
ANTIRETROVIRAL GLOBALISM, BIOPOLITICS, AND THERAPEUTIC CITIZENSHIP

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Early in 1998, a small youth group in Ouagadougou, Jeunes sans frontières, which had become successful in carrying out model sexual health and AIDS awareness raising campaigns, embarked on a new project. In a small house with a courtyard in an outlying neighborhood of Burkina Faso's capital city, the group opened a "Friendship Centre" for people with HIV. An erratic flow of donated medicines from France provided a small stock for the dispensary – "nothing much," but certainly better than what was available at the nearby state-run dispensary, where years of World Bank mandated cost-recovery had long ago emptied the pharmacy.

The Friendship Centre was successful in attracting people with HIV in its first year – even though there were not enough medicines, there was always at least a warm welcome afforded by Madame Justine, the volunteer receptionist. Madame Justine had come to the group after her husband's death, which she believed had been caused by AIDS. Widowed, and with three small children to support, she had come to ask for support. The charismatic founder of Jeunes sans frontières, Abdoulaye Ouédraogo, couldn't offer her a job, but as she was an older woman he thought she would have the right social stature to be the Centre's receptionist. He suggested she volunteer, and he would do his best to make sure that enough would come her way that she could keep paying her children's school fees and put food on the table.

As the volume of patients grew, an informal camaraderie was struck up in the house's living room, which doubled as a waiting room. Its two wooden couches

around a small table, a shelf-full of AIDS literature, and a large color television and VCR painstakingly obtained through a complicated World Bank program, gave it a homey feel. The patients often sat watching the television, unaware of its complex Bretton–Woods genealogy, exchanging long formulaic greetings as others arrived or left. The TV and VCR anchored the ill-defined sense of solidarity felt by strangers who await the same train. All of them had at some point learned they were HIV positive, and all of them knew that the others were HIV positive too, and some were visibly ill. Yet never, in those first months of operation, did they discuss this situation amongst themselves.

This wall of silence was a common reaction to these early attempts to foster a culture of self-help as a response to the AIDS epidemic in Africa. It did not long resist the onslaught of empowerment workshops, role-plays, self-esteem exercises, and the panoply of confessional technologies that trained people with HIV to “live positively” and “come out into the open,” in order to “break the silence” and “overcome the stigma” surrounding life with HIV in Africa. By 2001, three years after the first attempts at initiating empowering dialogue had resulted in a laconic silence, African activists had begun to take center stage at international conferences and, even in remote villages, people with HIV were starting to talk openly about being HIV positive.

Within that same historical time-span, media coverage of the lifesaving potential of the new combination antiretroviral treatments for HIV furnished a faint glimmer of therapeutic hope, one nourished by contacts fostered by the intensifying institutional networks that linked Northern AIDS activists with individuals such as Abdoulaye and, through him, the people who attend the Friendship Centre. While the millennium marked a huge increase in the numbers of Africans living with HIV taking antiretroviral drugs, the total numbers are miniscule relative to the massive scale of the epidemic on that continent – of the over 30 million HIV positive Africans in 2002, fewer than 10,000 are estimated by UNAIDS to be on treatment.

These individuals, although few in number, have become the vanguard of a much broader phenomena emerging in the wake of the success of transnational campaigns to increase access to the lifesaving treatments in developing countries. This vanguard, I argue here, is much more than a new social movement pre-articulated around explicit objectives. Rather, it is a complex biopolitical assemblage, cobbled together from global flows of organisms, drugs, discourses, and technologies of all kinds. Institutionally, this assemblage roughly corresponds to what others have called an AIDS industry.¹ As AIDS emerges as the foremost issue threatening economic and political futures in many countries around the world, this AIDS industry has become ever-more entangled with the development industry, a salient example of how humanitarian issues are quietly reconfiguring the contours of Bretton–Woods modernity.

The increasing scope of humanitarian intervention in today’s world has drawn attention to how the humanitarian industry constructs a logic of intervention that displaces local politics and contributes to the fashioning of new identities, a process that has been described as “mobile sovereignty.”² The humanitarian “apparatus,”

blending military and biomedical intervention, is a specialized and highly structured crystallization of broader, more diffuse transnational processes wherein a diversity of groups, often referred to as nongovernmental organizations (NGOs), involved in a plethora of activities ranging from advocacy to service delivery, coalesce across different settings around specific issues. Humanitarian issues are most sharply expressed as health issues – threats to the lives and well-being of populations, as in the case of famines, war, and epidemics, are those that call forth the deployment of humanitarian apparatuses and the need for timely intervention.

In this chapter, I wish to capture how the humanitarian/development complex that has emerged around the HIV/AIDS issue has grown to encompass a heterogeneous and uneven congerie of practices and techniques, present and active in everyday life, to produce particular kinds of subjects and forms of life – AIDS activists, resistant viruses, and therapeutic citizens. Within science studies, the concept of “actor-networks” has been advanced to examine how practical and institutional arrangements tie together human and nonhuman agents (such as retroviruses) in order to stabilize scientific facts.³ Certainly, this approach is useful in considering how HIV has been able to stitch together such apparently disparate phenomena as condom demonstrations, CD4 counts, sexual empowerment, retroviral genotyping, an ethic of sexual responsibility, and compliance with complex drug regimens, into a remarkably stable, worldwide formation. In this chapter, I am concerned with describing the forms of action that may result from such networks; specifically, I wish to draw attention to how these assemblages prefigure the emergence of new forms of therapeutic citizenship; that is, claims made on a global social order on the basis of a therapeutic predicament. As I will show here, therapeutic citizenship broadens “biological” notions of citizenship, whereby a biological construct – such as being HIV positive – is used to ascribe an essentialized identity, as in earlier forms of eugenics and racial ordering. Therapeutic citizenship is a biopolitical citizenship, a system of claims and ethical projects that arise out of the conjugation of techniques used to govern populations and manage individual bodies.

