

## Organizational Factors Related to AIDS/HIV Education in Outpatient Substance Abuse Treatment Units

John D. Clapp, PhD

**ABSTRACT.** The association of HIV and AIDS with intravenous drug use is well documented. Given this, substance abuse treatment providers must figure prominently in any effective national response to HIV/AIDS. The strategies employed by human service managers to address AIDS may be important in explaining how substance abuse treatment units implement policies and programs concerning AIDS-related prevention services. This paper utilizes data from the National Drug Abuse Treatment System Survey to examine how strategic activities concerning AIDS/HIV undertaken by outpatient substance abuse treatment unit managers impacted the provision of preventive AIDS-related services to clients. Results of multiple regression analysis indicate collaboration with other human service organizations and environmental scanning activities are important variables in explaining variation among substance abuse treatment units in the provision of AIDS prevention education to clients. Based on these findings, implications for future research and policy concerning AIDS prevention within the context of substance abuse treatment are made. [*Article copies available for a fee from The Haworth Document Delivery Service: 1-800-342-9678. E-mail address: getinfo@haworth.com*]

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John D. Clapp is Assistant Professor at the School of Social Work, University of Nevada, Las Vegas, 4505 Maryland Parkway, Box 455032, Las Vegas, NV 89154-5032.

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The human immunodeficiency virus (HIV) and the acquired immunodeficiency syndrome (AIDS) are among the most serious social and health concerns in the world today. As of September 1993, there were 339,250 documented AIDS cases in the United States (U.S. Center for Disease Control, 1993). Because there is no cure for AIDS, prevention of new HIV cases remains the only method to fight the AIDS pandemic. Therefore, identifying and intervening with groups at high risk for contracting HIV is a paramount activity in any viable prevention strategy or policy (Friedman et al., 1989).

The association of HIV and AIDS with intravenous drug use is well documented (U.S. Center for Disease Control, 1993; Conviser and Rutledge, 1989; McBride et al., 1990; Haverkos and Steel, 1992). The most recent official statistics suggest intravenous drug users (IVDUs) account for 27% of the prevalence of all AIDS cases in the United States, while the remaining percentage of AIDS cases are comprised of homosexual and bisexual males (48%), or females that had sexual relations with HIV infected males (Center for Disease Control, 1993).

Several authors have noted that AIDS pandemic created environmental uncertainty that challenged the status quo within the substance abuse treatment system (Des Jarlais, 1990; Bayer, 1991; Des Jarlais, 1995; Openheimer, 1993). As such, the substance abuse community was slow to respond to the AIDS epidemic (Bayer, 1991). For instance, Des Jarlais (1990) suggested the alcohol and other drug (AOD) treatment community in New York City went through a stage of "denial" when the AIDS epidemic first broke in that city.

To date, however, there is little research concerning the factors that influence how outpatient substance abuse treatment organizations (OSAT) implement AIDS-related programs and policies. Most of the current research on this issue is descriptive or anecdotal (Des Jarlais, 1990; Bayer, 1991; Price and D'Aunno, 1992; Friedman et al., 1989; Brown and Beschner, 1989). Of the few analytical studies, Clapp (1995) and Clapp and Burke (1996) found that supervisory beliefs concerning AOD treatment influenced AIDS-related services in these settings. Specifically, OSAT units with clinical managers who were more supportive of harm reduction practices (e.g., needle exchange programs), were likely to provide more AIDS-related education to their clients.

Although such ideologies of care are important in determining service technologies in human service organizations (Hasenfeld, 1992), the management strategies employed by human service managers may also be important in explaining how OSAT units implement AIDS-related prevention programs and policies. Along these lines, Mayntz (1983) suggested

that management activities like program design are important to the implementation of policies. In the case of AIDS, for instance, managers of OSAT units that engage in management activities like environmental scanning might support AIDS-related prevention within their unit to a greater extent than managers who are unaware of environmental issues like AIDS.

Data from a national sample of OSAT units are analyzed to provide evidence about the extent to which these social service organizations are engaged in HIV/AIDS education activities. Such activities encompass efforts aimed at increasing AOD clients' knowledge concerning the risks associated with the transmission of HIV (e.g., unprotected sexual activity, needle sharing, etc.). Education efforts typically take the form of one-on-one counseling and distribution of written materials (D'Aunno & Mohr, 1990), but also sometimes include attempts to prevent non-IVDUs from beginning IV drug use (Friedman et al., 1983).

