Since assuring quality health care delivery to patients suffering from Acquired Immunodeficiency Syndrome (AIDS) and those who test positive for Human Immunodeficiency Virus (HIV) is a priority, development of effective staff training methods is imperative. This pilot study assessed the effect on staff attitudes of a participative AIDS/HIV staff training method, designed to overcome many of the problems associated with standard didactic methods. Health care workers (N=42) at a large, public psychiatric hospital were evaluated prior to training. Pretest scores were obtained for all 42 staff members. Fourteen employees attended both training sessions; 18 attended the first session only; 6 attended the second session only; and 4 attended neither session. Posttest questionnaires were administered at the end of the second training session. Of the 20 employees who completed the posttests, 6 had not attended the first session and 14 had attended both sessions. Pretest scores were compared with posttest scores from those who completed the two training sessions. The results support the efficacy of the participative staff training method as a means of increasing compassion toward AIDS/HIV patients, acceptance of the obligation to treat these individuals, and appropriate work-related risk reduction. Desired changes were found only in subjects who attended both training sessions. (Author/NB)
Participative AIDS Education Methods

Catherine Chambliss, Ph.D.
Aidan Altenor, Ph.D.
Edward Parkes, Ph.D.

1990

Ursinus College
Collegeville, PA 19426

Norristown State Hospital
Norristown, PA 19401
Participative AIDS Education Methods

Catherine Chambliss, Ph.D., Aidan Altenor, Ph.D., Edward Parkes, Ph.D.

ABSTRACT

Since assuring quality health care delivery to AIDS/HIV+ patients is a priority, development of effective staff training methods is imperative. This pilot study assessed the effects on staff attitudes of a participative AIDS/HIV staff training method, designed to overcome many of the problems associated with standard didactic methods. Forty-two health care workers at a large, public psychiatric hospital were evaluated prior to training. Pretest scores were compared with posttest scores from those who completed the two training sessions. Results support the efficacy of the participative staff training method as a means of increasing compassion toward AIDS/HIV patients, acceptance of the obligation to treat these individuals, and appropriate work-related risk reduction. Desired changes were only found in subjects who attended both training sessions.

Please mail correspondence to C. Chambliss, Dept. of Psychology, Ursinus College, Collegeville, PA 19426
The acquired immunodeficiency syndrome (AIDS) and other manifestations of the human immunodeficiency virus (HIV) are emerging as illnesses with major psychiatric, neuropsychiatric, and psychosocial implications (1-4). AIDS dementia complex (ADC) characterized by pervasive cognitive deterioration without accompanying impairment in consciousness is now recognized as the most common neurological complication of AIDS (5). Navia and his colleagues (5) found that ADC was documented in the clinical histories of two thirds of a group of persons who succumbed to AIDS; about 40% of those with ADC showed evidence of cognitive impairment before or at the time of diagnosis of frank AIDS; and in 10% cognitive impairment was the only presenting AIDS-related complaint.

Although there is conflicting evidence of cognitive impairment in persons with asymptomatic HIV infection (6,7), direct brain infection by HIV is likely to result in neuropsychiatric complications earlier in the continuum of HIV/AIDS infection and these complications are probably often missed in persons without other HIV/AIDS-related symptoms (3). ADC and other manifestations of severe psychopathology that appear similar to functional syndromes such as mania, depression, personality changes, and psychotic disorganization may predate the medical diagnosis of AIDS (3,8).

As the population of affected persons and knowledge of the varied manifestations of an HIV-compromised system increases, it has become increasingly evident that there is a primary role for the mental health community in the management and treatment of the HIV/AIDS patient. As this role has become clearer, there is growing recognition of an increasing obligation on the part of the psychiatric community to provide the full range of services to HIV/AIDS-affected persons. Psychiatric facilities have been expected to respond not only to specific presenting problems such as psychosis or suicidality, but also to help the patient in understanding AIDS, investigating and strengthening social supports, and in clarifying concerns of significant others (9).

Are members of the psychiatric community adequately prepared to respond to the varied needs of the HIV/AIDS patient? A dearth of empirical research makes it difficult to estimate the present training requirements of mental health care workers. Impressionistic data suggest a need for improved methods of educating staff members who will be expected to care for growing numbers of HIV/AIDS patients. The available data suggest that HIV/AIDS care givers require some measure of psychological supports and training (1,4,10).