The notion of therapeutic citizenship points to the growing transnational influence of biomedical knowledge and practice in the government of human and nonhuman affairs. This discussion draws on the concept of therapeutic economy, which is used here to refer to the totality of therapeutic options in a given location, as well as the rationale underlying the patterns of resort by which these therapies are accessed. These therapeutic options comprise the practices, practitioners, and forms of knowledge that sufferers resort to in order to heal affliction. Therapy always involves a form of exchange and is embedded in “regimes of value.”⁴ Exchange may be monetary, as in the purchase of medicines, or it may constitute “moral economies” as individuals call on networks of obligation and reciprocity to negotiate access to therapeutic resources,⁵ thus drawing attention to the constraints that shape therapeutic itineraries.⁶ In this sense, the notion of a therapeutic economy builds on ethnographic studies that have taken medical pluralism as their object of scrutiny⁷ to emphasize the link between therapies and wider economic and social relations.

As the full social and demographic consequences of the relentless global AIDS epidemic become clearer, calls for increased access to treatment for this disease in poor countries have been made by a coalition of AIDS activist groups, humanitarian organizations, and health advocacy networks. By engaging governments, international aid donors, biomedical researchers, and the pharmaceuticals industry with these therapeutic claims, this coalition has configured a therapeutic economy that conjugates confessional technologies, self-help strategies, and access to drugs in novel ways. This represents an increasingly biomedicalized form of governmentality, and my argument here is that the ways in which these coalitions produce subjects and citizens cannot be limited to the discursive and the material, but increasingly encompass the biological itself.

The Global Biopolitics of HIV: From Prevention to Treatment

Efforts to address the HIV epidemic in developing countries had, until very recently, almost exclusively focused on preventing HIV infection. A first generation of programs was focused on raising awareness through large-scale “information, education and communication” (IEC) programs, assuming that this would lead to an increase in safer sex. This was followed by the adoption of “social marketing” campaigns that sought to generate demand for, as well as supply, what was deemed to be the key preventive intervention: condoms. Condom social marketing represented a significant shift from IEC programs in that it extended beyond awareness-raising to measuring efficacy in terms of condom distribution and sales. These approaches were developed by Northern development agencies that relied on consortia of large international NGOs as implementing agencies. It was in many respects a “top-down” approach, with international agencies targeting the populations of developing countries, and with little local involvement in the process.

A second generation of programs stressed the direct involvement of affected communities in the response to the epidemic, largely through the idioms of “self-help” and “empowerment.” These strategies were a hybrid of approaches pioneered by communities affected by the epidemic in Northern countries, which drew on local forms of solidarity to organize “buddy” systems and support groups, and forms of community organizing indigenous to African, Asian, and South American contexts. A handful of pioneering AIDS groups from Brazil, Thailand, and Uganda were founded by charismatic leaders who were able to obtain funding from progressive foundations and other funders outside of the mainstream development organizations and consortia that implemented the first wave of AIDS programs. Their funding success resulted from their ability to successfully translate Western notions of solidarity into locally meaningful action; most notably, by rephrasing the “buddy” system of therapeutic companionship – pioneered by the North American gay community in the early years of the epidemic – in the post-colonial idiom of evangelical organizing. These local NGO responses became the reference for subsequent attempts to replicate “indigenous” responses around the globe.

These programs encouraged the creation of groups of people living with HIV/AIDS (PWA) and the promotion of people with HIV to visible leadership roles within organizations active in the response to the epidemic. Achieving “greater involvement of people with HIV,” or GIPA, as this approach came to be called after the 1994 Paris summit on AIDS, translated into resources as funding agencies rushed to fund new PWA groups and organizations that undertook to visibly promote persons with HIV in their ranks. Understandably, this stimulated the creation of groups and a plethora of “self-help” and “empowerment” activities, although in the early years many of these seemed to exist more out of mimicry of their Western inspiration than out of any heartfelt desire to participate in self-help groups – a process referred to by development workers as “resource-capture driven.”

Abdoulaye Ouédraogo is the founder of Jeunes sans frontières, the youth group in Ouagadougou that opened the Friendship Centre in 1998. Shortly before, in late 1997, Abdoulaye had gone to Europe for the first time – he had been invited by a French NGO to come and attend a workshop. Traveling to France, former colonial metropole for Francophone West Africa and the primary reference for all that is Western and “modern,” was enormously exciting – an opportunity that few Burkinabè would ever have. At the time, Abdoulaye was spending most of his time putting together HIV projects for Jeunes sans frontières, and once in Paris trips to the Eiffel Tower, the Louvre, and the Champs-Élysées were complemented by visits to the French AIDS organizations whose material Abdoulaye had been reading and whose names were by now important references for him. Abdoulaye took the “exchange and sharing of experiences” purpose of the trip seriously, and as he had been writing about HIV testing centers and counseling groups he decided to visit a number of testing sites and activist groups in the French metropolis. He also had an HIV test, which turned out to be positive. Parisian friends found a doctor who was able to supply him with triple therapy for himself.

