

AIDS and Health Strategy Options: the Case of Côte d'Ivoire

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In this article we deal with two questions. The first can be stated as follows: To what extent are anti-AIDS measures consistent with other aspects of health strategy? The second relates to issues of equity: Are the choices revealed by an examination of the health strategy really ethical?

The two questions are interrelated, because -- resources being limited -- equity demands that all the measures adopted be equally cost-effective. We will therefore begin by examining the most obvious aspects of the problem, which show that the reasoning underlying the AIDS strategy is quite different, after which we will identify the various elements upon which a new approach could be based.

I. The First Decade: AIDS -- a Ministry of Health Priority?

“From 1987 to 1992, direct and indirect contributions by the Ivorian Government to the PNL (National Program for Control of AIDS) essentially consisted of paying the salaries of government employees assigned to the Program, together with the maintenance costs of the premises provided. Thus, it provided CFAF 11.4 million (US\$22,800) in 1997 for the salaries of seven staff members in the Program.

“From 1993, the Government added a specific item to the General Operating Budget of the Ministry of Public Health. This was intended to cover expenditures on operating costs, IEC (information-education-communication) and prevention, training, publications, and support for NGOs and ministries. Although originally launched to support the AIDS and STD control program, the item was extended in 1995 to include the tuberculosis program.” ([1] page 48.)

The funding increased from CFAF 60 million in 1993 to CFAF 450 million in 1995 (with the inclusion of antituberculosis activities), CFAF 650 million in 1996, and about CFAF 800 million in 1997. Its share of the Health Ministry's General Operating Budget was 0.15% in 1993 (38 billion) and 1.25% in 1996 (52 billion) ([1] page 48).

In fact, this item was financed to a considerable degree by EDF. This Fund provided the entire amount of financing from 1993 to 1995, and more than half in 1996 (CFAF 350 million, out of the total CFAF 650 million -- [1] page 48). The total for this line item is not sufficient to finance large-scale activities. In 1996, the grant to the NGO Espoir-CI alone amounted to CFAF 100 million ([1] page 49).

Obviously, the total operating costs of CNTS (the National Blood Transfusion Center) could be added to the list of activities financed under this special line item, given that the Center was rehabilitated in 1990/91 because of the problem of blood safety. (The cost of

rehabilitation -- CFAF 900 million -- was met by EDF; in 1996, EDF also financed the conversion of blood banks into blood deposits, the cost being CFAF 145 million.) Operating CNTS costs the Government about CFAF 650 million ([1] page 49).

To these expenditures by the Ministry of Health can be added the spending of other ministries that were invited to submit sectoral plans as part of the preparation of the Second Medium-Term AIDS Plan. Overall, their total for 1994/95 is equal to the amount shown in the "AIDS" line item of the Ministry of Health's General Operating Budget ([1] page 50). The annual grand total for all ministries is about US\$2.5 million, on paper, because the other ministries have been waiting for the Health Ministry to subsidize them, and therefore not all sectoral plans have been implemented ([1] page 51) !

In practice, therefore, the operating costs of the PNLs were financed by WHO from 1987 to 1995, and thereafter by UNAIDS. WHO's contribution over the 1987-95 period totaled about US\$4 million (an annual average of US\$400,000, or CFAF 200 million). In 1996/97, UNAIDS will have provided US\$200,000 (equivalent to CFAF 100 million) ([1] page 52).

AIDS-control activities have also been financed by donors. "The first substantial AIDS-control initiatives were implemented as part of the 1987/88 Short-Term Plan, and were mainly concerned with blood safety. The European Union (EDF) financed rehabilitation of CNTS (...), at least in the capital and two other large cities (i.e. the Bouaké and Korhogo Regional Blood Transfusion Centers), providing CFAF 900 million between 1989 and 1992, while the French Cooperation Agency financed technical assistance for CNTS, equipment for serological diagnosis, and a number of prevention and AIDS-awareness initiatives." ([1] page 52.)

An initial meeting for mobilizing donors was held on June 20 and 21, 1989. They were asked to finance the first Medium-Term Program, with each of them developing "projects managed on the basis of agreements entered into with the Government." ([1] page 44.)

"The main donors contributed US\$13,833,000 over the 1993-95 period (US\$4,611,000 per year) toward control of the HIV/AIDS epidemic" ([1] page 53), the annual figure being equivalent to CFAF 2.3 billion. In 1996, donors provided a total of US\$9.8 million (CFAF 4.9 billion) for AIDS, STD, and tuberculosis programs ([1] page 47).

