Umndeni Care Program (UCP): Lessons Learned From Home HIV Testing and Linkage to Care in the South African Generalized Epidemic

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Abstract

OBJECTIVE: UCP focuses on providing community-based, in-home HIV testing, linkage to care and treatment, social support, tuberculosis screening, adherence monitoring, HIV prevention, and health care professional training in rural KwaZulu-Natal (KZN), South Africa.

METHODS: UCP uses an incentive-based system of community health care workers to perform community-based in-home HIV counseling, testing, prevention education, tuberculosis screening, adherence monitoring and linkage to care. Community health workers are given incentives for successful linkages to care and additional bonuses for continued adherence in their patients.

RESULTS: In the first ten months of 2012, our counselors tested 1,326 (86.4%) individuals of the 1,534 who were offered confidential in-home point-of-care HIV testing. From those who tested, we found 180 (13.6%) new HIV infections. One hundred [and] thirty-one (77%) of the newly diagnosed received their CD4 results and 73 (56%) met national criteria for initiation of antiretroviral therapy (ART). Of the UCP patients newly diagnosed as HIV-infected by rapid testing, 76 initiated ART. In addition, we detected 70 cases of sputum-positive tuberculosis from random home visits. Acceptance rates for in-home HIV testing have risen from 64% in 2010 to 87% in 2012.

CONCLUSIONS: With the recent approval of home self-testing and increasing access to point-of-care diagnostics for HIV in the United States, using similar methods developed in Africa could potentially increase the number of newly identified cases. Using community health care workers to facilitate testing and linkage to care has shown to be a powerful method of detecting early, asymptomatic patients as well as patients less inclined to access the health care system.

Background

The Umndeni "Family" Care Program (UCP) began in 2005 in collaboration with Habitat for Humanity and the Valley Trust, and in its first year provided HIV-testing and linkage to care for 72 families caring for AIDS orphans living in a rural region of KwaZulu-Natal, South Africa. With its early success in accessing difficult-to-reach populations, UCP has grown independently and expanded its vision to overcome the barriers of poverty while increasing access to HIV-prevention, testing, care, and treatment in KwaXimba, South Africa.

The goals of UCP function on a simple path-to-prevention model: The more people we test and link to care → the more people receive treatment → the less HIV is present in the community → the less HIV is transmitted across the population. This model begins with early diagnosis of asymptomatic HIV-infected patients. Once diagnosed, these patients can access life-saving antiretroviral therapy prior to becoming sick with potentially life-threatening opportunistic infections. Once on treatment, patients are much less likely to transmit HIV, therefore preventing of new infections.

Since its inception in 2005, by using Community health workers (CHW) with performance-based incentives, UCP has increased integral access to comprehensive HIV prevention, diagnosis, care and treatment for families living in KwaXimba, a rural region of KwaZulu-Natal, South Africa.

Methods

UCP employs community health care workers to perform community-based free in-home HIV counseling, testing, prevention education, tuberculosis screening, adherence monitoring and linkage to care. CHWs are given financial incentives for new HIV diagnoses, successful linkages to care, and retention in care. CHWs are given additional financial incentives when their referrals complete tuberculosis treatment and or have undetectable viral loads after 6 months of antiretroviral therapy.

Results

Table 1: KwaXimba community HIV testing: February 2012 to October 2012

Individuals tested	Number tested	HIV-infected
Adult	975	163 (16.7%)
Children	351	17 (4.8%)
Total	1,326	180 (13.6%)

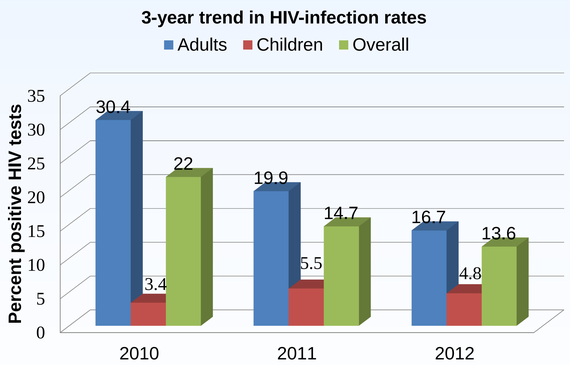
Counseled for HIV testing: 1,534
Counseled and received HIV testing: 1,326
Counseled and refused testing: 209
Uptake rate: 86.4%

Table 2: Cumulative Data: Total to date

Individuals tested	Number tested	HIV-infected
Adults	1,657	349 (21.1%)
Children	920	47 (5.1%)
Total	2,577	396 (15.4%)

