Paraprofessional Delivery of a Theory Based HIV Prevention Counseling Intervention for Women

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SYNOPSIS

THIS REPORT DESCRIBES A MID-COURSE PROCESS evaluation of an HIV risk-reduction counseling intervention delivered by specially trained peer paraprofessionals. One of the key questions addressed is whether paraprofessionals can successfully implement a theory-based counseling intervention. The project, known as Project CARES, is a 5-year demonstration research project to prevent HIV infection and unplanned pregnancies in women at risk for HIV infection and transmission who were recruited from homeless shelters, drug treatment facilities, and hospital-based service settings for HIV-infected women. Project CARES uses an enhanced counseling intervention based on the Transtheoretical Model, also known as the Stages of Change model, to promote condom and other contraceptive use for women who wish to avoid pregnancy, condom use for disease prevention, and reproductive health service use. Peer paraprofessionals, called advocates, provide stage-tailored counseling using a structured manual which guides them in the selection of specific counseling activities appropriate to a woman's level of readiness to change her behavior.

Data from process evaluation forms completed by advocates in Philadelphia and Baltimore document that the delivery of the intervention is consistent with the theoretical model upon which it was based. Paraprofessionals can become skilled in the delivery of a stage-based counseling intervention in health and social service settings. The use of paraprofessionals in HIV prevention service delivery may be a cost-effective way to enhance and extend services for women.

Most behavioral research on human immunodeficiency virus (HIV) prevention assesses intervention effectiveness by evaluating outcomes. Little intervention research is built on a conceptual model of how an intervention could produce the desired outcomes *(1-3)*, and even less of this research evaluates implementation of a specified protocol *(4)*. Yet simply knowing whether a treatment produces an effect does not substantially contribute to our ability to design and implement effective programs—that is, to move from a pilot demonstration project to broad-scale application *(5-7)*. For outcome evaluation results to be useful in developing programs, we need to understand how

and why the intervention worked. Moreover, monitoring program implementation can foster adherence to the protocol by allowing mid-course corrections in program delivery.

This report describes results of an interim evaluation of the implementation of an intervention that uses peer paraprofessionals to deliver theory-based counseling to women at risk for HIV infection and unintended pregnancy. Since the use of peer paraprofessionals is potentially a viable, cost-effective strategy for outreach and health services delivery, particularly for groups that are difficult to locate, recruit, or retain in social services programs *(8)*, this evaluation focused on the following key question: Can peer paraprofessionals deliver a theory-based counseling intervention in several service delivery settings? Additionally, we assessed the comparability of intervention delivery between the two cities involved in the project, and we attempted to identify areas where additional training of the paraprofessionals, or modification of the intervention protocol, might be needed.

Counselors evaluate a client's readiness to change, then they select the influencing factors most likely to help her change her behavior.

Project CARES

The project described in this report, Project CARES, is a 5-year demonstration research project to prevent HIV infection and unplanned pregnancies in women at risk for HIV infection and transmission who were recruited from homeless shelters, drug treatment facilities, and hospital-based service settings for HIV-infected women *(9)*. The project was funded by the Centers for Disease Control and Prevention (CDC) in 1991 and is currently operating in two cities, Philadelphia and Baltimore.

Project CARES was created to serve two main objectives: to reduce access barriers to use of reproductive health services, and to assist women in making changes in specific outcomes—reproductive decision making, contraceptive use, and condom use with main and other partners.

The first objective is being addressed through a structural intervention in which reproductive health services are introduced or enhanced in settings where women come for other needs. The second objective is being addressed through an enhanced counseling intervention.

In Philadelphia, women are recruited through drug treatment centers, homeless shelters, and public housing projects. In Baltimore, women are recruited through HIV treatment clinics serving women and children. In both cities, reproductive health services are available on site at participating facilities.

A prospective, longitudinal design is used to evaluate outcomes. Women receive either standard (Title X) reproductive health services, or those services plus an enhanced counseling intervention. For outcome evaluation, all participants receive a baseline interview and follow-up interviews at 6, 12, and 18 months.

Model for the enhanced intervention. The enhanced intervention is based on the Transtheoretical Model of Behavior Change, also referred to as the Stages of Change (SOC) model *(10)*. The model describes behavior change as a process of movement through a series of stages: precontemplation, contemplation, preparation, action, and maintenance. The model suggests that interventions tailored to a person's stage of readiness to change are more likely to be effective than those that are not *(11)*.