#### *MANAGEMENT AND POLICY/PROGRAM IMPLEMENTATION*

As suggested above, strategic management activities may be important to the implementation of AIDS-related prevention policies and programs in OSAT units. Schaefer (1987) noted that among other management activities, identifying and clarifying the imperative for change in the organization's external environment is key to the implementation of new programs in human service organizations. During the late 1980s and early 1990s there were only limited formal policy mandates concerning AIDS prevention within the context of substance abuse treatment (Bayer, 1991). Thus, identifying and understanding the need for AIDS-related prevention services through assessment of the external environment was an important aspect of strategic management in OSAT units. As a management practice, this process might occur through environmental scanning practices.

Bryson (1989) noted that scanning internal and external environments is a key aspect of strategic management activity within human service organizations. External environmental scanning includes identification of macro trends and collaborative forces (Bryson, 1989; Bennis and Nanus, 1985). Internal scanning is concerned with the identification of organizational resources, competencies, and capacities. Similarly, Bennis and Nanus (1985) noted that coupling the internal and external environments via collaboration is a common strategy employed by organizations to address external environmental change. Moreover, Fleishman, Piette, and Mor (1991) suggested that interorganizational relations such as participation in AIDS consortia and tasks forces represented a "maximal" organizational response to AIDS among human service organizations (p. 32).

Further, collaboration can be viewed as a response to environmental uncertainty (Aldrich and Marsden, 1988) or as a means of cost sharing to develop and start new services (Whetten, 1982). For strategically addressing environmental uncertainties, collaboration represents an attempt to gain control over the environment by securing needed resources (Whetten, 1982). Thus, collaboration in OSAT units might be viewed as a response to AIDS that results from environmental awareness and uncertainty. Additionally, such responses might be seen as strategically sound and beneficial to the organization (Penner, 1995; Fleishman et al., 1990).

Contributing to the uncertainty associated with AIDS, the substance abuse treatment system did not have adequate resources to address the AIDS pandemic. Clapp (1995), Clapp and Burke (1996) and D'Aunno and Mohr (1990) all found that resources were key in determining the extent to which OSAT treatment units were able to offer AIDS-related prevention services in 1988 and 1990. Consistent with Whetten's notion of collaboration, in a study of coalitions among AIDS/HIV service organizations, Penner (1995) found that AIDS/HIV-related organizations participating in mandated collaborations depended on each other to provide resources not available from the state and federal government. Further, Penner (1995) found that organizations that participated in HIV-related collaborations and consortia exhibited increased organizational independence and reduced inefficiency. Thus, conceptually, collaboration is an important variable to consider when evaluating strategic management activities undertaken by OSAT unit managers to address AIDS.

Thus, based on the current literature, several variables might be important in explaining how OSAT units implement AIDS-related policies and programs including collaboration (Penner, 1995) and environmental scanning (Meyer, 1982; Bryson, 1989). Because there is limited research concerning the ways in which OSAT units have responded to the AIDS epidemic, environmental scanning and collaboration have not been clearly operationalized as they related to this subject. Environmental scanning concerning AIDS might occur in OSAT units in a variety of ways. Managers might, for example, participate in professional development activities such as conferences and workshops that explore cutting-edge topics like AIDS. Other forms of environmental scanning might include reading professional journals or participation in local task forces to identify emerging issues like the association of AIDS to AOD use. These activities are consistent with Fleishman et al.'s (1990) assertion that information sharing among organizations is a key aspect of organizational response to AIDS.

## METHODS

### *Design and Data*

The relational study reported on here utilized secondary analysis of extant cross-sectional survey data to address the following research question: To what extent do strategic management activities undertaken by OSAT unit managers, among other organizational factors, contribute to the provision of AIDS-related education services to clients?

This study used data from the 1990 Drug Abuse Treatment System Survey (DATSS). The DATSS was a national survey of outpatient substance abuse treatment units conducted in 1988 and 1990 by the Survey Research Center of the Institute for Social Research at the University of Michigan and funded by the National Institute on Drug Abuse. Interviewers obtained data from respondents in 481 of 546 units asked to participate in the 1990 DATSS for a response rate of 88 percent. These units were all participants in the first wave of the DATSS conducted in 1988, based on a random sample of OSAT units drawn from a list of the population of approximately 8,500 treatment units in the United States. The population was stratified according to treatment services offered (methadone vs. non methadone); ownership (private vs. public); and treatment context (hospital-affiliated, mental health affiliated, and unaffiliated or "freestanding"). In each unit, interviewers asked the top two managers (i.e., unit director and director of clinical services) to complete telephone surveys. Interviewers asked directors to provide information about the unit's ownership, financing, strategies, and accreditation. Clinical supervisors were queried for information about personnel, clients, services, and HIV prevention efforts.

