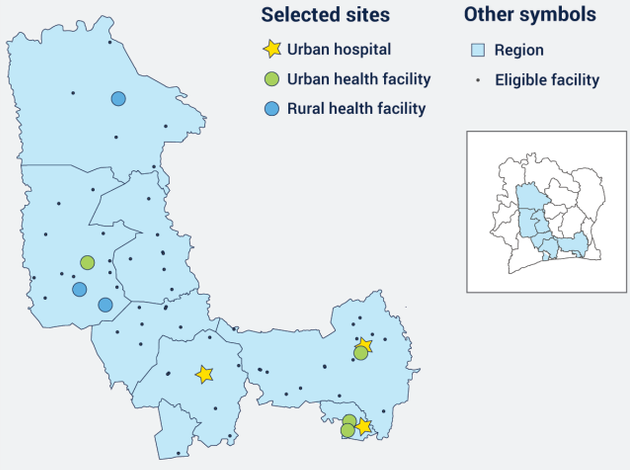
OpCon

Out of pocket expenditure on HIV and chronic disease care in Côte d'Ivoire

Background

HIV prevalence amongst adults in Côte d'Ivoire is estimated to be 2.8%, with approximately 500,000 people living with HIV and 30,000 new HIV infections each year. Under current national policy, antiretroviral therapy (ART) and some lab tests (VL, CD4) are provided free of charge, but people living with HIV pay other direct and indirect costs for their HIV care. In addition, people living with HIV pay for all non-HIV services, including those for noncommunicable and chronic diseases. These repeated out of pocket (OOP) payments may deter retention in care. Understanding the level of current OOP expenditure among people on ART in Côte d'Ivoire can inform the design of sustainable, financial risk protection mechanisms. In response, ICAP at Columbia conducted a study of OOP costs for people on ART.

Location of study sites in Côte d'Ivoire



Key Findings

- **In a convenience sample of 400 adults with HIV, 91% reported out of pocket expenditures for their visits for HIV care. The median expenditure was $16 USD (IQR $5-$48) per year. Most of these costs were indirect[1]; transportation was the most common expenditure.**
- **26% of participants reported at least one chronic illness in addition to HIV. Among those who reported a chronic illness, median annual out-of-pocket costs of chronic disease care were $50 USD (IQR: $6-$107).**
- **27 participants (5%) reported out of pocket expenditures as a primary reason for missing HIV care, but annual expenditures did not appear to be associated with missed care.**
- **No participants reported paying user fees for HIV care at their most recent appointment. 49 of the 102 with a chronic illness (48.0%) reported paying user fees for chronic illness services, at a median of $7 USD per year (IQR: $3-$21).**
- **68% of participants reported using savings, borrowing money, and/or selling assets to pay for health care. 21.3% of participants reported spending more than 10% of their annual household income on HIV and/or chronic disease care.**

Methods

A convenience sample of HIV-positive adults scheduled for routine ART appointments at one of the 10 study sites was recruited. Inclusion criteria included having missed at least one appointment in the previous 12 months; having been on ART for at least 12 months; speaking French, English, or a local language spoken by the interviewer; being at least 18 years old; and not being acutely ill on the day of the appointment. Recognizing that people who miss clinic appointments may be more likely to have financial barriers to attendance, we included people who were scheduled for an ART appointment but did not attend. The study clinics routinely call people who miss appointments; during these routine calls, potentially eligible patients were offered the opportunity to participate either by coming to the health facility later that week, or by providing information via phone. Because chronic NCDs occur more frequently among older people, we purposively recruited a sample with an equal number of participants aged 18-39 years old and 40 or more years old.

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[1]*Direct costs include money spent on the goods or services themselves, such as payments for medication, tests, or hospitalizations. Indirect costs include other resources lost due to the patient's receiving the services, such as payments for transportation, wages lost, or gifts given in return for childcare.*

Data Collection

A trained interviewer administered a tablet-based electronic survey in French, English, or a local Côte d'Ivoire language *(e.g., Senoufo or Dioulain)* in person or over the phone. The survey included 100 questions and took between 30 and 45 minutes to complete. Data were collected on encrypted tablets. All participants gave informed consent.

In addition to costs of HIV care, participants were asked about costs related to care for "high blood pressure or hypertension," "high blood sugar or diabetes," "heart disease or chronic heart condition," "lung disease or chronic lung condition," "cancer or a tumor," and "depression." They were also asked about the costs of "any other chronic disease or disease that is long lasting."

Data Analysis

We conducted descriptive statistics using median, range, and interquartile range (IQR) to describe results. We also conducted simple tests of significance to explore the associations between costs of HIV care and total costs of HIV and chronic disease care with the number of HIV appointments missed. For both, we performed simple linear regressions with bootstrapped 95% confidence intervals (CIs) using the bias-corrected and accelerated method. To examine affordability of care, we compared the total OOP expenditure as a percentage of the median value of the reported household income in each quintile.

