Development and Pilot Testing of a Standardized Training Program for a Patient-Mentoring Intervention to Increase Adherence to Outpatient HIV Care

Jeffrey A. Cully, Ph.D.,[1–4] Joseph Mignogna, Ph.D.,[5] Melinda A. Stanley, Ph.D.,[1–4] Jessica Davila, Ph.D.,[1,4] Jackie Wear,[6] K. Rivet Amico, Ph.D.,[7] and Thomas P. Giordano, M.D., M.Ph.[1,4–6,8]

Abstract

Although peer interventionists have been successful in medication treatment-adherence interventions, their role in complex behavior-change approaches to promote entry and reentry into HIV care requires further investigation. The current study sought to describe and test the feasibility of a standardized peer-mentor training program used for MAPPS (Mentor Approach for Promoting Patient Self-Care), a study designed to increase engagement and attendance at HIV outpatient visits among high-risk HIV inpatients using HIV-positive peer interventionists to deliver a comprehensive behavioral change intervention. Development of MAPPS and its corresponding training program included collaborations with mentors from a standing outpatient mentor program. The final training program included (1) a half-day workshop; (2) practice role-plays; and (3) formal, standardized patient role-plays, using trained actors with "real-time" video observation (and ratings from trainers). Mentor training occurred over a 6-week period and required demonstration of adherence and skill, as rated by MAPPS trainers. Although time intensive, ultimate certification of mentors suggested the program was both feasible and effective. Survey data indicated mentors thought highly of the training program, while objective rating data from trainers indicated mentors were able to understand and display standards associated with intervention fidelity. Data from the MAPPS training program provide preliminary evidence that peer mentors can be trained to levels necessary to ensure intervention fidelity, even within moderately complex behavioral-change interventions. Although additional research is needed due to limitations of the current study (e.g., limited generalizability due to sample size and limited breadth of clinical training opportunities), data from the current trial suggest that training programs such as MAPPS appear both feasible and effective.

Introduction

POOR RETENTION in medical care is one of the primary reasons for HIV/AIDS-related mortality in the era of widely available antiretroviral treatment (ART).[1,2] With approximately 40% of the HIV-infected population in the United States who are aware of their HIV status failing to engage and remain in regular HIV outpatient care,[3] a sizable number of people living with HIV are at increased risk for deterioration in health, as well as transmission of HIV to uninfected partners.[4] Poor retention in HIV primary care affects access to ART and survival.[5,6] Advances are needed to enhance engagement in HIV care to improve both ART utilization and adherence.[7,8]

Patient-mentoring interventions have proven effective at improving self-management for chronic diseases,[9] fostering hope in HIV patients,[10] and improving engagement and retention in HIV outpatient care, although negative trials exist, e.g., Purcell et al.[11] A recent systematic review of 117 studies evaluating the efficacy of peer-based interventions

[1]VA HSR&D Houston Center of Excellence, Michael E. DeBakey VA Medical Center, Houston, Texas.
[2]VA South Central Mental Illness Research, Education and Clinical Center.
[3]Menninger Department of Psychiatry and Behavioral Sciences, [4]Section of Health Services Research, [8]Section of Infectious Diseases, Department of Medicine, Baylor College of Medicine, Houston, Texas.
[5]Michael E. DeBakey VA Medical Center, Houston, Texas.
[6]Thomas Street Health Center, Harris County Hospital District, Houston, Texas.
[7]Center for Health Intervention and Prevention, University of Connecticut, Storrs, Connecticut.

in HIV/AIDS found generally positive outcomes for peer interventions but noted the need for demonstration of more rigorous designs and outcomes related to biomarkers.[12] Patient mentors, because of their experience in successfully engaging in care and lifestyle changes associated with HIV (or other chronic conditions), possess unique skills and opportunities to engage at-risk patients and patients out of care or not adhering to adaptive self-management routines. Unfortunately, few studies have examined the utility of HIV peer-mentoring interventions; and we know little about methods for training HIV patient mentors to carry out these often complex interventions. Mentor skill may be a particularly salient factor associated with clinical trial outcomes.[13]