After he returned from Europe, inspired by the self-help groups he had seen there, Abdoulaye opened the Friendship Centre and convened – but did not participate in – a discussion group of people who had come to him because they were HIV positive and had heard that Jeunes sans frontières was involved in the “fight against AIDS.” However, none spoke about being HIV positive. Discussion was centered around the details of everyday life and the difficulties of getting by. By 1999, Abdoulaye was faced with a new problem. Some of the people he had invited to the group, he realized, were better off than others – some of them were even able to pay for some form of medical treatment. This would surely “inhibit” any of the kind of fluid discussion that was important to mutual support. “It will only create jealousies and frustrations,” he told me.

During the time he was trying to set up the “talking group,” one of Abdoulaye’s aunts in the family compound fell ill. She had been ill for some time, and unbeknownst to her she had tested positive for HIV at the local hospital. As is customary, the diagnosis was confided to her father, the head of her household, and he had summoned his knowledgeable Abidjan-educated nephew to discuss the matter. Abdoulaye arranged for medical care, and made sure that she was properly looked

after and that basic medications were paid for. Her diagnosis was never discussed. At the time, lifesaving antiretroviral drugs were unaffordable to all but the very wealthy. She died six months later, not having been told she had AIDS.

In the eyes of Western donors, NGOs and other “community-based organizations” (CBOs) were representative, and even expressive, of preexisting communities. Thus NGOs and CBOs could be used to target interventions at these communities and mobilize a response to the epidemic. They became the lynchpin of efforts to get at the roots of the epidemic. However, such organizations can be “artificial,” in the sense that they are not expressions of endogenously occurring collectivities, such as those organized through kinship relations. Programs such as GIPA promote particular kinds of people, in effect conjuring them into existence through testing programs and a wide range of narrative technologies that empower them to represent themselves to others and shape their own experiences.

In harnessing NGOs and CBOs as mechanisms to implement programs, donors actually create new forms of social relations and, over time, new communities. However, these communities do not spring up *de novo*; rather, they are bricolages of preexisting social relations (such as kinship relations), global therapeutic strategies, and local tactics. In this sense, they recapitulate earlier attempts to translate kinship into strategies for accessing and redistributing resources during colonial modernity. In colonial Africa, what are today called CBOs or NGOs were referred to as voluntary associations. These are described in the classical ethnographic literature on urbanizing Africa as “acculturating” and “modernizing” influences, destined to wither away once cultural modernization was complete. More recent historiographic work on Africa suggests that voluntary associations were rather more like social laboratories, sites of heightened reflexivity where the terms of engagement with the new colonial – and global – modernity were negotiated and enacted. Significantly, these social laboratories produced historically robust phenomena, whether large historical formations such as nationalism or the persistence of a myriad of micropolitical forms that continue unabated in contemporary everyday life.

From Diagnosis to Therapy; From Biosociality to Biopolitics

Between 1994 and 1999, it seemed as though the disconnection between “coming out,” or talking about one’s experience of being HIV positive, and “solidarity” or self-help would remain refractory to the best efforts of westerners to bring them together. For the development workers with whom I spoke, it seemed obvious that self-disclosure was cathartic and a first step to the organization of therapeutic social relations. Although Abdoulaye said he believed this too, this was belied by the differential manner in which disclosure occurred around him.

Abdoulaye told me that, after his initial depression upon discovering he was HIV positive in Paris, he did not speak to anyone about it. After all, whom could he trust in Ouagadougou? As the leader of *Jeunes sans frontières*, he told me he was afraid

that “it would discourage everyone in the group, if they find out that even I am positive too.”

The Friendship Centre’s World Bank television set was a welcome source of diversion, but ultimately *poulet télévisé* (the local term for the chickens grilled on a spit, referring to their presentation behind a window) would have been more welcome. Talking about being HIV positive was of little relevance when the pressing concerns were about getting food and medicines.

Things began to change, however, in early 2000. By then, Abdoulaye had been on his antiretroviral treatment for three years, managing with donations from his Parisian doctor. Together with him, Abdoulaye had devised a treatment plan to deal with erratic supplies; he would just switch medicines according to what he had on hand, making sure that he was taking at least three different and complementary drugs. He had bought a small fridge to store those medicines that had to be refrigerated. As a result, by late 1999 his T4 cells had shot up, from 14 to over 400; the virus had been undetectable in his blood for almost three years.⁸

He put on weight, regaining the stocky build of his early twenties. His wife also thrived with a supply of medicines from Marseille, but his daughter Salimata was often ill with fevers. While this is not unusual for a child in West Africa, Abdoulaye was distraught every time she took ill. For the first year of life, HIV tests are unreliable, as infants have their mother’s antibodies and, Fatou being positive, Sali would have been positive too. By the time she was two, Sali still had not had a test, even though it could have been reliably ascertained whether or not she had contracted HIV from her mother at that point. By that time, Abdoulaye had resigned himself to preferring uncertainty – punctuated by attacks of anxiety every time Sali had a fever – to risking the certainty of knowing his daughter had HIV.

Meanwhile, Abdoulaye’s visible recovery was not without an impact on his surroundings. Rumors circulated that he had supernatural healing powers, and this brought a new influx of the ill to the Friendship Centre. Those who knew about his consumption of medicines did not suspect HIV, he told me, because he had always been “easy to take medicines,” a modernist quirk that his Ouagadougou friends assumed had been acquired in Abidjan, where, like many Burkinabè, Abdoulaye had been born and raised. His stock of antiretrovirals did seem ostentatiously modern, laid out in their brightly colored boxes by the foam mattress he slept on in the adobe room in the family courtyard where he lived.