1994 saw the launching of the 1994-98 Strategic Plan, prepared in cooperation with the World Bank and UNAIDS, and immediately -- at the suggestion of the World Bank -- preparations began to be made for a National Health Development Plan (PNDS) for the 1996-2005 period.¹ Over its first three years, this latter Plan will cost CFAF 132 billion, with CFAF 13.6 billion (10.3%) devoted to AIDS, STDs, and tuberculosis (6.8% in 1997, 3.3% in 1998, and 3.5% in 1999). (See [1] page 57: The table contains at least one error; the share of total financing allocated to AIDS, STDs, and tuberculosis is not 12%, but only 10%.) In short, expenditures are tending to decline (except for the first year), and donors are still being called upon to provide most of the financing; more specifically, the figure for the Ivorian Government's contribution (CFAF 51 billion over three years) is completely unrealistic.

¹ TRANSLATOR'S NOTE: The Plan focuses in particular on AIDS control.

To summarize, AIDS-control activities are now perfectly integrated into a strategy specifically designed for obtaining assistance. It could be claimed that the parties are simply acting as is to be expected: faced with donors who are looking for someone to give their money to, the beneficiaries hone the skills necessary for acquiring it. (The donors even organize courses to train them in preparing their applications!) Nevertheless, if all this is to have any real impact on public health, the projects for which assistance is requested must be properly designed and selected.

II. The First Decade: Activities

The earliest activities were concerned with prevention of the sexual transmission of AIDS, blood safety, prevention of nosocomial infection, and provision of care for HIV-positive and AIDS patients.

As regards preventing sexual transmission, satisfactory results seem to have been achieved through promotion of the use of condoms and a process of social marketing, these tasks being entrusted to an American NGO. In 1995, condom consumption (taking into account all distribution sources) was about four per man per year ([1] III, page 4). Condom distribution in Côte d'Ivoire, therefore, is substantial, in relation to its population size and the rates in other countries ([2] p. 318-325), but the true extent of needs is not known. In addition, it is not known how many are sold, how many are donated, or how many are used -- or by whom and in what circumstances.

There have been some IEC activities, targeted to the population in general and special groups in particular; however, these are seldom the result of initiatives by ministries, none of which have established budget line items for such action. Such activities are sometimes carried out by private enterprises, but usually by NGOs. Nevertheless, no figures are available. Moreover, there is absolutely no information available regarding their effectiveness. They have never been evaluated. As regards STD control, diagnostic and treatment algorithms were prepared and applied in 1993 and 1994 for health staff training; however, it was only in 1996 that STD drugs became available through PSP (the government drug-importing agency), and they are still not distributed throughout the country ([1] page 43).

The main point regarding these preventive measures is this: there are strong arguments in favor of targeting them toward the groups most at risk of contracting and transmitting the virus, because of the multiplier effect to be derived from changing high-risk behavior ([2] pages 81-83, 144-146). In Côte d'Ivoire, seroprevalence among prostitutes seems to have declined ([2] page 69), but that may simply be the result of a turnover in that group. Moreover, nothing is known of the results of measures targeted toward -- for example -- STD patients, military personnel, truckers, sailors, etc.; i.e. all the other groups that are most likely to contract and spread the virus (as identified, for example, in [2] page 153, on the basis of international experience). It is not even known whether the necessary task of identifying the groups most at risk for contracting and spreading the virus has been done, and what specific resources could be deployed among these groups.

As regards blood safety, CNTS has been rehabilitated, and blood banks have been turned into blood deposits: "HIV-positive donors are now only 6% of the total instead of

12%, as was the case originally, so selection has been effective. Although 100% of the demand from the Abidjan region is met, blood products are often unavailable in the Center-West and South-West regions. Patients requiring transfusions usually refuse them, for financial reasons, and there are grounds for wondering how relevant the current approach (i.e. the centralization of blood products) can be in light of this problem” ([3] page ii); further, “whereas CNTS was originally planned to supply 200,000 bottles per year, it currently meets 100% of demand with 40,000 bottles.” ([3] page 55.)

In this connection, it must be remembered that in a country where the epidemic is widespread, like Côte d’Ivoire, blood safety -- while certainly being necessary and comparatively cost-effective -- will not have an appreciable impact on the future development of the epidemic ([2] page 151); although it benefits those individuals actually receiving blood transfusions, it is not an efficient way to prevent the spread of the epidemic.

As regards prevention of nosocomial transmission, “activities in the field have been very limited throughout this period.” ([1] page 44.)

Care for persons who are HIV-positive or have contracted AIDS has been discussed only “sporadically” ([1] page 44) with regard to what should be done, or rather what preliminary measures should be adopted; i.e. the preparation of treatment algorithms for opportunistic infections, using the essential drugs available from the PSP; the adoption in 1994 of an inexpensive diagnostic strategy; and the preparation of teaching modules and the organization of training sessions for health personnel. In 1997 (better late than never), “a policy on supplying serological reagents (...) is in process of adoption.” ([1] page 44.)