The model also hypothesizes that certain cognitive, emotional, and behavioral processes, or influencing factors, are associated in characteristic ways with each of the five stages *(12)*. These influencing factors are the basic coping activities people engage in when they attempt to change a behavior.

The model suggests that the relative importance of the influencing factors differs across the stages (see table 1). In the early stages, precontemplation and contemplation, when people are not yet thinking about or just beginning to think about making changes in their behavior, cognitive and emotional factors are most important—for example, increasing awareness of risky behavior and alternatives to it, understanding personal vulnerability, and weighing pros and cons associated with behavior change. In the later stages, action and maintenance, behavioral processes and social reinforcement become increasingly important to support behavior change and to prevent relapse. These factors include learning to substitute positive behaviors for risky ones, altering the environment to eliminate or reduce opportunities for temptation, and learning to rely on trusted relationships to support behavior change. These influencing factors have been used as the foundation for the development of the Project CARES enhanced counseling intervention.

Women in the Project CARES enhanced intervention receive one-on-one counseling based on the SOC model. First, counselors evaluate a client's readiness to change, then they select the influencing factors most likely to help her change her behavior. Once the influencing factors are identified, counselors can select from a menu of counseling activities that encourage the use of the appropriate influencing factors. A comprehensive manual, the Advocates' Guide to Stage of Change Counseling (SOC manual), was developed by project staff for use in Project CARES.

Although the SOC model describes five stages of

change, the influencing factors and counseling activities for the contemplation and preparation stages were combined into one counseling module, resulting in four stages for the Project CARES counseling intervention. The contemplation and preparation stages form a continuum of intention, from long-term intentions to short-term or immediate intentions to change behavior. For outcome measurement purposes, it is necessary to define each stage precisely along this temporal dimension; thus, preparation is defined as intention to change within the next 4 weeks, whereas contemplation is defined as intention to change sometime within the next 6 months, but not within the next 4 weeks *(12)*. For counseling purposes, however, short- and long-term intentions do not require such rigid definition. The important distinction for the advocate is the immediacy of the woman's intention to change. Therefore, for the intervention, the SOC manual treats this combined stage as a continuum of readiness to change, and guides counselors to select influencing factors appropriate for those with relatively long- versus short-term intentions to change.

Project CARES: Stages of change in which particular influencing factors are most useful.

Precontemplation	*Contemplation*	*Preparation*	*Action*	*Maintenance*
Consciousness-Raising Social Liberation				
	Emotional Arousal Self-Reevaluation			
		Commitment		
			Reward Countering Environmental Control Helping Relationships	

Adapted from Changing for Good: The Revolutional Program that Explains the Six Stages of Change and Teaches You How to Free Yourself from Bad Habits, Prochaska, Norcross, and DiClemente, 1994 *(13)*. Used with permission.

Intervention delivery. Counseling in Project CARES is delivered by peer health advocates, paraprofessionals who have had some experience working with health, social, or community programs. Many have personal and/or family histories of homelessness or drug abuse, although a minimum of 2 years of sobriety and recovery is required. In Philadelphia, the advocates all live in the neighborhoods where the intervention is being delivered. The Baltimore advocates are all women living with HIV infection, as are the women who are enrolled in the project in that city. Advocates receive 9 days of structured training on the Stages of Change model, use of the counseling manual, and implementation of the multisite protocol. In addition, advocates receive continuing education through in-service training, case conferences, and ongoing review of the manual with their supervisor.

Advocates work with clients to help them change one or more specific behaviors, or to reinforce and support their current risk-reduction behaviors, during the 6-month intervention period. Advocates work on contraceptive use only with women who say they wish to avoid pregnancy; if clients are uncertain about whether they want to become pregnant, the advocates first work with them on clarifying their reproductive intentions.