The doctor in Paris was also impressed, having “never imagined” that such a striking clinical response could have been obtained with rotating medicines and a long-distance therapeutic relationship. As a result, from early 1999 Abdoulaye left his doctor’s office with armfuls of medicines that had been collected for other patients in Ouagadougou. By 2000, Abdoulaye was telling some people he was HIV positive, but “only my friends who are taking the test or have taken it,” he told me, “because only they can understand.” That year, he moved out of the family compound. His daughter’s frequent illnesses had led to his aunt being accused of witchcraft by the other women in the family compound. As I helped him pack up his antiretrovirals in

their pristine packages, Abdoulaye told me he was “tired” of these “African stories” and wanted a holiday.

Faced with the influx of newcomers at the Friendship Centre, Abdoulaye tried again to start a “talking group.” Initially, the patients maintained an awkward silence. Discussion invariably turned to the problems of material subsistence. In the words of a European psychologist who tried to work with the group, “these people are completely overwhelmed by their material needs and difficulties – how can you expect to do any psychological work until these more basic issues get resolved?” The laconic nature of these exchanges, whether in Abdoulaye’s discussion group or in his own family, would seem to point to the difficulties of fostering an ethic of self-help oriented around a biomedical diagnosis and a culture of talking. At first glance, it could be surmised that ease of self-disclosure, and the ability to generate therapeutic communities on that basis, is a cultural particularity of westerners in general and Americans in particular. However, these have proven to be robust even in the alien soil of an impoverished Africa. Abdoulaye’s persistence paid off, and gradually over the next two years, the “talking groups” flourished as more members joined and awkward silence gave way to at times animated discussion. The subject of discussion, however, was not the kind of self-disclosure familiar to North American readers steeped in a culture of talk shows and confessional media, but a more pragmatic to-and-fro about the vicissitudes of everyday life.

Abdoulaye’s, and *Jeunes sans frontières*’ story is not unique, and parallels the evolution of community groups that inevitably moved to being confronted with the problems of persons ill with HIV after having started out in prevention work, extolling the benefits of condoms, safer sex, and HIV testing. Community groups involved with AIDS inevitably have many HIV positive people who know their diagnosis amongst their members – either because they join these groups in the hope of getting access to treatment or they take the test themselves (as Abdoulaye did) in order to “practice what they preach.” Encouraging testing is one of the pillars of development agencies’ prevention strategies, the argument being that testing is a powerful tool for raising awareness and changing behavior. In countries with a high prevalence of HIV, the odds are good that some of those tested will turn out to be HIV positive.

Training Africans with HIV to “come out” with their stories of being diagnosed, and living, with HIV were the cornerstone of development organizations’ attempts to foster self-help. It would be a mistake to take these early silences, as we have seen, as evidence that these techniques were culturally inert and pragmatic failures. These confessional technologies, deployed by the AIDS industry, were taken up by individuals to fashion themselves. The evangelical idiom within which “living positively,” “taking responsibility,” and “caring for others” was phrased was not merely a form of religious mimicry, but an ethical project, a way of integrating being HIV positive in a moral order. The direction this ethical project took was determined by the inequalities inherent in the global therapeutic economy.

The evolution of contemporary PWA groups and other community organizations initially “recruited” into the battle against a terrible epidemic shows how they, like

their historical predecessors, do act as social laboratories where globalized discursive forms – from discourses such as GIPA to discursive practices organized around “self-help” – are negotiated and indeed fashioned. The story of Abdoulaye and the patrons of the Friendship Centre indicates how testimonials and other confessional technologies, used by the AIDS industry to foster self-help and empowerment, fashioned local subjectivities and social relations, something I will return to later. HIV/AIDS led to the organization of social relations according to a shared biological affliction, inadvertently in the case of many community groups drawn into awareness-raising campaigns by the availability of donor funding, and explicitly in the case of the PWA groups that were funded by GIPA programming.

What was at stake in these social relations, mediated through various NGOs, was dramatically raised by news of the lifesaving potential of antiretroviral treatments. What may have been regarded as just theatre, mimicry-for-money, became a matter of life and death. In retrospect, it seems that the arrival of the antiretrovirals subtly shifted what was at stake in the discussion groups. With circumspection, Abdoulaye and an inner circle of Friendship Centre staff began to carefully – “little by little” – distribute the medicines. He explained to me that they used the talking group to identify candidates for the medicines – those who came regularly were more likely to observe the rigorous treatment schedules, and those who “contributed” most to the group were favored. These “dynamic” members should have access to treatment, they reasoned, because they would be able to help others more than those who remained passive. The “talking group” began to fulfill a function unintended by those who championed it as a model of self-help: it served as a kind of laboratory for determining how to identify those who should have access to treatment. Thus, the self-help group functioned as a triage system, a method for determining who would benefit most from medicines – just as in wartime, when military physicians must decide who of the wounded can be saved and who cannot.

Biopolitical Production and Antiretrovirals

These micro-ramifications of GIPA show how policies developed in geopolitical centers take on a life of their own in the peripheries where they are enacted; however, they also indicate how techniques for managing populations and bodies produce particular kinds of subjectivities. Foucault used the term “biopower” to group these forms of the government of life together and map the transformations in the nature of power and sovereignty in the modern age. While the globalization of HIV/AIDS prevention set the stage for the emergence of a globalized politics of access to treatment, it also shows how a biosocial formation – self-help organized according to a biomedical diagnosis – can articulate with biopolitical processes. But here, in the globalized therapeutic economy of the current age, the biopolitical production of subjects becomes ever more intimately tied to the biomedical.