Similarly, the planning of specific measures for preventing mother-to-child infection did not take place until 1996 ([1] page 45).

Consequently, the outstanding feature of activities in recent years has been how slow the authorities have been to react, and particularly striking have been the difficulties encountered in attempts to solve such obvious problems as how to supply drugs and reagents in sufficient quantities and at the lowest cost. It is hard to call this a strategy, because of the meagerness of resources allocated locally to the study of the problems and to the search for the best solutions from a local perspective. In this particular field of public health, negligible use has been made of the considerable epidemiological research undertaken with foreign technical assistance. The purpose of the activities that were actually undertaken was to improve the quality of care for patients who already had access to care, or to provide information for a very broad community that roughly corresponds to the electorate, rather than to deal with specific areas in which the spread of the epidemic could really be tackled.

From this viewpoint, the strategy that has been selected with the assistance and agreement of specialized international AIDS agencies is consistent with the general health strategy applied by Côte d’Ivoire, which views any new resource as a good thing, provided that it strengthens and develops the existing system, regardless of whether that system and the services it provides are accessible, or whether the services are effective.

III. Care Provided for AIDS Patients under the Existing System

It is possible that, over the last few years, AIDS patients have been making use of hospital services that other patients, at least in Abidjan, had previously left unused:

- Two thirds of patients attending the Infectious Diseases and Pneumology Sections of the Treichville CHU (University Hospital Center) are HIV-positive, as are 44% of those in the General Medical Care Section of the San Pedro CHR (Regional Hospital Center). Rates are lower in first-level health units (e.g. 17% in the public clinic in Marcory -- a district of Abidjan -- and 24% in the Bardo clinic); however, the proportion of patients whose status is unknown remains high ([1] page 115).

- In Treichville, 63% of the patients hospitalized in the Infectious Diseases Section are HIV-positive, as are 53% of those in the Pneumophthiology Section and 19% of those in the General Medical Care Section; this also applies to 19% of those hospitalized in the General Medical Care Section in San Pedro ([1] page 114); however, in these cases also there are many whose HIV status is unknown.

Nevertheless, it is very surprising that the only available survey showed no significant difference between HIV-positive patients and other patients with regard to average daily expenditure on drugs or average total expenditures ([1] III, page 17), any difference favoring the opposite group from the one that might have been expected. This is also probably true of lengths of stay (except for the General Medical Care Section of the Treichville CHU) ([1] page 117), and of the time devoted to each patient ([1] III, pages 123-124); however, these comparisons make no allowance for the different stages the disease may have reached.

It should also be noted that patients do not comply with the prescriptions presented to them at consultations. On average, 4.4 drugs are prescribed for HIV-positive patients consulting the Infectious Diseases Section, but they buy 0.9. The Pneumophthiology Section prescribes 4.2, and patients buy 2.5 (there is no explanation for this comparatively satisfactory behavior). Neighborhood health units, like the one in Marcory, prescribe 3.2 drugs, and they buy 0.4; the Bardo clinic prescribes 4.1, and they buy 0.3. The only exception to this trend is the Anonkouakouté community unit, which prescribes 3.8 drugs, with patients buying 3.1, the explanation being that this unit sometimes provides its patients with generic essential drugs ([1] page 125). HIV-negative patients, and those whose serological status is unknown, are in exactly the same situation (except in the Pneumophthiology Section, where HIV-positive patients are in a more favorable situation than others; however, average spending per patient is higher by far in that Section than anywhere else, standing at CFAF 3,500 -- twice the amount for patients in the Infectious Diseases Section, and four times the amount spent at San Pedro).

The following should also be noted:

- Patients should normally receive the first day's treatment, and then a prescription to present to the private pharmacy; however, the percentages of patients who were able to obtain drugs in the health unit were 25% in the Treichville CHU, 12.3% in the San Pedro CHR, 12.9% in the Marcory public clinic, and 5.3% in the Bardo clinic. In the Anonkouakouté community health unit, 94% of patients received drugs. Nevertheless, the drugs were in fact available in the various units (the availability rate being at least 75%) ([1] page 126).

- Hospitalized patients should receive the drugs available in the pharmacy of the establishment where they are being treated. “Out of a sample consisting of 60 patients in the Treichville CHU and 90 patients in the San Pedro CHR, it was discovered that, taking an average for all sources, patients purchased seven different molecules during their hospital stays (the median being six). Of these seven drugs, an average of two were purchased at the PSP (the government drug-importing agency that supplies all public-sector establishments), and five in the private sector. Of the latter five, an average of three were molecules on the list of essential drugs for the secondary level.” The same pattern was evident in the case of consumables, with each patient purchasing an average of four, one at the PSP and three in the private sector ([1] page 127). The use of PSP drugs whenever possible would have reduced the pharmaceutical bill for hospitalized patients by an amount ranging from about one fifth to one third (according to the figures quoted in [1] page 127).

