Program Abstract

Title

The mDOT Program
For Individuals Receiving Highly Active Antiretroviral Therapy (HAART)

Summary

Many resource-limited countries are in the process of expanding treatment options for individuals living with HIV/AIDS by increasing access to and availability of highly active anti-retroviral therapy (HAART). However, significant health system barriers in these countries (such as overburdened pharmacy staff and reduced access to health facilities) challenge the development of patient-centered care and productive relationships between patients and providers. These barriers may challenge the ability of patients to correctly maintain long-term adherence to HAART medications. Non-adherence to HAART decreases medication effectiveness and may increase the likelihood of drug-resistance.

Directly observed therapy (DOT) involves health workers monitoring medication doses on a daily basis to ensure medication adherence. Modified directly observed therapy (mDOT) also provides a way for providers to ensure HAART adherence while simultaneously developing long-standing relationships with their HIV patients. With the *modified* DOT strategy, patients beginning HAART are monitored once-daily during their morning medication dose by a trained peer educator. The mDOT peer educator also helps the patient incorporate HAART adherence strategies into their daily life, since observed dosing alone may be insufficient to promote adherence as a long-term strategy. Peer educators share experiential knowledge of adherence strategies, risks of non-adherence, and provide continued social support throughout the duration of the program.

The effectiveness of the *mDOT Program* in promoting short-term and long-term medication adherence was evaluated at an HIV clinic in Beira, Mozambique. In addition to self-reported adherence measures, CD4 cell counts were measured before and, 4- and 10-months after initiating

HAART. Individuals participating in the *mDOT Program* reported significantly higher mean adherence at the 6-week, 6-month, and 12-month follow-ups. Program participants were more likely to achieve ≥90% adherence at 6 months. Mean CD4 cell counts among those with CD4 data did not differ, however, between the *mDOT Program* participants and those in the control condition at baseline or either follow-up.

Global HIV Archive Category

☑ Sexual risk reduction (secondary)	☐ Community mobilization	☑ Antiretroviral adherence (primary)
☐ HIV testing and education	☐ Reproductive health	☐ High-risk populations

Primary program content categories reflect the main focus of the program, while secondary content categories may be addressed in other aspects of the program.

Implementation Level

☑ Individual (implemented one-on-one)	☐ Couple/ family (implemented with a couple or family)	☐ Group (implemented in small groups)
☐ Structural (implemented on social, economic, political, or environmental levels)		

Implementation Setting

☐ Community (implemented through community-based organizations)	☐ School (implemented in schools)	☑ Clinic (implemented in clinics)

Although this program was designed to operate in an HIV clinic or hospital, it may be feasible for other community-based organizations serving individuals living with HIV to implement the *mDOT Program*.

Original Target Population

Participants in the original implementation of mDOT were patients starting HAART in Mozambique. They were patients at a large-volume public institution providing free specialized HIV care and antiretroviral medications to individuals in Beira. Participants were at least 18 years old, living near the clinic,

and free of severe mental illness or dementia. The study sample was almost equally composed of men and women (N = 350) and most (69%) were employed.

In order to begin HAART, patients had CD4 cell counts <200 cells/mm^3 regardless of WHO stage, CD4 cell counts 200 to 349 cells/mm^3 if in WHO stage 3 or pregnant, or were in WHO stage 4 regardless of CD4 cell count. Of the 350 participants, 97% of them were taking 1 fixed-dose non-nucleoside reverse transcriptase inhibitor (NNRTI) combination pill (i.e., d4T+3TC+NVP) twice daily.

Program Components

- ☐ Booster sessions for participants
- ☐ Community outreach/ mobilization
- ☑ Condom demonstration
- ☐ Continual assessment of progress
- ☐ Educational materials (e.g., leaflets, posters, comics, magazines)
- ☑ Electronic media (e.g., radio, cell phones, internet, videos)
- ☐ Formalized curriculum
- ☑ Medication adherence and routine clinic visits
- ☐ Motivational interviewing
- ☐ Multi-year program
- ☐ Needs assessment
- ☑ Peer education/ counseling
- ☑ Presentations
- ☑ Role Plays
- ☐ Stakeholder investment
- ☐ STI/HIV testing

Program Length

The *mDOT Program* is delivered to participants over a period of six weeks.