Organizations such as *Jeunes sans frontières* inevitably find themselves confronted with the issue of treatment for their own members as well as those who come to

them for help. Ultimately, access to treatment is contingent on social relations and the ability to capitalize on social networks. *Jeunes sans frontières* made treatment decisions based on a social calculus: Who would translate improved health into the greatest good for others? This explicit form of local triage is, however, the exception. The lucky few who obtain antiretrovirals do so through contacts with northerners. For these individuals, the key to survival is to be able to “tell a good story.” Stories may mediate access to medicines by being told to the right person or, more significantly, can get the teller to a European haven. French authorities, like those in other European countries, quietly renew foreigners’ residency permits when they are HIV positive, subsequent to domestic political pressure denouncing early deportations of HIV-positive Africans. Many of the founders of the first PWA groups now live in Europe, having stayed behind after obtaining a visa for a conference or having gotten sponsored by fellow activists. The lucky ones found work with European AIDS groups; others scrape by, at least assured of free treatment. These early activists were the vanguard of a small movement of Africans who migrate to the North to obtain treatment, a fact that has come to the attention of HIV clinicians in Europe and Canada. To those who are left behind, these therapeutic migrants are the truly lucky ones, whose stories got them to Europe.

The UNAIDS Initiative and the Local Biopolitics of Treatment

As we have seen, confessional technologies were initially used to attempt to elicit narratives of distress as a means of fostering mutual support. In a context of material want and of growing awareness of the benefits of treatment, these narratives were used tactically – either to improve one’s own chances of obtaining treatment or to select those who could best benefit from obtaining medications. As *Jeunes sans frontières*’ pragmatic decision-making around using antiretrovirals makes clear, once biosocial relations were in place, the biological potency of drugs articulated these social forms to predicaments where what was at stake was eminently biopolitical: a question of the government of life.

This biopolitical dimension emerges clearly when examining the strategic positioning that narratives must take when used to negotiate access to resources mediated through large, stable institutions. In the early years of the therapeutic revolution ushered in by the new “cocktails” of antiretroviral drugs, few options existed outside of the informal networks scaled by those with the social and symbolic capital necessary for reaching sites where resources could be accessed more easily.

The inability of public health care institutions in Africa to offer much in the way of accessible services to the general population is well known, the result of decades of structural-adjustment mediated underfunding and ill-conceived schemes to “recover costs” from users who cannot possibly pay. The HIV epidemic only exacerbated the situation, by increasing demand for services at the same time as the burden of illness meant that those who needed it were in even less measure to pay, a marked example of the illness/poverty trap. Private for-profit institutions treat those with HIV only as

long as they can pay, at times with treatments of doubtful efficacy. The AIDS industry's efforts had neglected medical treatment for people with HIV, preferring to concentrate on prevention and, in a minority of cases, "cost-effective" interventions aimed at offering people with HIV "care and support": largely supportive listening and home-based palliative care. In those early years, the only exception to this was a UNAIDS initiative that attempted to make antiretrovirals available to the general population.

The UNAIDS initiative was a pilot program coordinated by the agency to improve access to antiretrovirals – programs were launched in Chile, Vietnam, and Côte-d'Ivoire. The agency hired a consulting firm to negotiate reduced prices for antiretrovirals with pharmaceuticals firms and implement a local distribution system. In Côte-d'Ivoire, the government pledged one million dollars to a drugs purchasing fund that would be used to subsidize the purchase of antiretroviral medicines. Interestingly, UNAIDS did not itself make any financial contribution to drug purchases, as this was "beyond their mandate" as a "co-ordinating and technical support agency." For UNAIDS, this was to be a pilot project to demonstrate the feasibility of using "private-public partnerships" (public funding to purchase drugs produced by the private sector, which would guarantee reasonable prices).

The program got under way in late 1998, recruiting patients at the Infectious Diseases Service of the Treichville University Hospital, one of the city's TB control clinics, and at a handful of NGO outreach sites. The program quickly became embroiled in controversy. Several hundred people were treated through the program, although the subsidies were insufficient to allow them to keep paying for the drugs for more than a few months. Almost all of those who continued could only afford inadequate two-drug cocktails. As a result, the majority became resistant to these drugs, as demonstrated by their CD4 counts, viral load measurements, and resistance testing done by the CDC's retrovirology lab in Abidjan, Projet RétroCI. The laboratory data collected by CDC was compromised by the irregularity of follow-ups, which meant that blood specimens were collected at more or less random intervals, rendering any kind of meaningful epidemiological analysis difficult. Prescribing physicians, who had been selected from a variety of public health institutions across the city, had minimal training in using the drugs, limited to a three-day seminar conducted by a French AIDS NGO.

The selection criteria for subsidies were never made clear. One group of activists, which had been quite vocal at the Geneva AIDS Conference in 1998, received an unprecedented 95 percent discount and were able to afford the triple therapy cocktail with this subsidy. Curiously, the group ceased to be visible on the local AIDS scene at about that time. The coordinator of the program explained to me that the generous subsidy had been an administrative error. It was never clear what role the distribution system was to play, and the whole program became quickly mired in an ongoing corruption scandal that resulted in the suspension of European Union aid to the country. It subsequently emerged that the prices that had been negotiated by the consulting firm were in fact going market rates, and that as prices for antiretrovirals dropped through 2000 and 2001, the program was briefly locked into a higher price.

The 1999 coup complicated things even further. According to the incoming military government, outgoing officials had looted the Treasury and the state was near bankruptcy. The military government's evaluation was credible, given the financial track record of the previous government. Arrears to the Public Health Pharmacy, which purchased the antiretrovirals, mounted to the point of compromising its ability to purchase other essential generic medicines. Discontinuations in ARV purchases ensued that, combined with poor inventory management, led to sustained interruptions of deliveries of antiretrovirals. Thus, throughout 2001, the supply was patchy at best, meaning that almost all those on the UNAIDS program had intermittent, partial therapy – a situation certain to generate drug resistance in all involved patients. While the situation was denounced, and some patients even went on a hunger strike, little could be done.