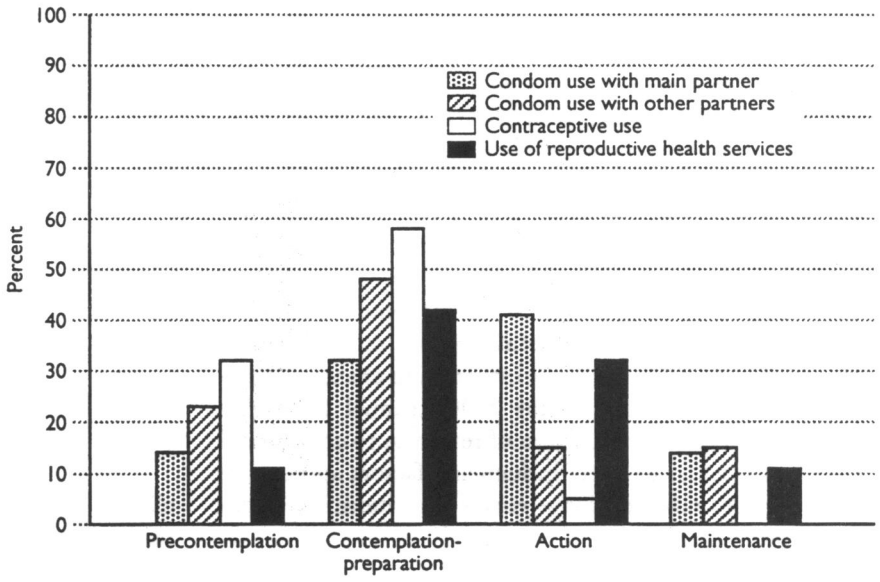
Protocol for enhanced intervention. After a client's baseline interview, she meets with her assigned advocate. This first meeting begins the "warm-up" phase; the protocol specifies that an advocate meet with a client at least one to three times to develop rapport, establish the foundation for future work, and assess the client's needs and strengths. The advocate may take her client out for coffee or to a clinic, or she may offer various referrals. By the end of the warm-up phase, the advocate will have identified her client's psychosocial needs as well as her current stage of readiness to change for each of the target behaviors: condom use with main partner, condom use with other partners, contraceptive use, and reproductive health service use. The advocate will also have developed an initial plan for work on specific target behaviors for subsequent stage-tailored counseling. This plan is updated as needed as the advocate and client meet over the next several months. The counseling phase is structured according to the SOC modules described in the counseling manual.

Stages of change manual. The counseling manual consists of self-contained modules that describe characteristics of clients at each stage of change and present objectives for movement to the next stage of change. The manual guides advocates in selecting the influencing factors and counseling activities for the identified stage.

A series of assessment questions help the advocates identify the key influencing factors and choose counseling activities. Although the SOC manual prescribes a set of counseling activities and influencing factors for each stage, the intervention is flexible so that advocates can diverge from the manual when appropriate. For example, an advocate may conclude that a client infected with HIV has not fully confronted or processed her feelings about finding out she is positive. Even if the advocate determines that a client is in the maintenance stage for condom use with her main partner, she may judge that relapse is imminent, and that an influencing factor for precontemplation (Emotional Release) and a corresponding counseling activity (Re-telling the Story) would be helpful. Although not detailed in the manual, this type of decision is entirely consistent with the theoretical model *(14)*, and is the type of decision a well-trained and experienced counselor should make. Departures from the manual are discussed by the advocate with her supervisors and are often reviewed by supervisors during cross-site communications.

Advocates meet with clients wherever it is convenient for the client and strive to conduct at least three Stages of Change counseling sessions during the 6-month intervention period. At the end of this period, the advocate may help phase clients into outside support groups, or she may suggest that clients continue to participate in the Project CARES psychosocial support groups. These support groups are conducted by the advocates and are an ongoing adjunct to the Stages of Change counseling intervention. An advocate may refer a client to the group, in addition to the one-on-one counseling sessions, at any point during the intervention.

Figure 1. Project CARES: Percentage of Stages of Change encounters by stage for four target behaviors, Baltimore.

