

B. Expenditures on AIDS in Côte d'Ivoire

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Section One: Introduction and methodology

This study analyses the expenditures on AIDS in Côte d'Ivoire in relation to total health care expenditures; the source of funding for treatment, prevention, and activities to mitigate the impact of AIDS; and the determinants of these funding patterns. In particular, we show how current government policies result in explicit and implicit subsidies that support hospital care.

As insufficient systematic data on costs and expenditures were available, we organised a workshop in May 1996 in Abidjan with eight AIDS experts, including physicians, leaders of nongovernmental organisations (NGOs), epidemiologists, health economists, a traditional practitioner, and representatives of the National AIDS Control Programme (NACP). Using a structured survey, workshop participants estimated the costs of treatment for various types of patients. To improve and adjust these preliminary estimates, additional data were collected from government documents, international institutions, research studies, prescribing guides, and NGOs (Boyou 1993; Vidal 1992a, 1992b).

Workshop participants first estimated the number of AIDS patients in Côte d'Ivoire, then classified them according to the type of treatment they were likely to have sought, estimated the cost of each type of treatment, and obtained total costs by multiplying the number of each type of patient by the estimated unit cost for each type of treatment.

As of 1995, there were 5,380 reported AIDS cases in Côte d'Ivoire, of which 3,401 were in Abidjan (the largest and capital city), 990 were in the interior, and 989 were reported from the Anti-Tuberculosis Centre (ATC). Only one in three AIDS cases is thought to be reported in Abidjan and only one in seven cases elsewhere in the country (personal communication, Department of Epidemiology, NACP). Using this information, we estimated that there were 18,122 new AIDS patients in 1995, of which 10,203 were in Abidjan, 6,903 in rural areas, and 989 in the ATC.

Table 1. Lifetime treatment costs^a per AIDS patient and total treatment costs, by type of AIDS patient, 1995 (thousands of FCFA)

| Costs per AIDS patient | Type of patient | | | | | | | | | | | | | | |
|-------------------------|------------------|-----------|--------------|----------------|-----------|--------------|---------------------|-----------|--------------|----------------|-----------|--------------|-----------|-----------|--------------|
| | Private coverage | | | Civil servants | | | Other urban Abidjan | | | Urban interior | | | Rural | | |
| | No. units | Unit cost | Cost per pt. | No. units | Unit cost | Cost per pt. | No. units | Unit cost | Cost per pt. | No. units | Unit cost | Cost per pt. | No. units | Unit cost | Cost per pt. |
| Generalist consultation | 10 | 12 | 120 | 10 | 3.8 | 38 | 8.8 | 4.8 | 42 | 7 | 2.2 | 15 | 3.3 | 1 | 3 |
| Specialty consultation | 3.3 | 14 | 46 | 1 | 6.5 | 7 | 1 | 7.5 | 8 | 0.5 | 5 | 3 | 0 | 5 | 0 |
| Ambulatory day care | 1.25 | 42.5 | 53 | 8.8 | 9 | 79 | 8.8 | 13 | 114 | 5 | 8 | 40 | 2 | 3 | 6 |
| Emergency night visit | 1 | 40 | 40 | 3 | 8.8 | 26 | 3.3 | 8.8 | 29 | 4.3 | 8.8 | 38 | 1.5 | 5 | 8 |
| Hospital days | 34 | 52.5 | 1,785 | 20 | 10.6 | 212 | 16.3 | 15 | 245 | 14 | 5 | 70 | 5 | 5 | 25 |
| Antiviral drugs | | | 306 | | | 0 | | | 0 | | | 0 | | | 0 |
| Other medications | | | 270 | | | 83 | | | 60 | | | 46 | | | 21 |
| Lab and x-ray | | | 130 | | | 35 | | | 19 | | | 8 | | | 4 |
| Traditional medication | | | 28 | | | 28 | | | 28 | | | 28 | | | 28 |
| Total/patient | | | 2,778 | | | 507 | | | 544 | | | 247 | | | 94 |
| <i>Total costs</i> | | | | | | | | | | | | | | | |
| Number of patients | | | 906 | | | 1,812 | | | 8,699 | | | 3,624 | | | 3,081 |
| Total cost (000 FCFA) | | | 2,516,709 | | | 918,593 | | | 4,735,866 | | | 895,128 | | | 290,538 |

a. Since the estimated lifetime of an AIDS patient at diagnosis was one year, these figures are also annual costs per patient. Source: Authors' calculations.