Patient mentors may bring many qualities that can serve as catalysts for behavioral change for HIV patients not in regular HIV ambulatory care.[14] Patient mentors provide support, HIV-specific knowledge, and knowledge about how to effectively navigate the health care system. In addition, they represent a real-life example of a person who has successfully faced similar life situations and now is living a full and healthy life, overcoming barriers associated with HIV to an improved life. Recent qualitative research, based on the interviews of patient-mentors across the United States, described the numerous supportive activities provided by patient mentors categorized into four domains: informational support (e.g., providing information on how to manage side-effects), emotional support (e.g., instilling hope), affiliational support (e.g., connecting clients with support groups), and instrumental support (e.g., providing assistance to clients in obtaining child care).[15] Serving as a patient mentor is a formidable challenge, considering that mentors are asked to serve in the role of a supportive and knowledgeable guide charged with motivating and assisting patients who are often skeptical of health care systems. In addition, few patient mentors, especially volunteer patient mentors, have formal training in behavioral-change theory or strategies.

The current study was part of a larger, grant-funded program testing the efficacy of a manualized patient-mentor program called Mentor Approach for Promoting Patient Self-care (MAPPS). The larger MAPPS study is a randomized trial of the mentor-delivered behavioral intervention designed to increase engagement and attendance at regular HIV outpatient visits among a high-risk HIV inpatient population. The mentors were selected from an existing outpatient mentor program contained within a larger county hospital health care system and systematically trained in the MAPPS intervention procedures and techniques. The aim of the current study was to develop, describe, and test the feasibility of a standardized training program used for the MAPPS mentor candidates in an effort to demonstrate and document the implementation potential of these intervention procedures. The MAPPS training and recertification program was seen as an important factor associated with mentor skill and abilities to carry out the intervention, as well as a formal mechanism for quality control during the ongoing MAPPS trial. Here we describe the MAPPS training program and how it was developed, review pilot data of the acceptability and feasibility of the training program, and provide recommendations, based on lessons learned throughout the implementation process.

Methods

The MAPPS Patient-Mentor Intervention was specifically designed to provide intervention services to hospitalized HIV-positive patients (newly diagnosed or otherwise) who either have never been in outpatient HIV care or who have not been retained in outpatient HIV care during the past year. Patients for the MAPPS study were recruited from a large metropolitan county hospital that primarily provides care to uninsured and indigent patients. Mentors were tasked with providing services to all high-risk HIV inpatients within the hospital and approached patients soon after admission and/or identification of HIV status, but only after each patient was clinically stable. High-risk status included patients with detectable HIV, those diagnosed with HIV during the past year, or those poorly retained in outpatient HIV care over the prior year. Patients were largely recruited from medicine inpatient units with few restrictions for medical illness and/or complications. However, patients from other inpatient settings were also targeted for recruitment. The brief intervention is delivered over two sessions in the hospital with follow-up telephone calls over a 2 ½-month follow-up period and was founded on the information-motivation-behavioral skills model.[16] See Table 1 for an overview of the MAPPS program.

Recruitment of patient mentors

To date, seven mentors have been approached and five mentors have become certified MAPPS mentors. Patient mentors were recruited from Thomas Street Health Clinic (TSHC), a free-standing HIV outpatient clinic affiliated with a large county hospital that serves a primarily low-income, minority, underinsured or uninsured population. TSHC provides a full spectrum of HIV services, including HIV testing, primary HIV and general medical care, sub-specialty HIV care, psychiatric care, case-management and social services, pharmacy services, and substance-use services, among others.

TSHC began an outpatient mentoring program in 2005 and currently staffs between 10 and 15 volunteer mentors. These mentors provide services for nearly all new patients at TSHC. TSHC mentors are selected from current patients at TSHC and vetted by the director of volunteer services. Basic requirements for mentors include being a patient for at least 1 year, being willing to share their HIV status, adhering to their medical regimens and medical appointments, and possessing social skills related to effective communication and rapport building. Mentors are subject to a background check, although the presence of a criminal record does not by itself exclude a potential mentor's eligibility. Once selected, TSHC mentors are given a 4-h introductory training workshop on HIV and how to engage patients.