- The above situation inevitably arises because PSP drugs are the same molecules and in the same packaging as those sold by the private sector at a higher price, and this “draws public-sector drugs into the private and informal sectors, where they can bring additional profits” ([1] page 129). At the same time, the country’s pharmacies have doubled their turnover since the devaluation of the CFAF. As for generic drugs, which are viewed as having a merely charitable function, the total is about 6 billion, while the 1996 turnover for private pharmacies was more than 90 billion.

The following three comments should be made:

- A survey by ANRS/CIE (the French National Agency for AIDS Research) of 120 patients who were monitored for 18 months beginning in 1993 shows that the percentage of those using modern forms of care declined in the final 10 months from 75% to less than 40%. The authors suggest that depletion of resources was the cause ([4] II.3.9).

- Studies by Laurent Vidal (who monitored a group of patients from the two Abidjan tuberculosis centers for a number of years) describe courses of treatment that defy description, combining as they do -- both at different stages and simultaneously -- the use of modern and traditional forms of medicine. These studies also show that treatments may suddenly break off at any point ([1] pages 141-142).

- Very little is known about the rates of seroprevalence and AIDS prevalence at the various socioeconomic levels in Côte d’Ivoire. In the ANRS/CIE survey referred to above (which took its sample from three health units in Abidjan and the hospital in Dabou, a small town 40 km from Abidjan), the patients had more or less the usual standard of education to be expected among the general urban population of Côte d’Ivoire ([4] I.1.6), but their average monthly household spending was much lower than that of households in Yopougon ([4] II.3.5), indicating that they belonged to the middle and lower categories ([4] II.3.3). Undoubtedly, some patients do not attend public health units, and receive private treatment instead; obviously, they are the ones who can afford it.

Patients find it very difficult to obtain treatment, therefore, whether they are HIV-positive or not. Consequently, it might be assumed that the main objective of any public health policy would be to remove all those obstacles to obtaining health care that a government is capable of removing; in particular, any economic obstacles caused by drug prices, and any cultural obstacles that can account for the erratic nature of certain courses of therapy, and for failures to comply with treatment (these problems being linked to some extent to the behavior of health workers). However, the treatment of opportunistic infections and the provision of palliative care will not become any less difficult to organize, and patient care will not become any less defective, until the health system in Côte d'Ivoire can be thoroughly reformed.

IV. The UNAIDS Initiative in Côte d'Ivoire

On the other hand, the UNAIDS Initiative might be viewed as fitting in easily with Côte d'Ivoire's health strategy. How is this Initiative designed, and for whom?

A. The Content of the Initiative

"Under the Initiative,² the ... developing countries involved in the pilot phase will work to adapt their health infrastructures to ensure effective distribution and use of the HIV/AIDS-related drugs, and participating pharmaceutical and diagnostic companies will subsidize purchases of these drugs." ([5] page 1.)

"To date, Glaxo Wellcome plc, F. Hoffmann-La Roche Ltd., and Virco N.V. have confirmed their intention to participate in the Initiative. Companies such as Janssen Pharmaceutica N.V., and Organon Teknika N.V. have expressed interest and are currently reviewing the level of their possible involvement. Discussions are also ongoing with others, and the Initiative is open to all those interested in participating." ([5] page 2.)

"... we must begin with small-scale pilot programmes, involving tough decisions to determine the limits of participation. But the alternative is to do nothing." (Peter Piot, [5] page 2.)

In each country, the following entities will be created:

- A national HIV/AIDS drugs advisory board, under the Minister of Health to devise a national policy, examine needs, optimize available resources, identify the selection of drugs that should be provided and the best ways of making these available to patients, set criteria for the participation of health centers in the Initiative and for the selection of patients, and draw up treatment guidelines.
- A nonprofit company to act as a clearing house for placing orders for products, acting as an import point for drugs, and for managing the subsidies from the companies. "The entity... will be funded by the pharmaceutical companies that use it, [and] will also address related business and logistical issues." ([5] page 3.)

² TRANSLATOR'S NOTE: Based on a collaborative effort between the public and private sectors.

Each company will negotiate separately with each country. “Companies participating in the Initiative will make available a range of HIV-related drugs, including antiretrovirals to combat the ... HIV infection, antimicrobials to prevent and treat opportunistic infections common among people with HIV/AIDS, and antibiotics to treat sexually transmitted diseases (STDs), which have been proven to increase the risk of HIV transmission. In addition, diagnostic companies will provide virological services and tests for patient monitoring.” ([5] pages 3 and 4.)