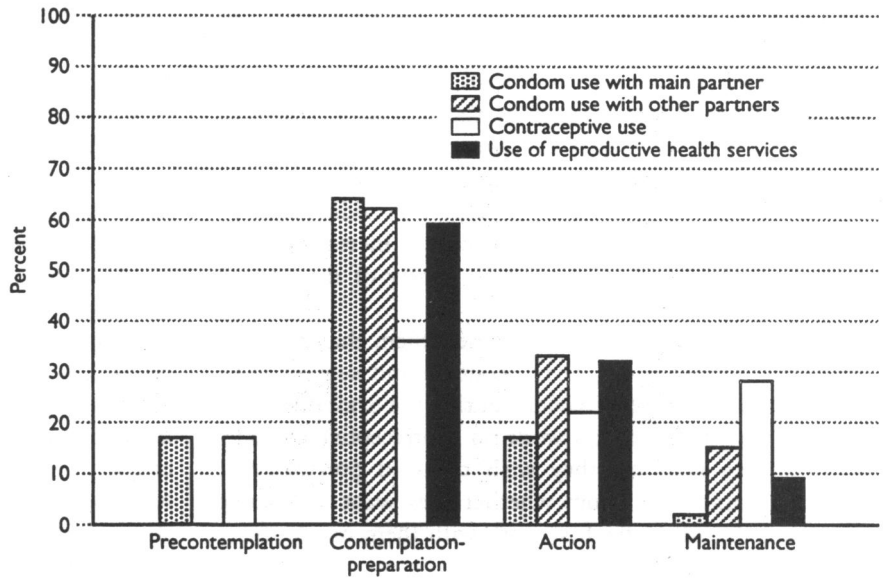


Methods

Process data on advocate stage assessments, warm-up/non-stage-of-change encounters, stage-of-change counseling encounters, group sessions, and medical services received were collected to track implementation of the Project CARES protocol. Data from two forms were used for the mid-course process evaluation described here.

One form, Warm-up/Non-Stage-of-Change Encounter Form (non-SOC), documented topics discussed during the initial sessions and other rapport-building sessions. The other, Stages of Change (SOC) Encounter Form, documented the advocate's assessment of the client's stage for a given behavior, and the influencing factors and counseling activities used during a specific SOC counseling session. If two behaviors are worked on during a session, the advocate fills out two SOC encounter forms—one for each behavior.

Figure 2. Project CARES: Percentage of Stages of Change encounters by stage for four target behaviors, Philadelphia.



Both forms, which are completed by advocates after each contact with a client, document the date, length, and setting of each encounter. All forms are reviewed with the supervisor before the data are entered into the database. The consistency and quality of data is enhanced through intensive supervision and discussion between the advocates and the supervisors about use of the SOC manual and the forms; biweekly conference calls between the supervisors and the project officers at CDC augment this oversight process.

Results

Data Sources. Data presented here are from process forms completed between March 1993 and April 1994 by six advocates from the two Project CARES sites. Data were

Figure 3. Project CARES: Percentage of Stages of Change encounters for which advocates matched influencing factors and counseling activities with stage of change, by city.

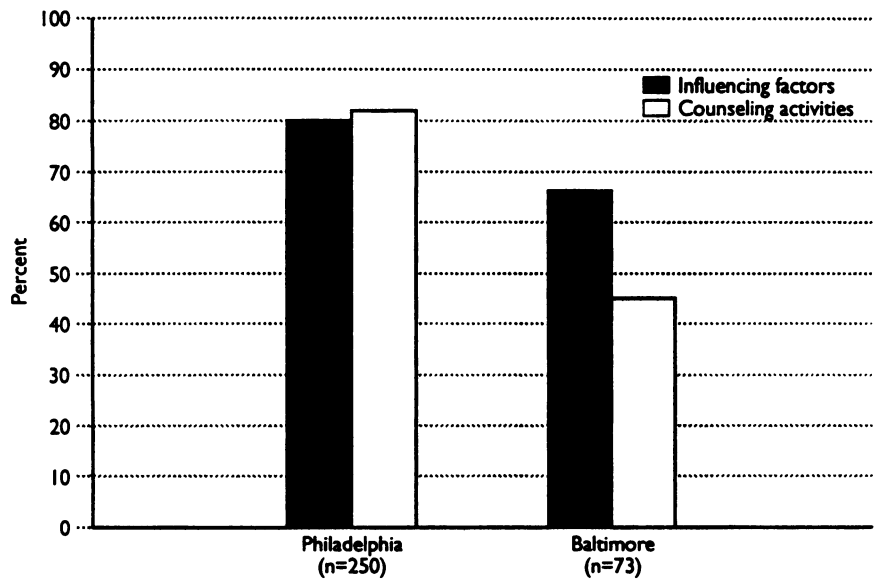
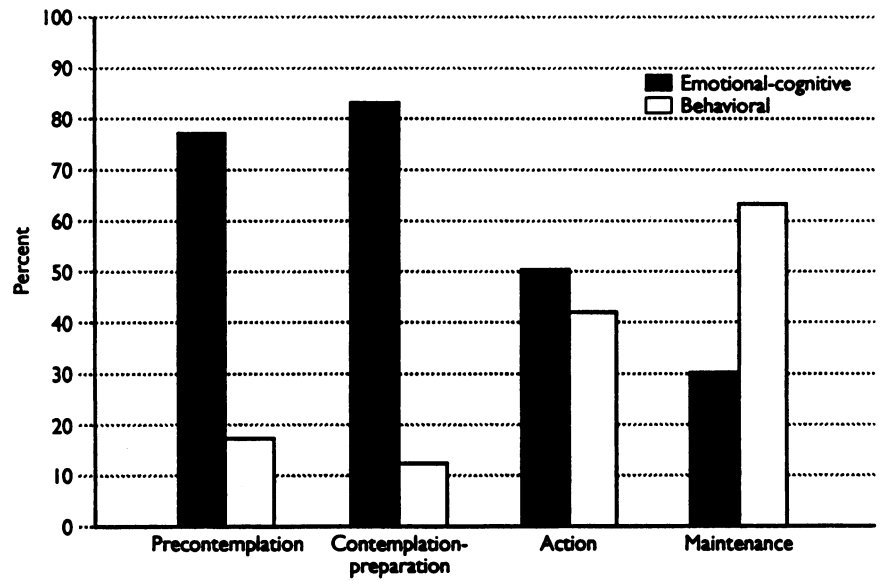