The MAPPS program sought to expand the existing TSHC mentor program by outreaching to hospitalized, high-risk HIV patients (rather than outpatients presently at TSHC) and increasing the formal behavioral-change training for TSHC mentors. MAPPS study investigators worked actively with the TSHC director of volunteer programs to select mentor candidates who might be interested in delivering a semistructured intervention to increase HIV retention in outpatient care for hospitalized HIV inpatients. Individual mentors were selected by the director and accepted by the study team if they were in good health, were consistently engaging in outpatient HIV care,

Table 1. MAPPS Patient-Mentor Intervention

Structural components	Intervention provided by patient mentors exclusively. Mentors typically approach hospitalized patients during the first days of the patient's hospitalization. Two face-to-face sessions during the hospitalization. Face-to-face sessions 45 min in duration. Five telephone follow-up booster sessions (10 min in duration). Patient-mentor available to meet patient at first visit to HIV clinic appointment. Total length of treatment—10 weeks.
Conceptual and practical application of MAPPS	Intervention based on information motivation and behavior skills. The establishment of a strong mentor–patient therapeutic relationship was seen as the foundation from which mentors would be able to provide information and enlist behavior change. Interactions with patients were designed to involve some teaching but were largely conversational in nature to allow patients to share their concerns and needs. Mentors were asked to serve as role models for successfully managing HIV infection and for encouraging active patient self-management behaviors. MAPPS mentors were specifically instructed to convey the limits of their abilities (e.g., they were not able to provide medical advice or act as social workers). Information was targeted through brochures and didactic materials provided by mentors (e.g., HIV myths, HIV care options, information about navigating the HIV care system) to increase awareness about the importance of obtaining regular HIV outpatient care. Motivational factors were targeted, using empathy, support, and mentor personal stories to build rapport and instill hope. Motivational factors were viewed as critical (but not sufficient) to the eventual success of the intervention. Behavioral skills targeted the identification of barriers and facilitators related to getting care; strategies to overcome barriers; and goal-setting and action-planning techniques to increase goal-directed, care-seeking behaviors.

MAPPS, Mentor Approach for Promoting Patient Self-Care.

and had established themselves as reliable and interpersonally effective mentors in the TSHC program.

Purpose and development of the MAPPS training program

The purpose of the training program was to provide mentors with a foundational knowledge and skill base to implement a semistructured HIV peer-mentoring interven-tion for hospitalized HIV patients currently not in regular HIV care. To address training effectiveness and intervention fidelity and the complexities of training mentors to work with HIV patients, training procedures included evaluation of their adherence and competency and relied on multimodal techniques that simulate real-world situations. Ultimately, the training program sought to achieve two specific goals: (1) ensure that the MAPPS intervention was faithfully completed within the larger MAPPS intervention project and (2) develop a mentor-centered training program that could be disseminated to other HIV volunteer mentor programs, thereby improving implementation efforts and increasing the number of trained individuals.

Development of patient-mentor training procedures was informed by existing research and completed by a multidisciplinary team containing internal medicine physicians (infectious disease), clinical epidemiologists, clinical and counseling psychologists, current mentors, and the TSHC mentoring program's volunteer coordinator. This collective team met periodically over 6 months to develop and refine the training materials and methods. Particular attention was paid to maintaining the general characteristics of the established mentoring program (e.g., emphasis on rapport building, education dissemination, and encouragement/motivation), while providing advanced training in behavioral-change strategies and techniques for mentors.

Description of the MAPPS training program

The MAPPS training program was developed to meet the educational and experiential needs of mentors with limited formal behavioral-change education or training. Discrete training steps included: (1) mentor review of the MAPPS intervention manual; (2) a formal, half-day educational workshop to review the manual and intervention concepts; (3) informal role-plays with feedback from members of the training team; and (4) a formal, standardized patient role play using trained actors with "real-time" video observation and immediate feedback from the MAPPS training team. For each mentor-training cohort, the training process lasted approximately 6 weeks.

Intervention manual. Each mentor received a copy of the MAPPS Mentor Manual prior to the training workshop to orient him/her to the intervention strategies and increase familiarity with the materials. The mentor manual included 32 pages of semistructured instructions on implementing the two required sessions of the intervention and example language of intervention practices and techniques. Focused attention was placed on behavioral-change concepts, including the regular use of goal setting and action plans. A checklist of intervention concepts is detailed in Table 2.

Training workshop. Prior to the training workshop, each mentor was provided with a copy of the MAPPS training manual to ensure mentor acceptability of the intervention. No mentors opted out of the training at this step. Mentors then attended a 4-h training workshop that provided a didactic overview of the MAPPS intervention, modeled administrations of important components of the intervention, and included interactive discussions and feedback from trainers.