### *Measures*

To develop the dependent measure and one of the predictor variables for this study, the author employed exploratory principle components analyses (PCA) for data reduction purposes. The author selected DATSS items for the PCAs by grouping them into the major conceptual domains presented above: strategy and AIDS-related variables. Principle components analyses were then conducted for each conceptual domain in the model. Only factors that conceptually reflected constructs of interest in this study were used to develop indexes. (See Appendix for factor loadings and summary statistics.) The investigator then built factor-based indexes by summing values for variables loading on a retained factor across valid

cases. To assess internal consistency, the investigator computed Cronbach's alpha coefficients for each index.

### *Dependent Measure*

#### *AIDS Education*

A factor-based index reflecting the extent to which organizations had undertaken AIDS-related education with their clientele was developed using the method described above. The following items were included in the index that asked clinical supervisors to rate the extent (1 = no extent to 5 = a very great extent) to which: (a) counselors routinely talked to clients about the risks of transmitting AIDS through sexual contact; (b) counselors talked to clients about ways to prevent transmitting AIDS through IV needle use; (c) counselors routinely talked to clients about the risks of transmitting AIDS to unborn children; and (d) written materials that explain the ways to prevent AIDS were routinely distributed to clients. Cronbach's alpha for this index is .87. The valid value range for this index is 4-20.

### *Predictor Variables*

#### *Strategic Management Activity Variables*

As noted earlier, environmental scanning and collaboration have not been clearly operationalized as they related to OSAT unit response to AIDS. The researcher used several single items as indicators of strategic management activity in the present analysis based on the literature discussed above. The following items were included in the strategic variable set: (a) a Likert-type item (1 = no extent, 5 = a very great extent) reflecting the extent to which OSAT units have worked with other organizations to prevent AIDS (Collaboration); (b) a Likert-type item reflecting the extent to which OSAT unit directors rely on membership in professional or provider associations as a way of finding out about developments in the field of substance abuse treatment (Professional Membership) (1 = no extent, 5 = a very great extent); and (c) a Likert-type item reflecting the extent to which OSAT unit directors rely on participation on advisory boards, commissions or panels as a way of finding out about developments in the field of substance abuse treatment (Networking) (1 = no extent, 5 = a very great extent).

In addition, the investigator used a factor-based index reflecting OSAT unit director's professional development. This index consisted of the fol-

lowing Likert-type items (1 = no extent, 5 = a great extent): (a) the extent to which the director personally relies on journals, newsletters, and other professional publications as a way of finding out about developments in the field of substance abuse; (b) the extent to which the director personally relies on attendance at conferences or meetings of professional associations as a way of finding out about developments in the field of substance abuse; (c) the extent to which the director personally relies on participation in special training sessions, seminars or workshops as a way of finding out about developments in the field of substance abuse (Professional Development). Cronbach's alpha, a measure of internal consistency reliability, for this index is .64. In early stages of research, alpha values of .5 and above are considered adequate (Nunnally, 1967). The valid value range for this variable is 3-15. The professional membership, professional development, and networking variables were all considered to be conceptual indicators of environmental scanning in the present study. Hence, the present study included an indicator of collaboration and several indicators of environmental scanning.

### *Other Organizational Variables*

#### *Agency and Client Characteristics*

Based on previous research (Clapp, 1995; Clapp and Burke, 1996), the investigator included three additional organizational variables in the present study: the percentage of OSAT unit clients who are multiple drug users, the percentage of clients who are IVDUs, and an index variable reflecting the extent to which OSAT units have the capacity (dollars and staff) to respond to AIDS. Cronbach's alpha for this index is .78 (valid value range = 3-15).

#### *Analyses*

The investigator regressed the dependent variable (AIDS Education) on the predictor variables using forward stepwise entry and the ordinary least squares method. Variables with statistically significant ( $\alpha = .05$ ) standardized partial regression coefficients were considered meaningful to the overall model.