The workshop participants defined five mutually exclusive and exhaustive categories of patients believed to have similar treatment cost profiles and estimated the per cent of patients in each category: private coverage (5 per cent of patients); civil servants (10 per cent); other patients in and around Abidjan (48 per cent); patients in urban areas of the interior (20 per cent); and patients in rural areas (17 per cent).

Section Two: Estimating treatment costs

In order to estimate the costs of AIDS treatment, the experts defined a list of composite parts of treatment, the number of units consumed per patient, and unit costs for each of the five categories of patients (table 1). All costs were

expressed in the national currency (the CFA franc, or FCFA) as of the time of the workshop, with exactly 100 FCFA equal to one French franc and approximately 500 FCFA equal to one US dollar.

Unit costs were based on studies done in Côte d'Ivoire in 1993 (Boyou 1993; MSP 1993), increased by 10 per cent to adjust for modest inflation in health sector costs and rounded to the nearest 100 FCFA. The cost of a specialist consultation (7,500 FCFA) was computed as a weighted average of the cost for otolaryngology (11,737 FCFA) and ophthalmology (5,661 FCFA). The cost of an AIDS consultation in other interior urban and rural areas (2,200 FCFA) is much lower than that in Abidjan because health services are generally less sophisticated and less costly outside of the capital. Similarly, the cost of one night of hospitalisation in interior areas (6,100 FCFA) is substantially less than the amount in Abidjan (15,000 FCFA). The cost of traditional medicine per patient (28,000 FCFA) was the midpoint of the workshop estimate of 24,000 FCFA and Boyou's (1993) estimate of 31,000 FCFA from a study on traditional care practices.

The total units and costs for patients in each of the five categories were calculated by multiplying the costs per patient by the estimated number of patients in each category. Finally, the workshop participants estimated the share of treatment expenditures for each of the five categories of patients financed by households, the government, insurance (including employer payments), and other payers.

Estimated expenditures on prevention and mitigation activities were obtained from the National AIDS Control Programme, as shown in table 2. This table excludes public and private expenditures on condom marketing and purchases, however, as these data were not available.¹ These data were merged with estimated expenditures for treatment to arrive at an estimate of total AIDS expenditure.

Table 2. Budget and disbursements through the National AIDS Control Programme, 1994–95 (thousands of FCFA)

| Source | Budget | Disbursement | |
|--------------------|------------------|--------------|----------------|
| | | Per cent | Amount |
| Government | 450,000 | 60 | 270,000 |
| Donors | | | |
| French Cooperation | 128,173 | 80 | 102,538 |
| German Cooperation | 195,000 | 80 | 156,000 |
| UNDP | 195,000 | 50 | 97,500 |
| WHO | 120,301 | 85 | 102,256 |
| Other | 32,192 | – | 33,149 |
| Total | 1,120,666 | 68 | 761,443 |

To put AIDS expenditures in context, we compared them with the entire government health budget, which was estimated using the published data for 1990 by Murray and others (1994). They provide a breakdown of expenditures from public, private, and international sources and separate preventive and curative expenditures. These were extrapolated to 1995 assuming that the percentage of GDP devoted to health and the related shares of public, private, and donor financing had not changed. Per capita GDP from 1993 was assumed to have grown by 2 per cent per year based on the country's reasonably favourable economic performance (World Bank 1995).