TABLE 2. MAPPS INTERVENTION COMPONENTS—DISPLAYED AS MENTOR CHECKLIST

Session 1	Introduce self & mentor program
	My story
	Your concerns/thoughts about HIV
	How important is it for you to get care for your HIV?
	How sure are you that you can get care for your HIV?
	What stands in your way of getting HIV care?
	Action plan form
	Give brochures
	Wrap up/next meeting/phone calls
Session 2	Review action plan
	How important is it for you to get care for your HIV?
	How sure are you that you can get care for your HIV?
	Review brochures
	Discuss importance of HIV care and where you can find support
	Discuss what you can do
	Review appointment date and time/what to expect at first appointment
	Wrap up/telephone calls

MAPPS, Mentor Approach for Promoting Patient Self-Care.

Informal role plays. Following completion of the training workshop, candidates engaged in a series of informal role plays (each approximately 60–90 min) in which study staff played the role of the patient, and a member of the training team was present for observation and feedback. Mentors required between two and four informal role plays to become comfortable and proficient with the intervention, depending on their prior mentoring experiences and skills. The final informal role play was rated by a member of the training team, using a standardized rating instrument to assess adherence and competency to ensure adequate skill demonstration. The Adherence and Competency Evaluation (ACE) rating tool, a new fidelity measure, was used to help establish and rate minimum standards in two areas, adherence to the MAPPS program procedures (i.e., how closely the candidate followed the MAPPS Mentor Manual) and competency (i.e., how effectively the candidate related to the patient). Regardless of their adherence and competency score, mentors received individual feedback about their strengths and areas for improvement. For some mentors, additional focused role-playing was provided (e.g., further skill development in the use of action plans).

Standardized patient role play. Using an established medical school actor-training program, we used a standardized patient technique that enlisted professional actors to simulate a real-world mentor inpatient encounter. The standardized patient technique has been used for decades in the training of medical professionals,[17] however, it has rarely been used to evaluate training in nonacademic settings or within research protocols.[18,19] For the purposes of our work, the use of a standardized patient encounter was beneficial to avoid having to record or observe mentor interactions with real patients, who are often already concerned about issues of confidentiality and privacy, and manipulate the encounter and provide mentors with immediate feedback.

Standardized patients (actors) were provided with general instructions for the role-play, a detailed patient vignette (instructions similar in format to those used in other research protocols[18]), and a copy of the study informed consent that was provided as part of all patient interactions. Actors were also verbally briefed by members of the training team prior to the actor/mentor role-plays about their expected role in the mentor interaction. Mentors were informed before the exercise that the "patient" they were about to see was an actor, but they were expected to interact with the actor as they would during a patient MAPPS encounter.

The standardized patient role-plays were videotaped and remotely viewed in real time by two members of the training team. Training team members independently viewed the mentor/patient interactions and rated mentors for adherence and competence (see description of rating below). Immediately following the interaction, training team members met with the mentor to provide feedback on their performance. Mentors completed session one, were provided with feedback and given a break, and then returned to follow-up with the same patient to complete the second session with additional feedback from the training team. Actors were also informally interviewed after each session to elicit their feedback on the mentor's ability to engage them, build their trust, provide information, and motivate them to attend outpatient HIV care visits.

Mentor certification and recertification. All mentors were evaluated using the ACE rating tool to assess a candidate's readiness to be a MAPPS patient mentor and evaluate his or her strengths and weaknesses during standardized patient interactions. Candidates were evaluated using ACE ratings by two MAPPS trainers who were blind to the other's initial rating. Discrepant ratings were addressed via discussions between the raters until agreement was determined and a final rating provided.

Using consensus scoring, mentors with adherence (as achieved by completion of all essential intervention components described in the manual and outlined on the ACE rating form) and competence ratings of six or greater (on an 8-point Likert scale, 0 = poor, 2 = weak, 4 = moderate, 6 = good, 8 = excellent) for both sessions one and two of the standardized patient encounter were considered fully certified for the MAPPS intervention and provided with a formal certificate of completion. To maintain treatment integrity, mentors completed a recertification process every 4–6 months. Recertification processes included a standardized patient interaction (as described above) with corresponding ratings by two study team members. Mentors with consensus ratings of six or greater were considered recertified and could continue their mentoring roles.