Figure 4. Project CARES: Percentage of influencing factors characterized as emotional-cognitive or behavioral, by stage of change for condom use with main partner.



from 161 non-SOC encounter forms (representing encounters with 55 women) and 73 SOC encounter forms (representing encounters with 22 women) in Baltimore, and from 654 non-SOC encounter forms (representing 160 women) and 250 SOC encounter forms (representing 96 women) in Philadelphia.

Participant Characteristics. In Baltimore, where all participants are women living with HIV, 92 percent were African American, and 85 percent were receiving public assistance. Nearly 60 percent said they had a main sex partner, and 11 percent reported that they had had sex with someone other than a main partner in the last 30 days. Eighty-five percent of women said they did not wish to have a baby now. One-third said they had at some time exchanged sex for drugs, money, or other things, and 65 percent had had a sexually transmitted disease.

In Philadelphia, 75 percent of the women were African American and 19 percent were white; 92 percent were receiving public assistance. About two-thirds (66 percent) had a main partner and 19 percent reported having had sex with someone other than a main partner in the last 30 days. Eighty-eight percent of women said they did not wish to have a baby now. Forty-five percent said they had ever exchanged sex for drugs, money, food, or shelter, and 58 percent said they had had a sexually transmitted disease. Fewer than 5 percent of the women in Philadelphia reported being infected with HIV at the time of enrollment.

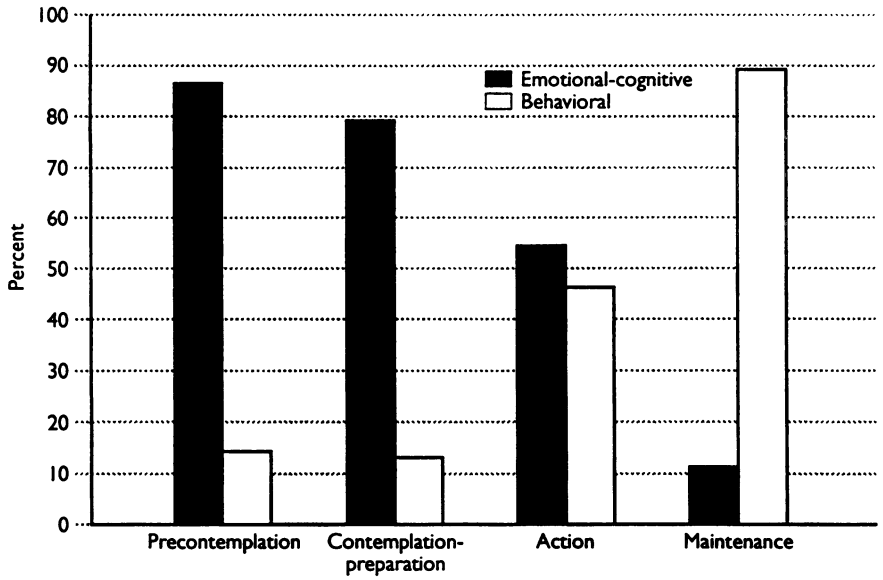
Warm-up/Non-SOC Encounters. The mean number of rapport-building sessions per client was 2.9 in Baltimore and 4.1 in Philadelphia. These sessions lasted a mean of 37 minutes in both Baltimore and Philadelphia. A broad range of topics was discussed during these sessions. For example, at both sites drug-related issues were discussed in nearly one-third of the encounters, and family and partner relationship issues in about half of encounters.