## **FINDINGS**

Table 1 presents descriptive univariate and bivariate statistics for the variables included in the present study. On average, OSAT units report a

TABLE 1. Correlation Matrix and Selected Descriptive Statistics for Strategic Activity, Dependent and Control Variables

Variable	x <sub>1</sub>	x <sub>2</sub>	x <sub>3</sub>	x <sub>4</sub>	x <sub>5</sub>	x <sub>6</sub>	x <sub>7</sub>	y
<i>Strategic Activity Variables</i>								
Collaboration (x <sub>1</sub> )	—	<u>.24</u>	<u>.11</u>	<u>.33</u>	<u>.37</u>	<u>.12</u>	<u>.52</u>	<u>.20</u>
Professional Membership (x <sub>2</sub> )		—	<u>.33</u>	<u>.42</u>	.02	.07	<u>.11</u>	<u>.12</u>
Professional Development (x <sub>3</sub> )			—	<u>.34</u>	-.02	-.01	.05	<u>.17</u>
Networking (x <sub>4</sub> )				—	.03	<u>.12</u>	<u>.20</u>	<u>.19</u>
<i>Control Variables</i>								
% IVDU (x <sub>5</sub> )					—	.04	<u>.32</u>	<u>.29</u>
% Multiple Drug User (x <sub>6</sub> )						—	.01	<u>.17</u>
Resources to Address AIDS (x <sub>7</sub> )							—	<u>.50</u>
<i>Outcome Variable</i>								
AIDS Education (y)								—
Mean	3.0	3.1	10.5	2.9	57.7	27.0	6.9	14.4
Standard Deviation	1.1	.97	1.7	.97	31.9	32.7	3.2	3.4

Note: Underlined coefficients are statistically significant at the .05 alpha level.

moderate level ( $\bar{X} = 3.6$ , s.d. = .84) of effort directed at HIV/AIDS education. Sixty percent of OSAT units report they provide HIV/AIDS education to their clients to a "4 = great" or "5 = very great" extent. Moreover, OSAT units report this level of involvement in HIV/AIDS education even though they typically report they do not have adequate ( $\bar{X} = 2.3$ , s.d. = 1.0) resources to support such efforts.

Overall, OSAT unit managers report that they engage in collaborations with other human service organizations to prevent HIV/AIDS to a moderate extent ( $\bar{X} = 3.0$ , s.d. = 1.1). Similarly, managers report engaging in networking and professional membership to a moderate extent. Finally, on average, managers report engaging in professional development to a substantial extent ( $\bar{X} = 10.5$ , s.d. = 1.7, valid value range = 3-15).

Table 2 presents summary statistics for the regression of provision of AIDS education on the strategic activity and control variables. Overall, this stepwise model was statistically significant ( $F = 47.75$ ,  $p < .0001$ ), and the linear combination of the four variables included in the final model

TABLE 2. Regression of Provision of AIDS Education to Clients on Strategic Variables (Stepwise Entry)

Variables	R <sup>2</sup>	R <sup>2</sup> Change	Beta	t	p
Collaboration	.24	.24	.27	5.7	< .001
AIDS Capacity	.31	.07	.30	6.6	< .001
Professional Development	.33	.02	.14	3.5	< .001
% Multiple DU	.34	.01	.13	3.3	< .01
% IVDU	.35	.01	.10	2.5	< .05
(Constant)	—	—	—	—	< .001

Notes: Standard error = 2.7; Adjusted R<sup>2</sup> = .35; For model: F = 47.75; p < .0001.

Variables not meeting .05 probability limit: (a) Professional Membership; (b) Networking.

N = 442. Durbin Watson value = 1.9; residuals approximated a normal distribution; the normal probability plot approached a straight line; the plot of residuals against the predicted values for the outcome variable approached a horizontal band.

accounted for 35% of the variance among OSAT units in the effort directed at HIV/AIDS education.

Of the strategic management variables, the variable concerning collaboration and the variable reflecting professional development each met the .05 probability criterion for inclusion in the model. The variable reflecting OSAT unit collaboration with other organizations to prevent AIDS significantly contributed to the outcome variable (beta = .27, p < .001). Additionally, the collaboration variable accounted for the 24% of the variance explained by the model. The variable reflecting OSAT unit directors' involvement in professional development activities as means of keeping up with emerging issues in the field was also statistically significant (beta = .14, p < .001). However, this variable only resulted in a R<sup>2</sup> change of .02. Finally, each of the additional organizational variables included in the study was statistically significant. The variables reflecting networking and professional membership did not meet the inclusion criterion described above.