Mentors with certification or recertification ratings of five or less were provided with feedback, and a training plan was developed to enhance identified skill needs. For those with identified needs, mentors were asked to complete additional training and required to complete an informal role-play with members of the study team to ensure adherence and competence. Once these requirements were successfully fulfilled, the mentor was certified/recertified.

Survey feedback from mentors

Mentors were asked to complete posttraining surveys to assess the overall impact of the training program on their development and confidence/comfort in using the MAPPS intervention procedures. Mentors were asked to comment on the training workshop and MAPPS materials, study-based role plays, and standardized patient role-plays, using Likert-style items and open-ended questions. Within each training component, Likert-style responses were requested for quality (5-point scale: 1=poor, 2=fair, 3=good, 4=very good, and 5=excellent); usefulness and comfort (4-point scale: 1=not at all, 2=slightly or somewhat, 3=moderately or mostly, and 4=very); and simplicity/complexity (3-point scale: 1=too simple/too easy, 2=just right/met my needs, and 3=too advanced/too difficult). In addition to these Likert items, each training component contained at least one open-ended question to elicit feedback for program improvement.

Results

Mentors

Although TSHC mentors by definition were HIV positive, their mode of infection and cultural and educational backgrounds were heterogeneous. Of the seven mentors approached, four were men; four were African American, two were Hispanic, and one was Caucasian; the average number of years with HIV was 15 (range, 8–18); and average number of years as an HIV peer mentor was 5 (range, 1–7). In terms of socioeconomic and prior life experiences, mentors were very similar to those targeted to receive the MAPPS intervention.

Training cohorts

The seven mentors approached were trained as part of two "cohorts" (with initial trainings occurring in March and October 2010). The first training in March involved four mentors, two of whom went on to complete the training and become certified MAPPS mentors. Two mentors from this first training cohort did not move on to the role-play training exercises. One was unable to continue with the study because of non-HIV medical reasons, and one mentor was asked by the training team to engage in observational activities (e.g., shadowing a certified mentor) to increase confidence and familiarity with the TSHC and MAPPS-specific mentoring procedures.

The second training in October involved five mentors working towards initial certification, including the two mentors who did not complete training from the March workshop. Previously certified mentors were not required to attend this workshop but were invited and attended. During this second workshop, three mentors moved forward with training, while two new mentors (not the two who dropped from the first training) were unable to continue (one for non-HIV medical reasons and one because of limited availability and scheduling issues). Neither mentor cited training demands as the reason for his/her withdrawal.

Posttraining data

Quality of the training workshop and role-plays was rated positively (average ratings of 4.4 and 4.6, respectively, on a five-point scale). Usefulness was also rated highly by the mentors, with all aspects of the training receiving an average rating of 3.6

(on a four-point scale). Average ratings of training procedure simplicity and complexity were 1.6 for all training elements (three-point scale), suggesting that mentors felt the training generally met their needs and was delivered at an acceptable level. The MAPPS intervention materials (mentor manual and action-plan worksheet) were rated for usefulness, with average scores of 3.8 and 4.0, respectively (4=very useful/critical). Notably, at the conclusion of all training elements, all mentors reported themselves as being "very comfortable" with the MAPPS training procedures (the highest level of comfort).

Qualitative feedback from the open-ended questions indicated that mentors found the overall training to be highly relevant and effective. Several mentors commented that they would have appreciated more opportunities during the informal role-play step to develop and hone skills. In a related vein, two mentors suggested that the training implement additional formal role-plays with standardized patients to increase the breadth of experiences (e.g., patient variability).

ACE interrater reliability data

From these two mentor cohorts, 14 mentor/standardized-patient interactions were completed (five new mentor interactions×two sessions and two recertified mentors×two sessions). For each mentor/standardized-patient interaction, two MAPPS training team members were present to view and independently rate the interaction via live video.

Blind agreement from raters that the mentor was proficient at a rating of six or greater (the cutoff for certification) was 85.7% (12/14). No ratings varied by more than 1 point. An intraclass correlation (ICC) was used to assess the agreement between the expert raters. The ICC (where ratings were classified as 5 or less, 6, 7, or 8) was 0.75.

Expanded training for mentors who did not meet initial certification

Additional training was necessary for one mentor who did not reach the minimum standards for certification/recertification due to difficulty with one focused area of practice, effective use of the action plan and worksheet. The training team requested that the mentor receive additional training in this area via focused role-plays and then certified the individual during a follow-up informal role-play with new ACE ratings to ensure this mentor met the minimum standards.