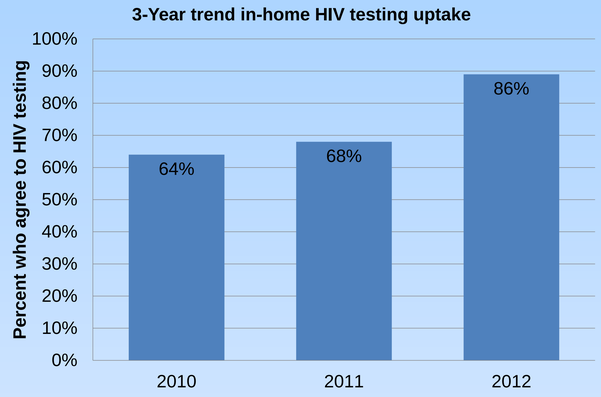
Total community members counseled for HIV testing: 2,952
Counseled and received in-home HIV testing: 2,355
Counseled and declined in-home HIV testing: 586
Uptake rate in all approached: 79.8

Graph 1: Three-year trend in new HIV diagnosis performed by UCP's in-home community-based HIV testing in KwaXimba, South Africa, from 2010 to 2012



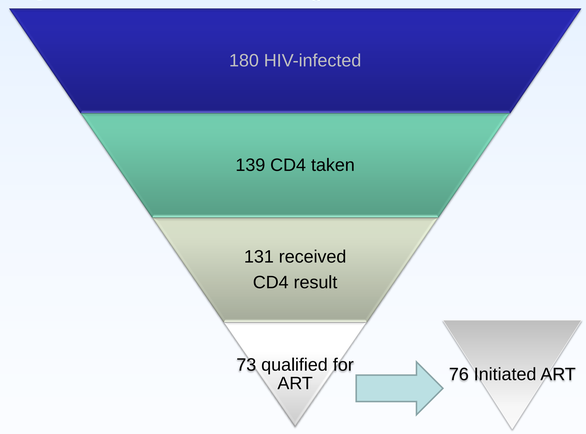
Results

Graph 2: Three-year trend in testing uptake from UCP's in-home community-based HIV testing in KwaXimba, South Africa, from 2010 to 2012



In 2012, the retention in care of the HIV-infected individuals tested by UCP has been high. Of the 180 newly diagnosed infected 139 (77%) entered the health care system for clinical assessment and CD4 monitoring. From these 131 (94%) returned for their CD4 results and 73 (56%) qualified for ART. All of the 73 who qualified for ART based on CD4 have started ART and an additional 3 who clinically qualified for ART have initiated therapy. Overall in 2012, 42% of those who were newly found to be HIV-infected began antiretroviral therapy.

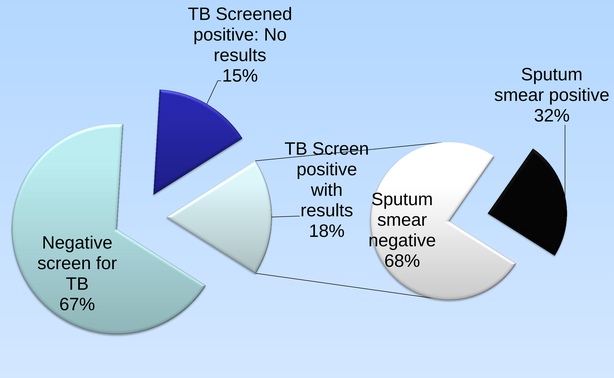
Graph 3: 2012 Retention and linkage to care



Results

From our random in-home visits, 461 individuals screened positive for further TB investigation based on a positive contact or symptom screen. Of those referred 218 (47%) received sputum results and 70 were smear positive (32%). As of November 1, 2012 67 (96%) had initiated anti-tuberculosis therapy.

Graph 4: In-home TB screening 2012



Conclusions

With the recent approval of home self-testing and increasing access to point-of-care diagnostics for HIV in the United States, using similar methods developed in Africa could potentially increase the number of newly identified cases. Using community health care workers to facilitate testing and linkage to care has shown to be a powerful method of detecting early, asymptomatic patients as well as patients less inclined to access the health care system.

Extrapolation to US population

- Expanded HIV testing in high risk populations and areas
- Assignment of case managers or community health workers to assist with linkage to care for all newly identified HIV-infected individuals
- Financial incentives for CHWs to identify new infections and linkage to care

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