Staffing Requirements/ Training

Peer educators are responsible for delivering the *mDOT Program* to participants. In the original implementation of the program, peer educators were selected from community-based HIV groups and were employed by the clinic. These peer educators are trained during a 2-day, 7-day, or 10-day workshop (depending on the expected roles and responsibilities of the peer educators) and then receive ongoing refresher training sessions every three months throughout the program. The Peer Educator Training Guide gives further information on how to prepare and conduct *mDOT Program* training and refresher sessions.

Program Materials

The *mDOT Program* package contains the preparation materials needed to train the peer educators and implement the program in your clinic setting. In addition to program package materials, it is necessary to obtain a few additional things for both the peer educator training and program implementation. For the peer educator training, facilitators will need condoms and a penis proxy (for the condom demonstration during the training) and a computer and projector (if PowerPoint slides will be shown during the training). During program implementation, peer educators will need adherence/medical record forms to use during patient visits.

A Note About Adaptation

The Global HIV Archive program package includes a Customized Adaptation Handbook to help program staff successfully adapt the *mDOT Program* for new settings and target populations. The Adaptation Handbook details a set of pragmatic, easy-to-follow steps to facilitate making changes to the program, while preserving the components that made – or are believed to have made – it effective in the first place.

A Note About Evaluation

Each Global HIV Archive program package contains the original evaluation instruments used to evaluate the program. In the *mDOT Program*'s original evaluation, interviewers administered a 45-minute questionnaire to participants at baseline, 6-weeks, 6-months, and 1-year. Participants completed the interview with either a male or female Mozambican interviewer, in Portuguese or 1 of 2 local languages. The original English-version baseline, 6-week, and 1-year questionnaires are included in the Original Evaluation Materials booklet.

The program package also includes an Evaluation Resource Guide, containing select questions to assess relevant HIV measures such as antiretroviral adherence, sexual risk behaviors, and condom use.

If you would like to conduct an evaluation with your population, it is important to assess the applicability of survey questions to your context/setting. For instance, some questions contain region-specific language and terminology that you might need to adapt to be relevant to your population.

Program Acquisition and Implementation Costs

Global HIV Archive program packages are available in boxed, flash-drive, and downloadable formats. The cost of this Global HIV Archive program package includes:

- *Quick Guide to Your Program Package* – a roadmap to get oriented to the *mDOT Program* and tips for how to get started
- *User's Guide* – an overview of the program including original implementation and evaluation information
- *Peer Educator Training Guide* – a resource with information on how to implement the training workshop for peer educators
- *Peer Educator Training Presentations* – a booklet containing presentations to use or adapt for use during the peer educator training
- *Film: Silent Epidemic* – a DVD to show during the peer educator training
- *Peer Educator Checklist* – a checklist of daily peer educator responsibilities
- *Customized Adaptation Handbook* – a guide for adapting the *mDOT Program*
- *Original Evaluation Materials* – the instruments used to measure the effectiveness of the original implementation of the *mDOT Program* (except the 6-month survey) and additional information for data collecting including:
    - Baseline survey
    - 6-week survey
    - 1-year survey
    - Instrument training guide
    - Data collector guidelines
    - Useful terminology
- Evaluation Resource Guide – a set of survey questions for evaluating HIV-prevention program effectiveness

The following program materials are also available in Portuguese.

- *Checklist of Portuguese Program Materials* – a one-page guide of what Portuguese language documents are included in the program package
- *Peer Educator Training Presentations* (Treinamento em Educação Pelos Pares A*presentaç*ão)

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Bibliography

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