Discussion

The current study sought to develop and pilot-test a structured training program to assist patient-mentors to effectively engage high-risk hospitalized HIV patients in ambulatory HIV care. This program sought to expand the traditional supportive role of HIV mentors as identified by Dutcher et al.[15] to include training in focused behavioral-change strategies to increase proactive patient self-management behaviors. Through iterative developmental and implementation processes, important factors emerged that appear relevant to the generalization of similar mentor training programs and will be discussed in further detail below, with an emphasis on recommendations for others seeking to implement HIV patient-mentoring programs (see Table 3 for summary).

Table 3. Patient-Mentor Training Recommendations

Training Development

Recommendation 1: Peer-mentor training programs must engage both mentors and their immediate supervisors early and often in the formative/developmental process.

Recommendation 2: Intervention developers and trainers should pay close attention to and embrace the individual strengths and training needs of mentors. Training should be customized but target rapport building, as well as behavioral-change skill sets.

Recommendation 3: Mentor training should be completed using multiple learning methods (e.g., didactics, modeling, and experiential exercises) over a sustained training period to allow for knowledge and skill acquisition with regular feedback from trainers.

Training Implementation

Recommendation 4: Patient mentors benefit from flexible and adaptable training methods (customizable materials, extended training time frames, and flexible scheduling).

Recommendation 5: Mentor training programs should be prepared to provide focused curricula directed at the utilization of user-friendly, evidence-based behavioral-change techniques.

Recommendation 6: Training programs should provide opportunities for mentors to develop a sense of ownership and personal accomplishment, as well as providing modest external incentives.

Recommendation 7: Intervention fidelity is important for mentor training and the use of standardized patients (actors) is a feasible and effective learning/feedback technique.

Training development

Given the established successes of the TSHC mentoring program, the MAPPS study team actively solicited input from mentors and their supervisor during the formative process of the training program. These relationships began early and continued throughout the developmental process. This integrative work facilitated open and honest discussions about what was feasible for mentors and created a sense of transparency and clarity in shared goals and mission between mentors and the MAPPS training team. Important changes to the intervention protocol were made, based on input from the mentors and the TSHC mentor supervisor.

In the current study it was important to reinforce existing mentor skills and identify the individual needs of each mentor. This was particularly true when contrasting experienced and less experienced mentors. Experienced mentors had already developed rapport-building skill sets for engaging and motivating patients. For these experienced mentors, the training team was clear in indicating that the purpose of the training was to enhance and add behavioral-change skills, using techniques such as goal setting and action planning (new areas for all mentors in our program). For less experienced mentors, additional training in the importance and use of rapport building was a common need. The MAPPS training program, therefore, developed aspects of both relationship building and behavioral-change-technique skill development.

After discussions with the mentors and supervisor at TSHC, the MAPPS training team felt it important to deliver a multimodal training experience that would span 6 to 8 weeks to allow mentors time to assimilate the training, practice in-

tervention methods, and increase overall mentor comfort and confidence. We targeted multiple learning methods, including didactics, expert modeling, and experiential exercises with immediate feedback. Because of the interactive nature of the mentoring tasks to be developed and the explicit preferences of mentors, our training program placed an emphasis on coaching the MAPPS intervention protocol while modeling and practicing exercises (rather than didactics).

Training implementation

Implementation of mentor training was by far the most complicated aspect of the MAPPS program. The eventual success of the MAPPS training program was due in large part to the dedicated efforts of the director of volunteer services at TSHC (mentor supervisor), and the mentors themselves, who saw the MAPPS program as a challenging yet natural extension of the work conducted by TSHC mentors. Working with the mentoring program at TSHC, the MAPPS training team had to balance the need for internal control with issues of feasibility, mentor acceptability, and working to integrate more formalized intervention techniques within an existing mentor program. Our explicit implementation goals were to train mentors to exceed a knowledge and skill threshold, while not compromising or dictating each individual mentor's interaction styles. To accomplish these goals, we found that training efforts had to be flexible and accommodating. A flexible training schedule was necessary to accommodate volunteer mentor personal factors, physical health complications, and lifestyle issues (e.g., transportation, family needs, etc.) that often complicated a mentor's ability to complete the training program. Flexible and adaptable methods were also important to increase mentor comfort and skill. For example, some mentors in the MAPPS program were uncomfortable with the use of a written action plan and needed additional encouragement and assistance (e.g., adapting materials to meet unique mentor language preferences) in applying these skills. Less experienced mentors also benefitted from customized group-based role-plays and "shadowing" experiences prior to the standardized patient role-play with more experienced mentors.