As the affected population increases, facilities which have provided traditional inpatient psychiatric care are increasingly pressed to respond to the emerging need. Clinical manifestations of neurological disease and recurrent episodes of opportunistic infections make it difficult for many affected persons to live outside of an
institutional setting (11). Specialized acute care hospitals may be effective in meeting the broad spectrum needs of the HIV/AIDS patient but may not be the answer for long-term needs, for such facilities may be serving to further reinforce the stigma attached to HIV/AIDS-affected persons (12).

The traditional patient population served by psychiatric facilities is at greater risk for HIV/AIDS than the general population because of elevated rates of sexual promiscuity and/or exploitation by others, and intravenous drug abuse (13,14). Over time, an increasing percentage of hospitalized psychiatric patients can be expected to be HIV positive. Caring for such patients is especially demanding because many psychiatric symptoms make behavioral management and infection control particularly challenging. Despite concerted control measures, there are episodes of unpredictable and unconventional behavior (biting, public masturbation, self-induced bleeding, etc.) which create potentially problematic opportunities for co-mingling of body fluids.

Although the objective risk of contagion from such behaviors is exceedingly low, they contribute to a climate of significant fear of exposure on the part of staff and uninfected patients. Effective patient education about preventive behavior is hampered by the prevalence of learning deficits, memory limitations, egocentrism, apathy, and anti-social tendencies. Preparing psychiatric health care workers for the specialized needs of their patients and work setting is of obvious importance.

At Norristown State Hospital in an effort to prepare the hospital staff for the care of the "psychiatrically involved" HIV/AIDS patient, an educational program was offered to the entire staff. The program included a presentation of the hospital's policy on HIV/AIDS, current information regarding modes of transmission and risk reduction methods, video materials from the Centers for Disease Control, and opportunity for answering questions. The presentation was well received. However, when the first HIV/AIDS-involved patient was identified, the reactions on the part of the staff were quite alarming. It was as though staff had received no previous training in order to address the needs of the HIV/AIDS-affected population. The reactions supported the notion that it was not sufficient for the staff to merely understand the disease entity (9). It was apparent that a considerable effort was reequired to address the needs of staff in becoming aware of their own attitudes arising about members of the high risk population, their fears of contagion, and their anxieties about having to work with a multi-compromised group of persons. The participative AIDS training program was designed to address the staff needs for an expression of and possible resolution of their concerns.
Methods

This study was conducted at three units of Norristown State Hospital, a 1000-bed inpatient psychiatric facility, located roughly 20 miles northwest of Philadelphia. The units (Long-term Care, Active Patient, and Forensic) were selected because the presence of identified HIV patients on wards of these units created a pressing need for additional staff training.

Morning and afternoon shift members of the nursing and housekeeping departments of these units were required to attend both training sessions, if adequate ward staffing at the time of the meetings permitted. Sessions were scheduled to overlap shifts in order to accommodate staff needs and make participation more convenient. An informed consent form distributed to all attending employees stated that attendees had the option of completing the assessment instruments if they wished to participate in this study. All but one of the session participants volunteered to complete the questionnaires.

Forty-two employees who were potential candidates for the training completed the pretest questionnaires prior to their participation in the training. All of their responses were included in the pretest group. Actual participation in either or both of the two training sessions was based on the supervisor's evaluation of staffing adequacy. Only 14 candidates were permitted to attend both sessions; 18 attended the first session only; 6 attended the second session only; 4 were unable to participate at all in training because of staff shortages. Posttest questionnaires were administered at the conclusion of the second training session to those in attendance. Of the 20 participants who completed forms following participation in the second session, 6 had not attended the first session. Since the training sessions had been designed for consecutive participation, those who had failed to attend the first session and only came to the second session were not expected to derive full benefit from the second session. In order to evaluate the cumulative effects of both sessions, data from those that had missed the first session were excluded, yielding a complete training group (CTG) of 14 subjects. Inadequate staff coverage required several participants who attended the first session to miss the follow-up session, which created a naturally occurring, randomly selected subgroup of 18 members that only attended the preliminary session. In order to evaluate the necessity of the second session, those who only attended the first session were contacted shortly after the conclusion of the training and asked to complete posttest questionnaires after participating in only the preliminary meeting. The responses of this partial training group (PTG) allowed a separate assessment of the first phase of training, and permitted an evaluation of the incremental gain associated with complete participation.

The training method was designed to foster staff
involvement and participation. It combined a nominal group technique (15) with open discussion, in order to bring staff fears and concerns to the surface for cooperative examination. An interactive, shared problem-solving strategy was used to encourage staff "ownership" of solutions. This method was expected to be more effective than a more direct didactic approach in motivating behavioral change, because previous research in other areas suggests that people are more likely to implement suggestions of their own creation (16). The participative group training process was also expected to enhance cooperative spirit among staff members, and to motivate continued AIDS/HIV information-seeking among participants. This was expected to empower participants to deal more safely and more compassionately with their patients. Since the majority of current staff members had already experienced didactic training about AIDS through their departments, this study assessed whether additional participative training experience produced further improvement in knowledge and/or appropriate behavior.