In order to estimate the share of total bed days and hospital costs accounted for by AIDS patients, we obtained from the Ministry of Health the numbers of inpatient beds, consultations, bed days, and budgets for each type of hospital (MSP 1993, 1995, 1996). A 'bed-day equivalent' represents the amount of hospital services equivalent to one patient day of inpatient hospital care. One inpatient hospital day is one inpatient bed-day equivalent. Using the rule of thumb that one ambulatory consultation costs about one-quarter of a hospital bed day (Barnum and Kutzin 1993), we converted each ambulatory consultation into one-quarter bed-day equivalent. We were then able to estimate the cost per bed day for public health facilities. AIDS accounted for more than a fifth (21 per cent) of all hospital bed days in the country. Given that Côte d'Ivoire has an adult seroprevalence rate of 6.8 per cent (World Bank 1997) and that HIV/AIDS patients are hospitalised much more often than non-infected patients, this share is plausible.

Section Three: Patterns of expenditures

Total government health expenditures for 1995 were 50.1 billion FCFA (US\$100 million), of which 76 per cent was spent on curative care and 24 per cent on prevention.² Total government spending on AIDS amounted to 4.3

Table 3. HIV/AIDS expenditures by use and source of funding (thousands of FCFA)

| Use | Government | Private | Donor | Total |
|--------------------|------------|-----------|---------|------------|
| Treatment | 3,980,314 | 5,083,847 | 289,000 | 9,353,161 |
| (column %) | (93.6) | (100.0) | (37.0) | (92.5) |
| Prevention | 270,000 | na | 462,471 | 732,471 |
| (column %) | (6.4) | na | (59.3) | (7.2) |
| Mitigation | na | na | 28,972 | 28,972 |
| (column %) | na | na | (3.7) | (0.3) |
| Total | 4,250,314 | 5,083,847 | 780,443 | 10,114,604 |
| (column %) | (100.0) | (100.0) | (100.0) | (100.0) |
| As a % of spending | | | | |
| by all sources | 42.0 | 50.3 | 7.7 | 100.0 |

billion FCFA, of which 88 per cent went toward curative services and 12 per cent went for prevention (table 3). Thus, government subsidises curative services more than prevention for all health activities combined, but treatment for AIDS patients is subsidised to an even greater extent, even though at the present time treatment can do little to reduce the burden of disease from AIDS.

AIDS expenditures represented 8.5 per cent of total health spending. Most AIDS expenditures were financed by private sources (50.3 per cent) as compared to government (42.0 per cent) and donor sources (7.7 per cent). Treatment expenditures (92.5 per cent of total expenditures on AIDS) were far in excess of prevention (7.2 per cent) or mitigation (0.3 per cent) expenditures. Households, insurers, and employers together paid more in curative AIDS expenditures than the government (54 per cent vs. 43 per cent). Expenditures for prevention were mostly borne by donors (63 per cent) as compared to the government (37 per cent).

The cost of hospital stays represented nearly half (48 per cent) of the cost of AIDS treatment, followed by drugs (15 per cent), ambulatory day care (14 per cent), and consultations (6 per cent). Expenditure on AZT and other newer AIDS drugs was thought to be minimal but could not be quantified from the data available to us.

Privately covered patients represented only 5 per cent of all AIDS cases but 27 per cent of all treatment expenditure, while rural patients accounted for 17 per cent of AIDS cases and received only 3 per cent of expenditure. On the other hand, other Abidjan patients and civil servants received roughly the same share of treatment expenditure as their proportion of the total caseload (10 per cent and 51 per cent, respectively).

The government subsidised the greatest percentage of costs for urban patients: 63 per cent for Abidjan and 59 per cent for interior urban patients. This share exceeded the government percentage subsidy even for civil servants (44 per cent). The poorest category of patients (rural) received the least subsidy by the government (38 per cent), except for those privately covered patients who were not directly subsidised by government (but may have enjoyed substantial indirect government subsidies by virtue of their greater access and utilisation of government facilities).