The following will be the sources of financing:

- “Pharmaceutical companies will provide... drugs at subsidized prices.”
- “Health Ministries will both create new sources of funding and build on existing programmes.”
- “UNAIDS will provide US\$1 million for oversight of the health advisory boards and non-profit companies, evaluation of the pilot phase, and the dissemination of recommendations for applying the... principles in other comparable situations.” ([5] page 4.)

B. Criteria for Inclusion in the Program

What are the criteria for inclusion in the UNAIDS Initiative, as implemented in Côte d’Ivoire? A workshop held in Abidjan in July 1997 seems to have reached the following consensus on the principles governing the selection of patients for treatment:

(1) Those falling into the following categories:

- “symptomatic, with a CD4 count of less than 500 per mm³, and classified in group C of the CDC classification (i.e. patients who have reached an advanced stage);
- “those that have recently undergone seroconversion (initial test results being negative and the second set of results being positive);
- “subjects in group A.” ([6] page 7.)

The above division into categories indicates that the thinking on the subject was not very clear. Subjects in group A are hardly any different from patients who have recently undergone seroconversion; it is simply that the former are affected by the clinical signs of seroconversion.

(2) Those presenting no biological, hepatic, or renal anomalies (a biological assessment is therefore required, with a list of the specific forms of examination to be carried out).

(3) Those whose socioeconomic status can provide them with “the necessary financial resources and understanding of the disease and its treatment to enable them to comply with the treatment provided” ([6] page 8), socioeconomic status being determined on the basis of a social survey.

Naturally, the discussions at the workshop also dealt with the list of establishments that would provide care. The list is limited, of course, because of the standard of equipment and expertise that have to be brought together in order to provide the most appropriate form of treatment and ensure that patients are properly monitored. The consensus that had apparently been reached in July fell apart in November.

The technical constraints that result in only a few establishments being authorized to possess antiretroviral drugs (thus controlling all other establishments and prescribers providing treatment for patients on antiretrovirals) must, however, be reexamined in light of the information available to us regarding the catchment areas of health units in Côte d’Ivoire. Thus, a 1996 survey found that between 90% and 100% of patients in the centers and services examined (i.e. the Infectious Diseases, Pneumology, and Pediatric Sections of the Treichville CHU, the Marcory public clinic, the Anonkoua community health unit, the Abidjan ambulatory and counseling unit,³ the San Pedro CHR, and the Bardo urban clinic in the Southwest region) are city-dwellers, and between 80% and 81% of those hospitalized in these units normally live in Abidjan ([1] III, page 2), indicating that geographical accessibility plays a role even in highly specialized services.

Consequently, the technical and economic context in which this Initiative is being implemented makes it fundamentally inequitable.

³ TRANSLATOR’S NOTE: The unit is located in the Treichville hospital and caters for AIDS patients who do not require hospitalization.

C. Numbers of Patients Potentially Affected by the Program

In the case of Côte d'Ivoire, estimates of the number of people who are HIV-positive range from 600,000 ([7] page 1) to 900,000 ([8] page 1). To the best of our knowledge, there has been no discussion in Côte d'Ivoire of how the UNAIDS drugs for treating opportunistic infections could be distributed. All attention is focused on antiretroviral drugs. "Declared cases of AIDS amount to about 5,000 per year, and it can be supposed that there is massive underreporting, and that the figure should be more like 20,000 cases per year. In terms of access to care, it can be assumed that between 5,000 and 10,000 AIDS patients alone could be identified each year, and could be potentially eligible for antiretroviral treatment." ([7] page 1.)

"If all patients who have reached an advanced stage of the disease (i.e. full-blown AIDS) are to be treated, regardless of their prognosis, we must expect a minimum of 5,000 per year (undergoing bithery or triple drug therapy). Such treatments improve survival rates, and if we assume that survival can range from two to four years at this stage of the disease, the total number of patients could increase as follows:

First year:	5,000
Second year:	8,750
Third year:	11,250

"In the absence of any precise information on therapeutic regimens, it is difficult to calculate the percentages of these patients following antiretroviral bithery and triple drug therapy. It can be reasonably assumed that triple drug therapy would be appropriate for at least 10%-20% of these patients." ([7] page 2.) Calculations by Dr. Anglaret (based on consultations for adult general medical care in the Southern region) suggest that bithery is indicated for about 61,500 patients (i.e. T4 between 500 and 300 per mm³), while triple drug therapy is indicated for about 27,000 (i.e. T4 lower than 200); i.e. more than the number of patients on triple drug therapy in France.

In addition, treatment is indicated for only a few patients who have been infected recently (i.e. within the last three months). "CNTS is the only place where such cases could be identified. There are estimated to be between 30 and 50 cases per year, and they require prolonged triple drug therapy. The duration of this has yet to be determined, but it should not be less than 18 months, according to the present state of our knowledge." ([7] page 3.)