All eligible staff members from the selected units were required by their supervisor to participate in the training program, wherever staff coverage permitted. Multiple sessions were offered to facilitate scheduling and produce minimal disruption of ongoing unit activities. All participants were given an informed consent form explaining the nature and purpose of their research, along with the battery of pretest measures.

At the first group session, members were introduced to the three facilitators (doctoral level psychologists) and presented with the group's general objectives (impart information, improve cooperative effort among staff, increase approach to and compassion for AIDS/HIV patients, encourage appropriate risk reduction, and allay unrealistic fears). In order to foster universal involvement, all participants were then directed to spend 2-3 minutes listing their individual concerns about AIDS in writing. The large group was then divided into subgroups of 4-5 members, for a 5-10 minute discussion of these written concerns. A recorder from each subgroup created a list by pooling all of the individual members' concerns. Next, the trainers went around the room and asked each recorder in turn to state before the large group one of the concerns on their subgroup's list. A verbatim record of each concern was made by one of the leaders on a flipchart. This process was repeated until all of the items on each subgroup's list were exhausted. As concerns were listed, there was opportunity for large group discussion and amplification, so that all aspects of the expressed concerns were understood by all participants. This process allowed a semi-confidential collection of data for the large group to address, and prevented individual identities from being closely associated with any particular concern listed.

Next, in order to prioritize concerns equitably, all participants were told they had 25 points to allocate as
they pleased to each of the listed concerns. Points awarded to each of the concerns were totalled, in order to establish a hierarchy of importance, which was used to establish the order in which the various concerns were addressed in the next part of the group process. In this way, the key areas of staff concern were identified and all participants were given a voice. This process was intended to focus the educational component of the program on the most relevant areas.

This process was followed by the initiation of an informationally-guided examination of the main areas of concern. This large group discussion lasted approximately 45 minutes. The group generated a list of possible solutions to each of the problem issues identified earlier. Where specific knowledge was lacking, facilitators and participants shared responsibility for seeking further information and reporting back to the large group at the next meeting.

Two weeks later, at the second group meeting, the leaders returned to address unfinished areas of concern identified at the first meeting. Any additional pertinent information collected by group participants during the interim was shared, and its relevance to previously proposed solutions was discussed. At the conclusion of this meeting, participants completed the post-test battery. A follow-up questionnaire was sent to staff members who had attended the first session, but had been unable to attend the last session because of staffing limitations. After the last meeting, participants received a written summary of the group-generated "issues and answers".

Survey Instruments

The pre and post-test battery consisted of two questionnaires. The Hospital Staff AIDS Questionnaire (HSAQ) was designed to assess attitudes toward AIDS/HIV patients, work-related risk perception, work-related risk reduction, and endorsement of hospital policies designed to protect AIDS/HIV patients' rights. This instrument was developed for this project, and consists of 19 Likert items (using a 4-point scale), 16 of which are used to generate four factor scores. The remaining three items assess specific opinions about the adequacy of hospital AIDS/HIV training, "hazard duty" pay for staff involved in caring for AIDS/HIV patients, and the need for free staff testing. Scoring of the HSAQ yields four factor scores, measuring the following: Compassion and Acceptance of Obligation to Treat; Appropriate Work-related Risk Reduction; Accurate Perception of Transmission Risk; and Policy Preferences Regarding Segregation and Mandatory Testing. Factor scores range from 1 to 4; high scores indicate attitudes believed to be desirable in health care workers who are expected to care for AIDS/HIV patients. The HSAQ possesses high content validity and provides a clear, direct assessment of the variables on which analyses were based.
The AIDS general knowledge profile (AGK) was used to assess objective knowledge about AIDS/HIV. It contains 19 multiple-choice items that tap the respondent's knowledge of readily available information about AIDS/HIV. On five additional items, the respondent rates on a scale from 0 to 100 his own risk of contracting AIDS, as well as that of a sexually active homosexual, a sexually active heterosexual, an IV drug user, and a health care worker's chance of contracting work-related AIDS. Earlier research with college students and prison inmates has demonstrated the reliability and validity of this instrument (17,18).

