

A therapeutic setting that focuses on abstinence-based treatment of drug and alcohol addiction via outpatient counseling, medical support, and other rehabilitative services

Human immunodeficiency virus (HIV)

A specific and prominently recognized sexually transmitted illness, in which a lentivirus (slowly replicating retrovirus) may lead to acquired immunodeficiency syndrome (AIDS) wherein progressive failure of the human immune system allows life-threatening opportunistic infections and cancers to thrive

Motivational Enhancement Therapy (MET)

A counseling approach to help individuals resolve their ambivalence about engaging in behavior change. The approach aims to evoke rapid and internally motivated change, via a process consisting of an initial assessment battery session followed by one or more individual treatment sessions wherein a therapist provides assessment feedback and stimulates discussion about personal risks of current behavior and benefits

	of change while eliciting self-motivational statements via motivational interviewing techniques
Opioid Treatment Program (OTP)	A therapeutic setting that provides opioid agonist treatment medication and a comprehensive range of outpatient medical and rehabilitative services in effort to alleviate the adverse medical, psychological, or physical effects of opiate dependence
Sexually transmitted illnesses (STIs)	A broad category of illnesses for which there is significant probability of transmission between persons via sexual behavior, including vaginal intercourse, oral sex, and anal sex

References

- Albarracin D, Gillette JC, Ho M, Earl AN, Glasman LR, Durantini MR. A test of major assumptions about behavior change: A comprehensive look at the effects of passive and active HIV-prevention interventions since the beginning of the epidemic. *Psychological Bulletin*. 2005; 131:856–897. [PubMed: 16351327]
- Ball SA, Martino S, Nich C, Frankforter TL, Van Horn D, Crits-Cristoph P, Carroll KM. Site matters: Multisite randomized trial of motivational enhancement therapy in community drug abuse clinics. *Journal of Consulting and Clinical Psychology*. 2007; 75(4):556–567. [PubMed: 17663610]
- Bauer, DJ.; Curran, PJ. Introduction to multilevel modeling. 2012. Retrieved June 9, 2012, from www.cbanalytics.org
- Buti A, Eakins D, Fussell H, Kunkel LE, Kudura A, Mc-Carty D. Clinician attitudes, social norms and intentions to use a computer-assisted intervention. *Journal of Substance Abuse Treatment*. 2013; 44(4):433–437. [PubMed: 23021495]
- Calsyn, DA.; Hartzler, B.; Wells, EA.; Peavy, KM. Developing a computerized sexual risk assessment and feedback tool for use in substance abuse treatment settings. Paper presented at the College on Problems of Drug Dependence; Hollywood, FL. 2011.
- Calsyn DA, Hatch-Mailette M, Tross S, Doyle S, Crits-Cristoph P, Song YS, Berns S. Motivational and skills training HIV/sexually transmitted infection sexual risk reduction groups for men. *Journal of Substance Abuse Treatment*. 2009; 37:138–150. [PubMed: 19150206]
- Calsyn, DA.; Peavey, KM.; Wells, EA.; Hartzler, B.; Beadnell, B. Being Safe in Treatment: Enhancing discussions about sexual risk behavior between substance abuse treatment counselors and their clients. (under review)
- Campbell A, Hartzler B, Hatch-Mailette M, Calsyn DA, Miele GM, Tross S. Sustaining NIDA-funded HIV prevention interventions in community-based drug treatment programs post-trial: Provider and program factors. *Journal of Drug Issues*. 2011; 41(4):441–460. [PubMed: 23293393]
- Carey MP, Maisto SA, Kalichman SC, Forsyth AD, Wright EM, Johnson BT. Enhancing motivation to reduce the risk of HIV infection for economically disadvantaged urban women. *Journal of Consulting and Clinical Psychology*. 1997; 65:531–541. [PubMed: 9256553]
- Carroll KM, Martino S, Ball SA, Nich C, Frankforter TL, Anez L, Farentinos C. A multisite randomized effectiveness trial of Motivational Enhancement Therapy for Spanish-speaking substance users. *Journal of Consulting and Clinical Psychology*. 2009; 77(5):993–999. [PubMed: 19803579]
- Engstrom M, Shibusawa T, El-Bassel N, Gilbert L. Age and HIV sexual risk among women in methadone treatment. *AIDS and Behavior*. 2011; 15(1):103–113. [PubMed: 19936912]
- Fixsen, DL.; Naoom, SF.; Blase, KA.; Friedman, RM.; Wallace, F. Implementation research: A synthesis of the literature. Tampa, FL: University of South Florida, Louis de la Parte Florida Mental Health Institute, The National Implementation Research Network; 2005. (FMHI Publication #231)