SOC Encounters. The mean number of SOC encounters per client was 3.3 in Baltimore and 2.6 in Philadelphia. These sessions lasted a mean of 41 minutes in Baltimore and 52 minutes in Philadelphia. During these sessions, the advocates worked on a mean of 1.2 influencing factors and used a mean of 1.2 counseling activities from the manual.

Figures 1 and 2 show the percentage of SOC encounters by stage. This analysis represents the distribution of counseling efforts by the advocates. Counseling in the action stage for condom use with main partners was a greater focus in Baltimore than Philadelphia.

Influencing factors and activities. At both sites, in about 80 percent of SOC encounters, one or more influencing factors specified by the manual were selected as the focus of stage-based counseling (figure 3). In Philadelphia, one or more stage-matched counseling activities were used in 82 percent of SOC encounters, but in Baltimore, slightly less than half of the counseling activities were stage-matched.

Figure 5. Project CARES: Percentage of influencing factors characterized as emotional-cognitive or behavioral, by stage of change for condom use with other partner.



According to the Transtheoretical Model, emotional-cognitive influencing factors are most important in early stages, and interventions should focus on manipulating these factors for women in the precontemplation and contemplation-preparation stages. Behavioral influencing factors become increasingly important in later stages and thus should be the focus of intervention efforts for women in the action and maintenance stages. To evaluate whether this pattern was occurring in the advocates' counseling, we aggregated the 19 influencing factors suggested in the manual into two groupings (emotional-cognitive and behavioral) and determined which types of influencing factors were used in each stage for different behaviors.

Figures 4 and 5 illustrate the patterns of influencing factors across the stages for condom use with main partners and condom use with other partners. These data were combined for the two cities since preliminary analyses showed similar data for each. For women in the precontemplation stage for condom use with main partners, 77 percent of the SOC encounters focused on emotional-cognitive influencing factors and 17 percent on behavioral influencing factors. In contrast, for maintenance of this behavior, 38 percent of the encounters focused on emotional-cognitive influencing factors and 63 percent on behavioral influencing factors. This pattern between the stages and the conceptual influencing factor groupings was even more pronounced for condom use with other partners. A similar pattern is seen for contraceptive use and for reproductive health service use (data not shown).

Discussion

Counseling and SOC model congruence. Paraprofessionals who lacked previous exposure to the SOC model were successfully trained to provide counseling consistent with the premises of the model. In about 80 percent of SOC encounters, the influencing factors chosen by the advocates were stage-matched. For influencing factors, we believe this to be an acceptable level of compliance with the SOC protocol, particularly since the advocates are encouraged to use their judgment in adapting the manual.

We did not believe, however, that the 45 percent counseling activity stage-match in Baltimore was acceptable. Additional data were examined and discussions held with the advocates and the supervisor to determine why manual-specified counseling activities were not being selected more often. We found, in most cases, the advocates were modifying counseling activities to be more appropriate for women living with HIV. The advocates then recorded the modified counseling activities as "other" on the SOC encounter form. Thus, these activities were not counted as stage-matched in our analyses, even though many of them were the same basic activities suggested in the manual. Further clarification on how to record adapted activities was provided to both supervisors and advocates following this investigation.

We also discovered that advocates were showing a great deal of sophistication in evaluating the strengths and weaknesses of the influencing factors and counseling activities for their clients in different stages. Adaptations, such as working on influencing factors designated for early stages with clients in maintenance, to prevent relapse, demonstrate that advocates have a thorough understanding of the theoretical model. Although providing written guidelines for every counseling contingency would not be practical, the inclusion of a module on relapse may be an important modification for future stage-of-change counseling guidelines.