"At present, prevention of mother-to-child transmission of HIV-1 is the only case in which single therapy seems advisable. Its effectiveness is currently being tested. In Abidjan alone, the number of pregnant women benefiting from this strategy (from four to six weeks of AZT) is about 11,000 per year." ([7] page 3.)

The above considerations relate to the use of antiretroviral drugs. No attention has been paid locally to what the UNAIDS Initiative could mean for the treatment of opportunistic infections; however, the number of patients potentially benefiting from the Initiative is only a fraction of the number for whom one could justifiably prescribe antiretroviral drugs. Selection for treatment will inevitably be based on socioeconomic status, and public health specialists must view this with repugnance.

Implementation of the Initiative has not, therefore, been prepared as carefully as it should have been, and moreover it is difficult to avoid the conclusion that the Initiative itself is fundamentally unjust. Nevertheless, that will not prevent it from becoming an integral part of the country's health strategy. The whole issue of treating patients with antiretroviral drugs might make it possible to avoid any sort of health reform. From a political point of view, it would be enough if a small number of handpicked patients were treated, because it would be easy to find medical arguments to justify the selection made. It would also be nothing new in Côte d'Ivoire for international assistance -- as well as national solidarity -- to serve primarily the interests of the higher-income groups.

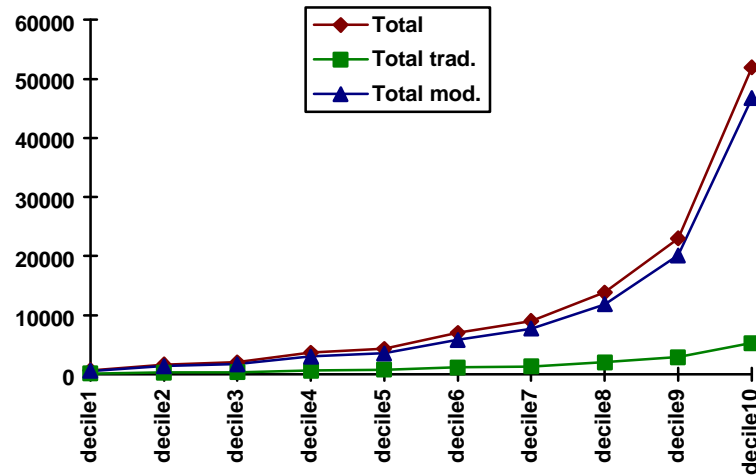
V. A Fundamentally Discriminatory Health Strategy

For decades, the Ivorian health system has strengthened social and economic inequalities. This is because the country had the ambition (mainly pursued in more affluent times) of establishing a health system based on the French model; however, the latter's patterns of hospital organization and university training were not modified in the slightest, and the system was weighed down by a bureaucratic and corporative spirit. The concentration of equipment and qualified personnel in Abidjan, the state of neglect of the rural health units, the disorganization reigning in the PSP until very recent years, and the preponderance of professional and commercial interests in the formulation of health policies (e.g. as regards supplies of pharmaceutical products) have led to some very obvious repercussions: Côte d'Ivoire has a per capita GNP three times larger than those of its neighbors in the Sahel, but its health indicators are scarcely any better than theirs.

Because of these structural shortcomings, the public finances allocated to health benefit the rich more than the poor. By combining the standard-of-living study's findings regarding the use of health services with a detailed study of the applications of government subsidies, a recent study reached the conclusion that: "... per capita health subsidies in rural areas are 34% lower than they are in urban areas, [...] the subsidy going to the poorest quintile is 64% lower than that received by the upper quintile." ([9] page 11.) In other words, in Côte d'Ivoire -- as in other countries -- using health services is a way of obtaining government assistance, but (and this is a comparatively original feature) nowadays in Côte d'Ivoire the rich receive more of this assistance than the poor. This is because the poorest patients hardly use anything but the first level of care, whereas the Government provides very generous subsidies for the tertiary level, which in practice serves the richest patients. Consequently, public-sector health care in Côte d'Ivoire is a mechanism for reverse wealth redistribution (another one -- albeit to a lesser extent -- being education; see [9]).

It should also be noted, for example, that average per capita spending on modern drugs differs by a ratio of 1:60 between the first and tenth deciles in the breakdown of total per capita consumer spending, and that the spread is very much larger in the case of consultations (1:300), and is enormous (contrary to all expectations) in the case of expenditures on hospitalization (1:3,000!). There is an absolutely extraordinary degree of injustice, therefore, in the use of modern health-care systems, as illustrated in the following chart (showing total household expenditures on health, together with spending on traditional medicine and modern medicine). This should certainly provide food for thought for health specialists.