Results

Participant Characteristics

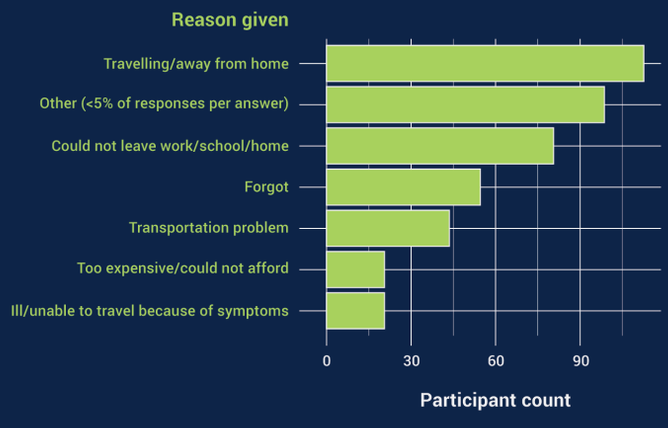
Participants were a median of 39 years of age (IQR: 33-49), and 77.2% were female. They attended a median of 8 HIV appointments per year (IQR: 4-10) and had been on ART a median of 4.7 years (IQR: 2.8-7.4). 148 (37.0%) participants reported a personal monthly income of less than $38 a month.

Overall Costs of HIV Care

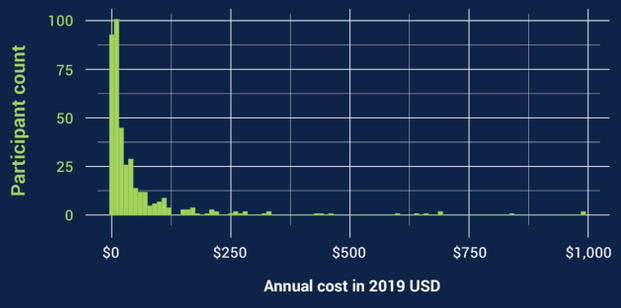
365 participants (91.3%) reported OOP costs for HIV-related care. 136 (34.0%) participants reported paying direct costs, including payments for medication (excluding ART), tests (excluding VL and CD4), hospitalization, and gloves. No participants reported paying a user fee at their most recent visit. 349 (87.2%) participants reported indirect costs, primarily payment for transportation and lost wages during visit days. 178 participants paid only transportation costs, which represents 48.8% of participants reporting any OOP costs while 120 participants (30.0%) reported both direct and indirect OOP costs.

Participants reported a median total (direct and indirect) cost of HIV care of $16 (IQR: $5-$48) per year. Excluding inpatient costs, participants reported a median total cost of $14 (IQR: $5-$43) per year. Among those who reported any HIV related OOP costs, the median reported cost was $21 (IQR: $7-$56) per year.

Primary reasons for missing HIV appointments



Reported annual costs of HIV care (N = 400)



Affordability

263 (65.8%) participants reported that they or someone in their household had used savings to pay for health care costs. 121 (30.2%) reported that they or someone in their household had borrowed money to pay for their health care costs. 22 (5.5%) sold assets to pay for health care. At the household level, participants reported spending a median of 2.6% of annual income on chronic disease and/or HIV care (IQR: 0.5%-8.2%). 85 participants reported spending more than 10% of their household income on chronic disease and/or HIV care, and 36 reported spending more than 25%. Six participants reported spending more than 100% of their household income on health care. All 6 of these participants reported using savings to finance their health care, and 1 reported borrowing money.

Overall Costs of Chronic Disease Related Care

102 participants (25.5%) reported at least one chronic illness, including hypertension, diabetes, heart disease, lung disease, cancer, or depression.

Of those with a chronic illness, 80 (78.4%) reported paying for chronic disease care. The median OOP cost of chronic disease care for all 102 participants reporting a chronic disease was $50 (IQR: $6-$107); among those (80) paying for chronic disease care, the median annual expenditure was $80 (IQR: $32-$127). Of the 80 people who reported any cost for chronic disease care, 76 (95.0%) reported direct OOP costs. Unlike for HIV care, 49 participants (48.0%) participants reported paying user fees for chronic disease related care. 59 of these 80 participants (73.8%) reported indirect costs for chronic disease related care. As with HIV care, the most common indirect cost was transportation: 57 (71.3%) participants paying for chronic disease care reporting OOP transportation costs.

This project is supported by the U.S. President's Emergency Plan for AIDS Relief, through the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under grant UJ7HA31180, Optimizing Momentum toward Sustainable Epidemic Control. This information or content and conclusions should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS or the U.S. Government.

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