Results

HSAQ Findings: In order to evaluate the impact of the training experience, the four factor scores on the HSAQ pretest were compared with those obtained following both partial and complete training. No significant differences were found after partial training. However, the complete training group (CTG) scored significantly higher than the pretest group on two factors: Compassion & Acceptance of Obligation to Treat ($x = 3.25$, s.d. = 0.79 versus $x = 2.35$, s.d. = 0.58; $t = 4.71$, df = 54, $p < .001$), and Appropriate Work-related Risk Reduction ($x = 3.60$, s.d. = 0.52 versus $x = 2.97$, s.d. = 0.40; $t = 4.88$, df = 54, $p < .001$). No significant differences emerged following complete training on Accurate Perception of Transmission Risk nor the Policy Preferences factor. Results of comparisons between the factor scores of the PTG and the CTG paralleled those obtained in the CTG-pretest comparisons, supporting the impression that the first training session in isolation did not produce the gains associated with both sessions.

Individual item analysis revealed a significant reversal during the course of the training on one item included within the Compassion and Acceptance of Obligation to Treat factor. This item reads: "I should be required to treat AIDS/HIV patients." Pretest-partial training score comparison showed a significant drop in scores (pretest $x = 2.48$, s.d. = 0.92 versus PTG $x = 1.78$, s.d. = 1.18; $t = 2.33$, df = 58, $p < .05$), indicating greater disagreement with this statement following the first training session. Partial training-complete training score comparison revealed a significant change in the opposite direction (posttest $x = 3.29$, s.d. = 0.70; $t = 5.22$, df = 30, $p < .001$), showing greater acceptance of the obligation to treat following the complete training.

Mean responses to the three separate items of the HSAQ not included in the factor analysis revealed no significant change from pretest to posttest. At both the outset of training and its conclusion, participants expressed mild disagreement with the statement "the hospital is doing enough to educate staff about AIDS/HIV" (pretest $x = 2.33$, s.d. = 1.06; posttest $x = 2.43$, s.d. = 1.40). They also endorsed the idea that staff working with AIDS/HIV patients should receive some form of extra financial compensation.
(pretest $x = 3.19$, s.d. = 1.22; posttest $x = 3.33$, s.d. = 1.11). Participants also expressed agreement that "free, confidential AIDS/HIV testing should be available to all hospital staff" (pretest $x = 3.30$, s.d. = 1.00; posttest $x = 3.50$, s.d. = 1.12).

AGK Findings: Only a subset of participants completed the entire AGK instrument, apparently because of its length and time constraints on the staff. Results here are based on 28 pretest and 12 posttest (CTG) respondents. No members of the PTG completed the AGK.

T test comparisons of pretest ($x = 13.20$, s.d. = 3.09) and posttest ($x = 14.50$, s.d. = 2.95) summary AGK scores revealed no significant difference. On both tests, participants responded correctly to about 70 percent of the factual information. Virtually all health care workers knew about the fatality of AIDS, the incubation period, and were aware of the three general modes of transmission (intimate sexual contact, sharing contaminated needles, and exchanging bodily fluids). In contrast, only about half of the respondents at either testing recognized that it was important to take precautions with all patients, not just those known to belong to a high risk group. Although less than half (46.4%) of the pretest group knew that individuals need not be symptomatic to transmit HIV, a majority (83.3%) responded correctly on the posttest. On the pretest, 42.9% wrongly believed that there were known cases of casual transmission in the home or workplace; on the posttest, only 25% made this error.

Risk estimates for the five target groups (self, homosexual, heterosexual, IV drug user, and health care worker) all decreased from pretest to posttest. However, only the reduction in perceived risk to health care workers reached statistical significance (pretest $x = 47.00$, s.d. + 24.05; posttest 27.50, s.d. = 15.14; $t = 2.75$, df = 38, $p < .01$).

Discussion

The data support the efficacy of the participative start training method as a means of increasing compassion toward AIDS/HIV patients, acceptance of the obligation to treat these individuals, and appropriate work-related risk reduction. Following the completion of training, participants expressed a greater appreciation for the special needs of AIDS patients and greater compassion for the problems facing the asymptomatic HIV patient. In addition, after training participants more strongly endorsed the use of universal blood and body fluid precautions in working with patients.

These desired changes were only found in subjects who completed both training sessions. Those who attended only the first session, where staff were encouraged to ventilate AIDS/HIV-related concerns freely, actually expressed increased resistance to treating AIDS/HIV patients following this meeting. Apparently the first session experience in
isolation may have been somewhat counterproductive. The participative group process allowed concerns to surface and permitted members to verbally share irrational beliefs. Committing misinformed ideas to paper may have made them seem more concrete and credible, thereby potentiating groundless fears. This might have served to reinforce fears and biases in some participants. Peer support apparently validated participants' qualms and temporarily legitimized their unwillingness to treat AIDS/HIV+ patients, thereby enabling them to protest the requirement to treat. Fortunately, this untoward effect was observed on only a single HS7 item, and problematic changes on this item reversed following complete training. On the basis of this finding, it would be advisable for future trainers using this method to require complete participation of all staff and to provide for thorough follow-up for any group members who unexpectedly miss the final meeting.