Chart 1 : Average Household Expenditure (in CFAF) on Health, per person and decile: 1993



Source : 1993 Household Survey (INS)

The Initiative is, therefore, fundamentally unjust, at least in the case of Côte d'Ivoire; however, it will be favorably received because it will make the international organizations feel good, because it will allow the country to receive assistance, and because the country's population is used to having an unjust health system. Nevertheless, given that the Initiative inevitably raises the questions of what the priorities in the health system should be and what criteria should be applied when selecting the patients to benefit from the available resources, while at the same time making it necessary to define the roles of the State and civil society (private enterprises, households, and associations or other nonprofit organizations), it is clearly a step in the right direction; i.e. toward control of the health system by nonspecialists.

VI. What Conclusions Can be Drawn from a Consideration of the Initiative's Effectiveness?

Everybody knows -- and a few even dare to say -- that not all African patients will be treated. Many soften the blow by allowing themselves to indulge in somewhat naive ethical considerations. The Minister of Health, for his part, has announced in an internationally broadcast address that the criterion for selecting patients is to be therapeutic effectiveness. He did not go into much detail, merely saying that the treatments would not be given to patients who had no hope of being cured (even though such patients would fall into the "advanced stage" category, which, it was noted above, satisfies the criteria for inclusion in the program). There is clear justification for choosing effectiveness as a criterion, and it is not an entirely new idea, but the repercussions of such a choice could be extremely far-reaching!

Why is it right to take account of effectiveness? Because health resources are scarce and must not be wasted at a time when so many needs are unmet. But what makes a medical treatment effective? The effectiveness we expect is that the patients' life spans will be extended, and their quality of life improved. In the case of the Initiative, effectiveness consists of extending a given number of patients' remissions by a few months. As for the cost of the

proposed program, what has to be calculated in the present situation (in which resource allocation is far from optimum) is not how many billion can be mobilized; instead, we have to consider the opportunity cost; i.e. the number of years of life that could be gained by allocating the same amount of financing to some other health program. These are matters of public health, and we have to be concerned with results in terms of lives saved, and the quality of those lives ([10]).

This reflects an attitude that has been widely adopted since the beginning of the decade. For example, it is now known that, in orders of magnitude (and that is all we need), one disability-adjusted life year (DALY) can be gained in a DPT+polio vaccination program by spending between US\$20 and US\$40, whereas gaining one DALY by treating a case of lung cancer costs about US\$12,000. Such findings are available for about 100 preventive and treatment interventions; all one has to do nowadays is look them up. Orders of magnitude like these can also be expressed in the following way: “An expenditure of US\$100,000 on chemotherapy for tuberculosis could save about 500 patients and prevent them from infecting others, gaining 35,000 DALYs. The same expenditure on management of diabetes would also benefit 500 patients but would save only 400 DALYs; each patient would gain less than one healthy year from a year of treatment.” ([11] page 61.)

The findings of Jos Perriëns and Ken Hill in Thailand in 1996 (referred to in Annex VI of Professor Coulaud’s paper [12]) indicate the survival gains associated with various treatments, as compared with outcomes when antiretroviral therapy is not applied. The largest gain was provided by the AZT + ddI or ddC combination, when used with symptomatic patients, and ranged from 0.89 years (lower limit) to 1.45 years (upper limit).

It has been announced on radio that the UNAIDS program will treat 4,000 patients, and that the cost of treatment would be CFAF 8 million per patient. If the annual program cost were CFAF 32 billion (US\$64 million) and provided two years of survival without disability for 4,000 patients, the cost per year gained would be US\$16,000, and therefore many other types of intervention would be much more cost-effective. Even if the cost of treatment can be cut by half, or even three fourths, the program would still not be as cost-effective as other health interventions, and even in these circumstances much more emphasis seems to be placed on treatment than prevention. The fact that the program can be subsidized would make it possible to increase its cost-effectiveness, but this argument is valid only if the subsidy cannot be transferred to another -- more cost-effective -- program. (Only the funding from the companies is untransferable; however, all the government financing should be.) Anything that would lower the cost of treatment and increase its effectiveness would serve to reduce the cost per year of life gained, and would make it necessary to revise the classifications; for now, however, patient treatment should not be favored over other forms of intervention, and if it is so favored, this is not for any reasons relating to public health.

In the case of triple drug therapies, calculations based on experience in Thailand indicate that the cost per year (of drugs plus monitoring) would range from US\$9,500 (for the AZT + ddI + IDV combination) to US\$13,500 (for the AZT + ddI + RTV combination) ([2] page 180), so that many other types of intervention are more cost-effective.