### *POLICY AND PRACTICE IMPLICATIONS*

This study reports findings from an initial effort to empirically examine the relationship between strategic management activities undertaken by

OSAT unit directors and the provision of HIV/AIDS education to clients. Data from a national sample of OSAT units in 1990 reveal that most units have made efforts to respond to this emerging social problem by routinely counseling clients about various risks associated with contracting and transmitting HIV.

Based on these findings, the implications for social and health policy are several. Of all the management variables, collaboration appears to be the most important strategy managers can employ to implement AIDS-related programs for their clients. At the local level, public health policy officials might consider developing more formal mechanisms for collaborative efforts in this area. AIDS-related prevention consortia and coalitions targeting substance abusers might be viable options. At the federal level, the efficacy of collaborative models developed through programs like the Center for Substance Abuse Prevention's community partnership programs might be evaluated for AIDS-related prevention projects. At both levels, policy makers might consider developing mechanisms for technical support concerning consortia and coalitions.

In addition to collaboration, attaining sufficient resources to implement programmatic change is crucial. At the organizational level, OSAT unit managers must identify and secure necessary resources (both fiscal and staff) to implement AIDS-related prevention services. Collaborative strategies like those described above might offset resource short-falls. At the governmental level, policy makers must be cognizant of the impact resources have on the provision of AIDS-related prevention to clients in substance abuse treatment. Simply put, without adequate resources, substance abuse treatment organizations can not implement and provide AIDS-related prevention services.

#### *DIRECTIONS FOR FUTURE RESEARCH*

Future research might explore the efficacy of collaborative efforts to prevent AIDS, the benefits of such collaborations to OSAT units, and the reasons OSAT units enter into such arrangements. In addition to collaboration, future studies might address the issue of environmental scanning more systematically. Although a case can be made for the validity of the indicators used in the present study to tap the construct of environmental scanning (professional development, professional membership, networking), clearly these are not the only indicators. For instance, the present study had no measures of formal needs assessment processes or internal scanning efforts, as such variables were not available in the DATSS.

Other variables to consider in future studies of this issue include the

geographic prevalence and incidence of HIV/AIDS (Des Jarlais, 1990) and the inclusion of measures concerning AIDS-related prevention ideologies among OSAT unit directors (Clapp and Burke, 1996). Des Jarlais (1990) suggested that the prevalence of HIV/AIDS in a unit's service area may affect the unit's level of response. A measure of AIDS epidemiology at the local level was not available to the present study.

By addressing these issues, future research should help better our understanding of AIDS prevention within the context of substance abuse treatment and increase the current knowledge-base concerning the ways in which human service organizations respond to environmental challenges. Further, health and social policy makers will benefit from a clearer understanding of the complex issues surrounding AIDS prevention within the context of OSAT. In times of fiscal retrenchment, increased knowledge of effective strategies to prevent the spread of HIV among AOD users within the context OSAT is critical to policy makers and unit managers alike. This study represents a first attempt at building such knowledge.

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## APPENDIX

## Factor Loadings for Professional Development Variable

Variable	Loading
The extent to which you rely on attendance at conferences or meetings of professional associations as a way of finding out about developments in the field of substance abuse	.81
The extent to which you rely on participation in special training sessions, seminars or workshops as a way of finding out about developments in the field of substance abuse	.72
The extent to which you rely on journals, newsletters, and other professional publications as a way of finding out about developments in the field of substance abuse	.67

Notes: This factor had an eigenvalue of 1.0 and accounted for 14.4% of the extracted variance. This factor represents the second factor in a two factor solution (overall variance extracted = 49.9%). KMO = .71; Bartlett's test of sphericity = 524.5,  $p < .0001$ .

## Summary of Factor Loadings for AIDS Education Variable

Variable	Loading
Counselors routinely talk to clients about the risks of transmitting AIDS through sexual contact	.87
Counselors routinely talk to clients about ways to prevent transmitting AIDS through IV needle use	.84
Counselors routinely talk to clients about the risks of transmitting AIDS to unborn children	.82
Written materials that explain ways to prevent AIDS are routinely distributed to clients	.54

Notes: This factor had an eigenvalue of 2.75 and explained 14.5% of the overall variance. The factor was the second factor in a four factor solution (overall factor model extracted 63.4% variance). Bartlett test of sphericity = 4444.2,  $p < .0001$ ; KMO = .87.