Section Four: Determinants of expenditures

The very high percentage of expenditures on curative services is strongly determined by hospitalisation costs. The fact that hospitalisation costs are very high in Côte d'Ivoire may be due in part to the large number of hospital beds, especially in Abidjan, with three tertiary, university-teaching hospitals, and also to the fact that there are many, relatively more expensive, private hospital beds.

The predominance of hospitalisation costs is also likely related to patterns of health care-seeking behaviour among the population and to referral decisions by caregivers. Many people are conditioned to seek and expect

hospitalisation when they become critically ill, regardless of whether the hospitalisation is likely to cure them. The expectation that effective drugs might be available in hospitals, whether that is the reality, probably also contributes to the patients' expectation to be hospitalised. Some patients may also seek a reduction in the stigma attached to AIDS through hospitalisation since doctors often protect AIDS patients and their families by giving some other diagnosis besides AIDS. Caregivers are trained to treat intensively with hospitalisation when the patient is critically ill, and since they do not directly bear the costs for hospitalisations, there is little incentive for them to decide to withhold it. The lack of good alternatives (home care or care in the community) for both the patient and the caregiver allows this pattern to continue. *Espoir Côte d'Ivoire*, an Abidjan-based organisation with donor support, provides nonhospital care to some urban patients, but even its services are too costly to be replicated nationally.

Privately covered patients incur the highest costs per case most likely because they are wealthier and because most of their expenditures (estimated to be 80 per cent) are financed by insurance, which encourages unnecessary utilisation. Generally, employers pay most of the insurance premiums (Koné et al 1994). Rural patients, on the other hand, have fewer disposable assets to begin with and have less ready access to facilities than do urban patients. Transportation expenses and costs related to leaving subsistence farming occupations are also disincentives for rural patients to use hospitals. Also, there is, in general, little capacity to treat AIDS patients through primary care in the periphery. It may be that medications are less available in hospitals that serve rural patients; this factor is a relative disincentive for rural patients to seek care.

The fact that donors' expenditures are predominantly directed toward prevention is consistent with most other African countries. In general, donors believe that prevention strategies are the most important long-term approach to reducing the burden of disease. Undoubtedly, the financial straits of the Ministry of Public Health, together with the salient demand for crisis-type curative care, have constrained the government's expenditures on prevention, and there are at present no government programs to mitigate the effects of AIDS on families of patients.

The expenditures of approximately 60 small NGOs in Côte d'Ivoire active in AIDS are difficult to analyse for lack of access to information. In general, their financial resources are meagre. Many are involved in prevention, mitigation, and curative care. The Association d'Auto-Promotion Sanitaire et Urbaine (ASAPSU) is a prototype of such NGOs. Their expenditures are determined in part by the decisions of local health councils as well as their own staffs. They reimburse for hospital and drug expenses; conduct community-based information, education, and communication activities on a partly volunteer basis; and provide support to families through home visits. At present there are no coordinating

mechanisms for NGOs that might facilitate a rationally planned approach and the development of synergies and shared resources.

Employer and insurance payments are determined by the requests of employees and subscribers for reimbursement. Though work-site preventive strategies are potentially effective, there has been little demand for them and little leadership. Employers probably contribute to offset funeral expenses, a form of mitigation, but the extent to which this occurs is unknown.

Notes

- 1 While this approach identified most government and donor prevention and mitigation activities, it possibly excluded certain regional in-kind contributions. For example, USAID supports the social marketing of Prudence condoms in Côte d'Ivoire as part of a regional programme of social marketing. As neither the NACP nor the Ministry of Health was involved in the financial management of this programme, the NACP did not report any costs for subsidising the sale and marketing.
- 2 To estimate the breakdown of total health expenditure by use, we assumed that half of the expenditures at the primary level, 10 per cent of expenditures at the secondary level (general hospitals), and none of the expenditures at the tertiary level (university and regional hospital centres) were spent on prevention.

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