These ideas have been well-known for a number of years, and are the reason for the position adopted by the World Bank in its 1993 World Development Report entitled “Investing in Health” ([11]), and which it developed once again quite recently ([2]). This

approach calls for "... a strong emphasis on prevention activities starting with those at highest risk of contracting and spreading HIV and covering as many others as available resources allow." ([2] pages 149-150.) This is not the only justifiable strategy, because the introduction of scenarios of explicitly economic behavior into models of the epidemic shows that efforts should be devoted to those at risk rather than to the core group ([13]). However, the practical consequences of this approach have not been assessed to a sufficient degree for it to be taken into consideration here. The following measures should be adopted when targeting the groups at highest risk:

- Governments should provide information (which is a form of *public good*), since it will identify where the people at highest risk are, and show how to reach them, so that the costs and effectiveness of alternative interventions can be evaluated ([2] page 150).
- Governments should subsidize safer behavior among those most likely to contract and spread HIV, ensuring that widespread knowledge, condom use, and the treatment of other STDs become the norm, beginning with the groups most at risk ([2] page 150).
- In countries with generalized epidemics, governments should ensure that the poor have access to the knowledge and means for preventing infection ([2] page 151).

The priority that this approach gives to prevention does not mean that nothing should be done for those already infected. International experience suggests what the cost could be in terms of consultations, hospitalization and drugs, palliative care (for diarrhea, skin rash, cough, fever, headache, pain, nausea, shortness of breath, etc.), prevention of tuberculosis and *P. carinii pneumonia*, and the treatment of the most frequent and comparatively inexpensive opportunistic infections (tuberculosis, thrush, toxoplasmosis, and pneumonia/septicemia). If generic drugs are used whenever possible, in West Africa the cost per patient per year of life gained should be about US\$300 ([2] page 177).

Conclusion

Obviously, foreign experts should not be given the task of defining a particular country's health strategy; likewise, however, countries should not disdain using the best up-to-date scientific knowledge that is available. If we accept this premise, it becomes immediately evident that the method adopted for preparing the PNDS involves totally implicit tradeoffs, and has been based on assumptions that are not borne out by modern thinking on public health issues.

More specifically, Côte d'Ivoire's approach to the UNAIDS Initiative is completely consistent with the health strategy it has adopted over the last three decades, consisting of developing a health system copied from a foreign model, without considering whether the services provided are accessible or effective. As regards the particular problem that concerns us here, the strategy clearly favors providing treatment over combating the epidemic itself; however, a prerequisite for adopting this latter course of action would be the implementation of profound reforms in the health system, and that is exactly what it is felt must be avoided!

Nevertheless, in a situation like this one must not be too quick to use ethical considerations as a justification for rejecting the view that preventive measures targeted toward high-risk behavior are more cost-effective than treating patients by means of antiretroviral drugs. "... [certain] people believe that it is the doctor's duty to do everything possible for the patient in front of him or her, no matter what the costs. But in a resource-constrained system 'cost' means 'sacrifice' (in this case the value of benefits foregone by the person who did not get treated). Thus 'no matter what the costs' means 'no matter what the sacrifices borne by others.' This does not sound to me like a very ethical position to be in." ([14].) "Moreover, if medical ethics include an injunction to deal justly with patients, then there *has to be* some weighing of the benefits to one person against the sacrifices of another. So I think that this supposed ethical conflict between the economists' argument that costs (i.e. sacrifices) must be taken into account *in every treatment decision*, and the precepts of medical ethics, is non-existent, because medical ethics does *not* require everything possible to be done for one patient no matter what the consequences for any of the others." ([14].)

So, does a concern with justice form part of the Hippocratic legacy? If the dictates of professional ethics governed exclusively the relationship between the doctor and each individual patient, they would not be concerned with justice, and the word would not appear in the Hippocratic oath; nevertheless, the oath does contain two absolutely clear references to the idea of avoiding injustice ([15]). The doctor swears to prevent the "regimen prescribed" (i.e. his therapeutic skills) from being used to commit any injustice to patients. The problem of justice arises only when a group of patients, or a population, is the object of consideration, not just an individual patient.

Obviously, a discussion of the cost-effectiveness of interventions can take us still further. It has been shown that the annual cost of treating an AIDS patient, which varies with GNP, is very slightly higher than the annual cost of educating 10 primary school students ([2] pages 38-39). As a result, when resources are limited, providing care means denying education, and *vice versa*.

Such choices are extremely difficult, and in order to make them every society must be aware what values it intends to protect, and its citizens must share in those choices. The technocratic decisions that affect us simply reflect the delicate balance among the various

competing interests, whether these are concerned with commercial benefits or control of the system itself, and such decisions make reference to ethics only when it suits them; i.e. only when such considerations have nothing to say about justice or the dignity of the patient. For decisions to respect the dignity of the individual, the patient has to have risen in status “from being a mere object of treatment to becoming a subject, and a partner of the doctor, with access to knowledge.” (Vidal *et al.* [12] page 121.) Furthermore, the citizen has to have risen in status from being a mere pawn in a pretense of political life to becoming an informed participant and decision-maker.

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