Recent data from a national demonstration project found that HIV outreach workers faced clear challenges in the delivery of support programs to increase HIV treatment engagement in a high-risk minority population.[20] Enlisting largely full-time and part-time paid personnel, outreach workers in this project had difficulty adjusting to the extensive scope and ill-defined responsibilities associated with their position. It is for these reasons that the MAPPS training program was viewed as critical to aid in the development or refinement of a mentoring identity and to advance practice-based mentor skills.

The mentors at TSHC are volunteers and provide valuable services to HIV patients, without compensation. Therefore, training programs should provide opportunities for mentors to develop a sense of ownership and rewards for personal accomplishments and should consider providing modest external incentives where possible. Within the MAPPS intervention, mentors receive regular monthly stipends of $40.00, plus allowable travel reimbursement. More importantly, the program provided graduated levels of mentor participation to increase mentor investment and sense of accomplishment. For

example, portions of videos of interactions between mentors and standardized patients were extracted and used as expert examples during subsequent training workshops. These video clips were perceived by the mentoring cohorts as more credible than modeling done by the training team. These mentor video examples facilitated a "culture of practice" that helped new mentors to better understand their roles and reduced anxiety around training expectations. All certified mentors received a formal MAPPS training certificate of completion to acknowledge their advanced mentor status. Our results support other findings that mentor and outreach worker training programs should engage staff in ways that move beyond traditional supervision to include broader models of mentoring and role development.[20]

Intervention fidelity, a critical component to better understand mentoring practices, and a formal measurement of fidelity can facilitate role clarity and advanced skill development when coupled with immediate feedback from trainers. Our fidelity-assessment ratings were specifically designed to assess intervention adherence and competence while also focused on broad skill application. The focus on broad concepts allowed an assessment of intervention faithfulness but, importantly, allowed for individual mentor differences in style or approach.

The MAPPS training program used standardized patients to enhance the mentor training experience. Standardized patients allowed us to avoid introducing the potential biases and patient privacy issues involved when observing real patient mentor interactions and allowed us to manipulate the training scenarios, rate mentor adherence and effectiveness, and provide immediate feedback to mentors in training. Although the training program used different vignettes for each training experience, the diversity of "patient" encounters was reasonably limited. In essence, the focus of the training program was on depth of experience and intervention concept. Breadth of intervention experiences was developed by posttraining experiences and ongoing consultation with mentors. These methods, therefore, reflect a relative weakness of the training approach and should be considered and thoughtfully addressed by other such training programs. Another limitation of the program was the inability of trainers to review actual mentor-patient interactions. Notably, during the standardized patient encounters, mentors reported feeling stress and pressure to perform adequately and reported that the actors and training environment were realistic. However, it is quite possible that mentors might interact differently in clinical care settings.

Peer-mentoring interventions have the potential to improve patient outcomes and adherence to outpatient HIV care,[12] however, these interventions often involve complex skill sets, such as the use of goal-setting and action planning that require focused training efforts. Given the complexity of these tasks, the current study documented the potential for a standardized training program to provide the necessary experiences for mentors to develop skills that are consistent with a manualized behavioral-change intervention. The current training program used a format that occurred over time (6 weeks) and included regular guidance and feedback to allow development and experiential skill practice. We found that the inclusion of the mentors and their immediate supervisor as stakeholders early in the developmental process was important to working collectively towards mutually agreed-upon program goals. These collaborative efforts led to improved programming at practically every developmental stage. Collectively, these data provide a structure that other peer-mentoring programs may wish to consider when attempting to train peer-mentors to obtain complex behavioral-change skills in a standardized approach. Generalizable training for mentors is likely to help advance the scientific literature surrounding the efficacy of peer-based interventions in HIV/AIDS.

Author Disclosure Statement

No competing financial interests exist.