We found the advocates' input regarding the appropriateness of the exercises and the stage placement of the influencing factors particularly useful to this new demonstration project model. Reviewing case notes and holding regular discussions with the advocates and supervisors provide the additional insight needed to make recommendations for future applications.

The types of influencing factors used by the advocates, emotional-cognitive or behavioral, conformed to the pattern outlined in the SOC model. Thus, the advocates were not simply providing generic HIV prevention counseling; the counseling being given was tailored to the readiness to change of the study participants and was theory-driven. It should be noted, however, that direct observations of the one-on-one SOC counseling sessions were not conducted. Client confidentiality concerns and the sensitive nature of the counseling sessions initially made us hesitant to place an observer in the room with the advocate and client. With the clients' permission, such observations will be conducted in the future.

Peer paraprofessionals can become skilled in the delivery of a theory-based counseling intervention.

The accuracy of advocates' initial staging of clients' readiness to change was also examined during the first 6 months of project implementation. Advocates completed initial stage assessment forms for each target behavior. These forms direct advocates to answer, in writing, specific questions about client intentions and behavior, and then to record client stage. Advocates correctly matched the information with stage 94 percent of the time. The advocates are trained to continually reassess stage of change, and the SOC encounter forms reflect this reassessment.

More emotional-cognitive influencing factors were used in later stages for condom use with main partners than for the other behaviors. Advocates apparently perceived a need to continue providing cognitive and emotional counseling activities to women in later stages for this behavior, which suggests that maintaining condom use with main partners requires more continued cognitive and emotional effort than is required for maintenance of other behaviors. Previous research with the model has shown that more women are in earlier stages for condom use with main partners than with other partners *(15)*.

Intervention comparability across cities. The amount of exposure to the intervention was similar across the two sites. The number and length of warm-up and other non-stage-based sessions were comparable. Furthermore, the types of issues (for example, drug-related, economic, relationship concerns) dealt with during these rapport-building sessions were similar. Participants had many concerns that had to be addressed before they were ready to begin work on condom and contraceptive behavior, and advocates had to be prepared to address life issues throughout the intervention. Differences in topics between the cities resulted from characteristics of the subsamples (for instance, HIV-positive women spent more time than other women discussing feelings and self-esteem and economic and housing concerns with their advocates).

Advocates in both cities used about three-quarters of an hour or more, per session, to conduct stage-based counseling. Advocates' counseling sessions for specific behaviors differed between the cities because of differences between the samples. For example, advocates in Baltimore, working with HIV-positive clients, focused more than half of their efforts on reinforcing condom use with main partners among clients in the action and maintenance stages. In Philadelphia, less than 20 percent of the encounters for this behavior were focused on later stages; advocates spent more effort helping clients develop an intention to change their behavior with their main partners. Overall, however, the distribution of SOC encounters for all the target behaviors was quite similar between the two cities; most encounters focused on the contemplation-preparation stage.

Implications for modifications. Process evaluation data are used on an ongoing basis to monitor quality assurance and enhance training efforts in both cities. Summaries of influencing factors and counseling activities used by the advocates are regularly reviewed by supervisors as part of weekly activities and, as a result of this interim evaluation, supervisors have provided additional training to advocates. Furthermore, the adaptation of several counseling exercises for other stages, as suggested by the advocates, has been considered and will be incorporated into future recommendations.

As part of our prospective outcome evaluation, process data will also be used to evaluate which influencing factors are related to movement through the stages of change, as well as which counseling activities are most effective. In addition, these data will be used to describe how the project is implemented and which resources are needed to replicate Project CARES in other facilities or clinics.

Conclusion

A key finding from this evaluation is that peer paraprofessionals can become skilled in the delivery of a theory-based counseling intervention. The Project CARES advocates' understanding of the Transtheoretical Model of Behavior Change, their use of the SOC manual, and their appropriate adaptation of the manual to the needs of their clients are evident in these results.

The use of peer paraprofessionals has several advantages

to service providers. Employing paraprofessionals from the community enables service providers to draw upon existing community resources and provides employment opportunities to residents. Further, paraprofessionals can serve as an important link to the community within which the intervention is provided, enabling providers to tailor prevention services more effectively and sensitively to the needs of the community. Finally, using paraprofessionals may be a relatively cost-effective way to extend and enhance service provision, and therefore may be an invaluable adjunct to standard HIV prevention services.

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