In retrospect, it seems that it was unreasonable to expect that Abidjan's crumbling public health facilities should have been to shoulder the burden of such an ambitious program. Staff in hospitals and clinics complained that they were not compensated for the extra work that the program entailed. Furthermore, it seems that, after launching the process, UNAIDS did not follow through as enthusiastically as it might have with technical support to monitor drug procurement and distribution, and training of physicians. Subsequent evaluations of the program were conducted, and indexed "dysfunctional institutional relationships" and "fuzzy decision-making," as well as lack of technical support and resources, as contributing to the program's mitigated success.⁹

While the program was intended as a demonstration, a pilot project, it needs to be also understood as obeying a specific biopolitical imperative. The French had for some time been arguing that treatment needed to be part of the fight against AIDS in developing countries, and Côte-d'Ivoire, the jewel in the post-colonial French crown, was to be a showcase; similarly, UNAIDS was being held accountable to an AIDS activist constituency that was increasingly vocal about the issue of access to antiretroviral drugs in developing countries. At one level, then, the UNAIDS Ivoirian initiative was more about showing that something was being done for political ends domestically and internationally than about achieving meaningful public health results. It should be underlined that, precisely because of the high political stakes of the program, its evaluation had benefited from an unprecedented degree of transparency from Ivoirian officials, who were held accountable both to a local HIV-positive public and a wide international audience. The preferential involvement of groups of people with HIV should also be seen in this light.

Little commented upon was the observation that a large number of the initial group of patients were found to harbor drug-resistant virus – sure evidence that they had had already had partial access to ARVs.¹⁰ The decision to start off with biotherapy, taken under material duress, was in retrospect a perilous one, for it could only lead to short-term therapeutic efficacy that wore off as patients quickly developed resistance to the two drugs they were treated with. The situation is analogous to that described by Farmer and colleagues, who showed that multidrug-resistant tuberculosis epidemics in Peru and then Russia were directly attributable to inadequacies in

government TB control programs, and evidence of the perils of scaling back of global health capacity in an era of globalized health expectations and therapeutic resort.

The outcome of the program – expanded access to antiretrovirals and clear short-term therapeutic benefit, but also partial treatments and drug-resistant viruses – reflected the welter of conflicting organizational and individual priorities. International consultants set up an unwieldy drug procurement and distribution mechanism that neither patients nor physicians knew how to negotiate; local priorities did not necessarily correspond to the concerns of international organizations. The gap between local patterns of resort, the therapeutic economy within which that occurred, and international humanitarian imperatives, was one that only a few could bridge – as in the case of the one group that was able to get a 95 percent discount on drug prices from the program.

How patients got access to drugs through UNAIDS' initiative in Côte-d'Ivoire contrasts with *Jeunes sans frontières*' tactical form of social triage. In Abidjan, at least, allocation of treatments obeyed programmatic imperatives about treating the greatest number of patients while balancing conflicting agendas, resulting in a worst-case scenario in which many got partial treatment and, therefore, resistance to the drugs. For the majority of patients, the institutional landmarks within which strategies could be oriented were absent; indeed, the only individuals who were able to successfully leverage full treatment were the members of that small group who correctly “read” the political dimension of accessing treatment.

From Local to Global Biopolitics

Confessional technologies, therapeutic tactics, and biopolitical strategies are, as we have seen, most legible in the local frame of everyday life. However, consideration of the global therapeutic economy requires they must be read in the context within which the creation and dissemination of biomedical knowledges and practices occurs globally. The UNAIDS program showed how global biopolitical goals may not be effectively translated into locally available strategies. In contrast, a local initiative in the same city was able to expand its social relations internationally to access resources: the Abidjan Institute for Biomedical Research. It was founded in 1995 with the intention of treating people with HIV without outside help, and attracting clinical research to expand access to treatment to those who could not afford even the cost of ARVs. Like *Jeunes sans frontières*, the Institute's drive stems from the charisma of one individual, and its therapeutic mission from that individual's experience with illness. However, in the case of the Institute, the ability to translate that experience into concrete resources for people with HIV in Africa derived from its founder's position in a well-placed social network that spanned Abidjan and Paris.

The Institute was the first institution in West Africa to concentrate on the issue of treating people with HIV openly, long before it became fashionable amongst international agencies, and even before local groups realized that this was an issue at the very heart of their own survival. Bertrand Dupont, a surgeon, is the Institute's

founder, driving force, and current director. Dupont banked that there would be a market of paying patients who could keep the Institute running, and wagered that if he could attract the research infrastructure he would then be able to use clinical trials to treat patients for free. As the son of prominent settlers, he was able to access and mobilize networks of support in the metropole, contacts that led him to meet and finally persuade Professor Luc Montagnier, hailed as one of the discoverers of HIV, to raise funds to fully equip a laboratory in Abidjan. Dupont's "village" was the cosmopolitan sphere that linked Abidjan and Paris. Dupont's maverick style allowed him to scale networks and "go to the top" to mobilize resources.

But Dupont's trump card in the battle for research resources is not the Institute's laboratory facilities, as impressive as they are. It is its loyal cohort of patients. Being able to put together, and retain, a cohort of patients is a greater challenge than setting up a laboratory, and patients are the key ingredients to conducting clinical research. Being able to conduct clinical research in Africa will become increasingly important as the pool of patients who have not been yet treated with antiretrovirals dries up in Northern countries, and with the advent of vaccines that will need to be tested against the strains of HIV circulating in Africa. Yet it is only now that the idea of using research to drive resources into African clinical settings is starting to gain currency.