References

1. Joy R, Druyts EF, Brandson EK, et al. Impact of neighborhood-level socioeconomic status on HIV disease progression in a universal health care setting. J Acquir Immune Defic Syndr 2008;47:500–505.
2. Recsky MA, Brumme ZL, Chan KJ, et al. Antiretroviral resistance among HIV-infected persons who have died in British Columbia, in the era of modern antiretroviral therapy. J Infect Dis 2004;190:285–292.
3. Marks G, Gardner LI, Craw J, Crepaz N. Entry and retention in medical care among HIV-diagnosed persons: A meta-analysis. AIDS 2010;24:2665–2678.
4. Cohen MS, Gay C, Kashuba AD, Blower S, Paxton L. Narrative review: Antiretroviral therapy to prevent the sexual transmission of HIV-1. Ann Intern Med 2007;146:591–601.
5. Giordano TP, White AC Jr, Sajja P, et al. Factors associated with the use of highly active antiretroviral therapy in patients newly entering care in an urban clinic. J Acquir Immune Defic Syndr 2003;32:399–405.
6. Giordano TP, Gifford AL, White AC Jr, et al. Retention in care: A challenge to survival with HIV infection. Clin Infect Dis 2007;44:1493–1499.
7. Simoni JM, Amico K Rivet, Smith L. Antiretroviral adherence interventions: Translating research findings to the real world clinic. Curr HIV/AIDS Rep 2010;7:44–51.
8. Simoni JM, Amico K Rivet, Pearson CR, Malow R. Strategies for promoting adherence to antiretroviral therapy: A review of the literature. Curr Infect Dis Rep 2008;10:515–521.
9. Lorig KR, Sobel DS, Ritter PL, Laurent D, Hobbs M. Effect of a self-management program on patients with chronic disease. Effect Clin Pract 2001;4:256–262.
10. Harris GE, Larsen D. HIV peer counseling and the development of hope: perspectives from peer counselors and peer

counseling recipients. AIDS Patient Care STDs 2007;21:843–859.

11. Purcell DW, Latka MH, Metsch LR, et al. Results from a randomized controlled trial of a peer-mentoring intervention to reduce HIV transmission and increase access to care and adherence to HIV medications among HIV-seropositive injection drug users. J Acquir Immune Defic Syndr 2007; 46(Suppl 2):S35–47.

12. Simoni JM, Nelson KM, Franks JC, Yard SS, Lehavot K. Are peer interventions for HIV efficacious? A systematic review. AIDS Behav 2011;15:1589–1595.

13. Lyles CM, Kay LS, Crepaz N, et al. Best-evidence interventions: Findings from a systematic review of HIV behavioral interventions for US populations at high risk, 2000-2004. Am J Public Health 2007;97:133–143.

14. Simoni JM, Huh D, Frick PA, et al. Peer support and pager messaging to promote antiretroviral modifying therapy in Seattle: A randomized controlled trial. J Acquir Immune Defic Syndr 2009;52:465–473.

15. Dutcher MV, Phicil SN, Goldenkranz, SB. "Positive examples": A bottom-up approach to identifying best practices in HIV care and treatment based on the experiences of peer educators. AIDS Patient Care STDs 2011;25:403–411.

16. Fisher JD, Fisher WA, Amico KR, Harman JJ. An information-motivation-behavioral skills model of adherence to antiretroviral therapy. Health Psychol 2006;25:462–473.

17. Yudowsky R. Should we use standardized patients instead of real patients for high-stakes exams in psychiatry? Acad Psychiatry 2002;26:187–192.

18. Rosen J, Mulsant BH, Bruce ML, Mittal V, Fox D. Actor's portrayals of depression to test interrater reliability in clinical trials. Am J Psychiatry 2004;16:1909–1911.

19. Steele A, Kunik ME, Cully J, Davila JA, Morgan RO, Snow AL. Feasibility of using standardized patient methodology to develop and assess research assistant competence in dementia research. Dementia 2009;8:317–324.

20. Hidalgo J, Coombs E, Cobbs WO, et al. Roles and challenges of outreach workers in HIV clinical and support programs serving young racial/ethnic minority men who have sex with men. AIDS Patient Care STDs 2011;25(Suppl 1): S15–22.

Address correspondence to:
Jeffrey A. Cully, Ph.D.
(MEDVAMC 152)
2002 Holcombe Boulevard
Houston, TX 77030

E-mail: jcully@bcm.edu