Since assuring quality health care delivery to AIDS/HIV+ patients is a strong priority, it is critically important to develop training methods which increase staff members' acceptance of these patients and improve sensitivity to their special needs. The participative method allows for an unpressured, unforced communal realization of the importance of setting aside one's personal anxieties and fears in order to meet the pressing demands of the HIV patient group. A strength of this training method over a more didactic approach is that it seems to circumvent an adversarial framework, where "management" is seen as presenting information as a means of coercing staff compliance in an authoritarian, unresponsive manner. The more "democratic" methods used here reduce the perceived distance between trainers and trainees, permitting a sense of joint problem-ownership and motivating a mutual search for solutions. The product appears to be a more genuine, heartfelt change in attitudes toward HIV patients than results when staff feel "ordered to care."

While it is certainly desirable to maximize helpful contact with AIDS/HIV patients, it is simultaneously important to guard against viral transmission. Motivating health care personnel to apply HIV transmission risk reduction strategies conscientiously in their work is of obvious importance for both staff and patient safety. Increasing knowledge about transmission and about the limitations of current antibody testing methods helps staff understand the value of universal precautionary behavior. However, implementation of this risk reduction strategy also depends upon the staff's belief that such precautions will make a difference.

Reducing exaggerated, unsubstantiated, unrealistic fears of HIV contagion is important because it reduces staff members' feelings of fatalistic resignation and helplessness. This helps to empower them to utilize appropriate safeguards with greater thoroughness. The participative training method permitted psychologically safe exploration of irrational fears and set the stage for a
gradual challenging and correction of fallacies. The format was designed to reduce members' defensiveness, in order to facilitate efficient processing of information. This is consistent with the AGK finding that training increased awareness of the safety of casual contact and reduced the perception of risk to health care workers. The experiential format was also conducive to an active, involved attempt to take control of the problem and respond constructively. Increasing appropriate risk reduction could be viewed as an extension of the process initiated within the training group itself.

In addition to reducing excessive fears, the participative method validates members' legitimate safety concerns, and increases peer support for appropriate precautionary behavior. This may reduce the problem of staff who feel the need to prove their "courage" by disregarding institutional safety recommendations. The finding that on the AGK only half of the participants recognized the importance of universal precautions, although on the HSAQ the majority reported engaging in such behavior, raises the possibility that with time participants may "forget" why they had changed their behavior and might resume earlier careless practices. Development of ways to strengthen participants' understanding of the rationale behind universal precautions might reduce this potential problem.

The participant training method did not affect perception of transmission risk nor attitudes toward segregation and mandatory testing. Several factors may have accounted for this lack of change. The participants' earlier didactic exposure to AIDS/HIV training may have created a "ceiling effect" on the perception of risk measure. This is consistent with the reliably high scores obtained on the AGK items regarding transmission. It is also possible that since the emphasis of the participant approach was more on attitudinal issues than on strict facts, it may have been less effective in modifying basic knowledge about AIDS/HIV. The high variability in scores on the risk perception factor also suggests the possibility that individual differences in participants interacted with the training experience to create widely disparate outcomes within the group. Possibly the benefits of the exposure to some participants were "cancelled out" by those who responded adversely. It may be that some group members were more influenced by the potentially counterproductive elements of the training experience, tended to align more strongly with peers' misinformed views, and as a consequence had their distorted, biased preconceptions reinforced rather than corrected by the group process. Future research could attempt to identify specific individual differences associated with this negative response in order to minimize these risks and develop ways of compensating for these effects. It is possible that only a small minority of participants responded in this negative manner.

Scores on the factor tapping attitudes toward
Segregation and mandatory testing were least influenced by the participative training method. Participants remained steadfast in the beliefs they expressed on the pretest; they prefer both mandatory testing and segregation of identified HIV patients. This may in part reflect a desire to avoid the problem by separating HIV patients—but might also stem from the conviction that the special needs of the HIV patient population could be better addressed by homogeneous patient grouping. Further investigation of the rationale for these policy preferences might be useful. Additionally, it would be interesting to assess whether the training altered the staff's reasoning without affecting their surface policy preferences.
REFERENCES