This is because it has been widely believed that conducting clinical research in African settings is fraught with "cultural," as well as economic, barriers. African patients, it is often said, and not only by Western physicians and bureaucrats but by African physicians as well, are notoriously "noncompliant." Why? The common reasons given are because "they go to the witch doctor," "they do not return for appointments," and "they stop their treatments when they feel better." This way in which efforts to improve patients' access to treatment is dismissed contrasts with the colonial period. Then, patients were more actively sought after – so much so that they were forcibly injected or were even interned for treatment. The colonial medical authorities' frustration with this kind of behavior in the face of their well-meaning efforts led them, at times, to blame the natives' evasiveness on ignorance, irrational fears, or even moral ineptness. Nowadays, frustrated physicians and public health officials – most of them African – resort to culturalist explanations, blaming patients' noncompliance on the ease with which they either resort to what is offered in "the village" or just stop coming back once they feel better.

The Institute's patients, however tell a different story. In the first year of the Institute's operation, over 900 patients consulted there, and half of them came back, a retention rate considered to be excellent by clinical epidemiologists. Many do not return because the \$7 consultation is expensive and, if they are poor, they are told to save the consultation fees by coming back only if they are ill. Those for whom the registration fee was not an obstacle kept coming back regularly because they felt well treated – "the receptionist is always friendly," or "the doctor explained things to me." Patients were appreciative that an effort was made to give them appointments rather than it just being expected that they would turn up and wait, as is the case in the public sector. Rudeness, long waits, and "not being told anything" were patients'

most common complaints about the welcome they received in public institutions. In these institutions, staff cited lack of time for not explaining things to patients, frequently adding that patients would not understand anyway. While this is often the case, I found that a fear also exists that by explaining and demystifying medical knowledge, practitioners will lose some of their status and prestige.

Considering it normal for staff to barely speak to patients (“treating them like animals” commented one physician, who had left the public service) makes it easier to blame patients for not complying with medical treatment. Dupont, while at times perfunctory in his explanations to his patients, instilled a culture of explanation at the Institute that had served him well in building up his private practice. His almost abrupt familiarity reassured patients, as did his popular ways of “acting like everyone’s brother,” as some put it. He succeeded in dissolving the hierarchy that normally separates patients from physicians.

Dupont was, I was told by expatriate French I interviewed, the first Frenchman to be infected with HIV in Abidjan. This happened between 1980 and 1983, when he cut himself while operating at the Treichville University Hospital. Dupont’s patients returned to him even after news of his diagnosis wound its way through the grapevine, as they were already a loyal clientèle. There is no doubt that this also encouraged HIV-positive patients to come to him. After his diagnosis, he took particular interest in treating people with HIV, and was certainly the first physician in the country to openly counsel and test his patients. Being himself HIV positive, he was also keenly aware of treatment issues and up to date on the indications and use of antiretrovirals before they became available in Côte-d’Ivoire. Sure enough, word got around, and the sheer volume of Dupont’s AIDS practice weighed in heavily in the decision to set up the Institute which, Dupont thought, could function as the “research arm” of his private practice. Indeed, many of Dupont’s patients left the homey feel of the family practice in the leafy colonial district of the Plateau for the gleaming sterile quarters of the Institute. They did this first out of loyalty to Dupont and then because of the service they received there.

The first clinical trial was conducted at the Institute in 2000. Twenty patients were enrolled into a study where they all received triple therapy for HIV. These patients were representative of the Institute’s patients – a few had good jobs, but most were poor. The study showed rates of adherence to follow-up that were superior to rates observed in Western settings, and that the most important determinants of adherence were economic. Patients were not paid to be in the study, and some had difficulty finding the money to travel to the Institute. The study also showed that the combination was biologically as effective as in Western patients. Yet the Institute has been unable to attract any further trials sponsored by drug companies, largely because of concerns that results will not be considered generalizable to the Northern markets where they earn their profits. (However, with an emerging market in antiretrovirals for HIV, companies have become interested in using African sites to generate clinical data that can be used to market the drugs for the African setting – see below.)

Despite the Institute’s relative isolation from the Western research world, and the difficulties of developing a culture of research that this isolation entails, its loyal

cohort of patients and laboratory infrastructure make it well positioned to take advantage of a growing market for clinical data. Essential to this has been Dupont's ability to foster an institutional culture that enables, in Foucaultian terms, disciplined patients. The laboratory allows patient loyalty – adherence to follow-ups and medication schedules – to be translated into universally recognized measurements of biological efficacy. Its ability to produce biomedical knowledge – knowledge that, because of its universal aspiration, is able to circulate globally – where others have not, illustrates how globalized forms of biopolitical production (that is, the production of particular kinds of subjects) may allow global capital to articulate with local biologies and politics that would otherwise remain refractory to abstraction and circulation.

This raises an important question. Transnational socioeconomic inequalities, and the gradients of disease and inequity in access to health care that are associated with them, may unwittingly produce ideal conditions for the conduct of clinical research that furthers the marketing concerts of the pharmaceutical industry. Does the Institute's drive to provide treatment through research not risk enhancing the market power of the pharmaceuticals firm that commission research? Does the increasing market power of pharmaceuticals firms increase the barriers to making treatment accessible? Or might increasing return on pharmaceutical capital in Northern markets make the industry more susceptible to public pressure there, and more likely to tolerate generics competitions and two-tiered pricing for the South? While there is no clear answer to this difficult question, it underlines the importance of understanding the increasing blurring of the boundaries between science and marketing within the global therapeutic economy.