- IOM. Bridging the gap between practice and research: Forging partnerships with community-based drug and alcohol treatment. Washington, DC: National Academy Press; 1998.
- Kral A, Bluthenthal RN, Lorvick J, Gee L, Bachetti P, Edlin BR. Sexual transmission of HIV-1 among injection drug users in San Francisco, USA: A risk-factor analysis. *Lancet*. 2001; 357(9266):1397–1401. [PubMed: 11356437]
- Metzger DS, Koblin B, Turner C, Navaline H, Valenti F, Holte S, Seage GR. Randomized controlled trial of audio computer-assisted self-interviewing: Utility and acceptability in longitudinal studies. HIVNET Vaccine Preparedness Study Protocol Team. *American Journal of Epidemiology*. 2000; 152(2):99–106. [PubMed: 10909945]
- Meyer-Bahlburg, H.; Ehrhardt, A.; Exner, T. Sexual risk behavior assessment schedule—adult—armory interview. New York: New York State Psychiatric Institute and Columbia University; 1991.
- Mitchell CG, Oltean A. Integrating HIV prevention into substance user treatment: Current practices and challenges. *Substance Use and Misuse*. 2007; 42(14):2173–2182. [PubMed: 18097998]
- Naar-King S, Wright K, Parsons JT, Frey M, Templin T, Lam P, Murphy D. Healthy choices: Motivational enhancement therapy for health risk behaviors in HIV-positive youth. *AIDS Education and Prevention*. 2006; 18(1):1–11. [PubMed: 16539572]
- Nunes EV, Ball S, Booth R, Brigham G, Calsyn DA, Carroll KM, Woody GE. Multisite effectiveness trials of treatments for substance abuse and co-occurring problems: Have we chosen the best designs? *Journal of Substance Abuse Treatment*. 2010; 38(Supplement 1):S97–S112. [PubMed: 20307801]
- Parsons JT, Rosof E, Punzalan JC, Di Maria L. Integration of motivational interviewing and cognitive behavioral therapy to improve HIV medication adherence and reduce substance use among HIV-positive men and women: Results of a pilot project. *AIDS Patient Care and STDs*. 2005; 19(1):31–39. [PubMed: 15665633]
- Picciano JF, Roffman RA, Kalichman SC, Rutledge SE, Berghuis JP. A telephone-based brief intervention using motivational enhancement to facilitate HIV risk reduction among MSM: A pilot study. *AIDS and Behavior*. 2001; 5:251–262.
- Prendergast M, Urada D, Podus D. Meta-analysis of HIV risk-reduction interventions within drug abuse treatment programs. *Journal of Consulting and Clinical Psychology*. 2001; 69:389–405. [PubMed: 11495169]
- Rogers, EM. Diffusion of innovations. Vol. 5. New York: The Free Press; 2003.
- Rondinelli AJ, Ouellet LJ, Strathdee SA, Latka MH, Hudson SM, Hagan H, Garfein RS. Young adult injection drug users in the United States continue to practice HIV risk behaviors. *Drug and Alcohol Dependence*. 2009; 104(1–2):167–174. [PubMed: 19559543]
- Spirito A, Abebe K, Iyengar S, Brent D, Vitiello B, Clarke G, Keller ME. Sources of site differences in the efficacy of a multisite clinical trial: The treatment of SSRI-resistant depression in adolescents. *Journal of Consulting and Clinical Psychology*. 2009; 77(3):439–450. [PubMed: 19485586]
- Strathdee SA, Galai N, Safaiean M, Celentano DD, Vlahov D, Johnson L, Nelson KE. Sex differences in risk factors for HIV seroconversion among injection drug users: A 10-year perspective. *Archives of Internal Medicine*. 2001; 161(10):1281–1288. [PubMed: 11371255]
- Tross S, Campbell ANC, Cohen LR, Calsyn DA, Pavlicova M, Miele GM, Nunes EV. Effectiveness of HIV/STD sexual risk reduction groups for women in substance abuse treatment programs: Results of a NIDA Clinical Trials Network trial. *Journal of Acquired Immune Deficiency Syndromes*. 2008; 48:581–589.
- Walters ST, Neighbors C. Feedback interventions for college alcohol misuse: What, why, and for whom? *Addictive Behaviors*. 2005; 30:1168–1182. [PubMed: 15925126]
- Walters ST, Vader AM, Harris TR, Field CA, Jouriles EN. Dismantling motivational interviewing and feedback for college drinkers: A randomized clinical trial. *Journal of Consulting and Clinical Psychology*. 2009; 77(1):64–73. [PubMed: 19170454]
- White HR. Reduction of alcohol-related harm on United States college campuses: The use of personal feedback interventions. *International Journal of Drug Policy*. 2006; 17:310–319.
- Winhusen T, Kropp F, Babcock D, Hague D, Erickson SJ, Renz C, Somoza E. Motivational enhancement therapy to improve treatment utilization and outcome in pregnant substance users. *Journal of Substance Abuse Treatment*. 2008; 35:161–173. [PubMed: 18083322]

TABLE 1

Client endorsement of sexual risk indices

	Male subsample (<i>n</i> = 48)	Female subsample (<i>n</i> = 31)	Overall sample (<i>N</i> = 79)
<i>Pretreatment 90-day indices:</i>			
Sexually active	67%	97%	79%
Involvement with multiple partners	21%	10%	17%
Sex under drug influence	40%	74%	53%
Sex without condom	50%	61%	54%
<i>In-treatment 90-day indices:</i>			
Sexually active	71%	74%	72%
Involvement with multiple partners	15%	3%	10%
Sex under drug influence	44%	23%	35%
Sex without condom	54%	61%	57%

Notes. All indices are 90-day retrospective self-reports gathered via audio computer-assisted self-interview; Pretreatment interval reflects the 90 days immediately preceding treatment intake; In-treatment interval reflects the initial 90 days following treatment intake.

TABLE 2

Sources of variance for congruence summary scores

	Covariance parameter estimates		
	Estimate	Standard error	Intra-class correlation
<i>Caseload-level variance</i>			
Intercept (caseload)	.026	.101	
Residual	1.043	.188	
			.024
<i>Clinic-level variance</i>			
Intercept (clinic)	.115	.213	
Residual	1.026	.165	
			.101

Notes. Two preliminary RE-ANOVAs were conducted to broadly identify sources of variance in congruence summary scores. The first RE-ANOVA targeted caseload-level variance for the 21 involved counselors, and the second RE-ANOVA focused on clinic-level variance for the two involved CTPs. In each analysis, ICC reflects the intra-class correlation or “within group correlation.”