Clinical Research and Bio-Capital

If biopolitics allows science and the global organization of "bio-capital" (in this case, the pharmaceuticals industry) to articulate local and global therapeutic economies, what is the driving force? In this case, it is the market for clinical data, as this is the cornerstone of the market power of the pharmaceuticals industry. Data from clinical research carried out in developing countries will be of increasing strategic importance to the pharmaceuticals industry, particularly for infectious diseases, as research costs escalate in developed countries relative to the number of research subjects available.

When the Institute first opened in 1998, the pharmaceuticals industry was skittish about doing clinical research in developing countries. Merck's "028" study, conducted in Brazil, compared triple therapy using AZT, 3TC and its drug Indinavir (CrixivanTM) with treatment with only one of these drugs ("monotherapy"). The study generated some controversy because some patients were kept on the single therapy arm of the study long after it had become accepted that triple therapy was superior to monotherapy, and had therefore become the standard treatment. Although controversial, the trial never became a major media issue, but the potential for "ethical trouble,"

along with clinicians' suspicion of trials conducted in developed country settings, made companies skittish about pursuing such trials throughout the past decade.

The situation began to change in 2001. In the late 1990s, the epidemic had slowed in the North, and patients who were not already on antiretrovirals were hard to find. But these "naïve" patients (so-called because they had never been treated with antiretrovirals) were extremely valuable for companies' marketing needs. In order to create a market share for a new drug, a company must show that the drug is superior to standard treatment in clinical trials. By 1998, AZT-3TC-Indinavir was considered the standard combination against which all new drugs were to be judged. But, for virologic and pharmacologic reasons, most new drugs in the pipeline are unlikely to be significantly superior to this standard – they are "me-too" drugs, whose mechanism of action is no different from existing treatments.

As a result, new drug combinations require large numbers of patients to be recruited into clinical trials, in order that any small improvements in patients' clinical outcomes can be attributed to the drug's effect rather than to random variation in these outcomes. Since previous treatment with antiretrovirals attenuates the impact of subsequent treatments, the therapeutic impact of new drugs is much more likely to be seen in ARV-naïve patients. However, recruitment of large numbers of previously untreated patients is difficult in the North – as a result, companies must conduct expensive multi-center international trials that can take years to recruit patients, delaying a drug's arrival on the market and increasing its research and development costs substantially.

With more and more new drugs coming out of their development "pipelines," competition for suitable patients is fierce. This requires companies to recruit patients across a greater number of clinical research sites and to offer more generous inducements to these sites for recruiting such patients. The enormous expense implied by these clinical trials encourages companies to conduct trials with combinations of exclusively "in-house" drugs. If an "all-in-house" combination can be proven to be as effective as the best available treatment, all three drugs will generate profits for the company for the cost of a single trial. For instance, GlaxoWellcome (now GlaxoSmithKline) strategically conducted a large international trial comparing three of its drugs (zidovudine, lamivudine, and abacavir) with two of its drugs plus Merck's indinavir, the "gold standard" of treatment. At the time the trial was designed and implemented (1997–8), it was widely thought that HAART required a protease inhibitor (PI) to be effective, and GlaxoWellcome's abacavir was a nucleoside reverse transcriptase inhibitor (NRTI), just like zidovudine and lamivudine. GlaxoWellcome "gambled," scientifically speaking, that three-drug NRTIs might be as good as two NRTIs and a PI. The trial was a success, demonstrating that either combination was equivalent, and setting the stage for GlaxoSmithKline to dominate the market with a twice-a-day HAART cocktail, formulated in a single capsule and aptly named Trizivir,TM which was marketed in late 2001 and then went on to be the leading HIV drug – and one of the company's most profitable products – until a subsequent trial in 2003 showed it to be less effective than another triple-drug combination.

Trizivir's development points to how marketing concerns are built in up-front into the design of the clinical trials that are conducted to bring drugs to market. GlaxoSmithKline's marketing acumen, however, has gained it little advantage in the African market, where the drug is still largely unavailable and has been upstaged by a copycat triple-therapy in one pill. In 2001, Indian generic pharmaceutical manufacturer Cipla began selling Triomune, a single-pill combination of zidovudine, lamivudine, and nevirapine (an NNRTI), for a dollar a day.

Although pharmaceutical capital and production is concentrated in Europe and North America, and despite an unprecedented wave of mergers and corporate concentration, the industry is organized transnationally across regionally segmented markets; and still remains fragmented, with firms tending to specialize in a handful of therapeutic drug classes. Companies' market power is the result of the highly technical nature of pharmaceutical production and the industry's ability to exert control over raw materials and technological know-how, largely through intellectual property laws (see below). To this must be added the power of brand names and a subtle, but vast, array of marketing strategies. As shown above, the design of pharmaceutical industry clinical research is one of those strategies.

Although their success was mitigated, public health campaigns served to create a biological "vanguard" of individuals who had been tested for HIV and had discovered they were positive. Of those who were not already active NGO members, many joined and have joined others in become increasingly vocal in demanding access to treatment for their condition, setting a global stage for what I have called a therapeutic citizenship. In this new age of biomedical globalization, the humanitarian logic of health has inadvertently spawned a political movement. This is a biopolitical movement because what is eminently at stake is life itself, both in access to lifesaving and -shaping drugs and the new forms of life – from therapeutic relations to drug-resistant organisms – that it spawns.

Conclusions

As a result of the access-to-treatment campaign and the media attention it has drawn, there have been a series of declarations announcing dramatic price reductions in the cost of these drugs. However, these only began once Cipla offered to make the nine antiretrovirals it produces in India available at cost to African countries. Subsequent offers of price cuts by – in order – Merck, Bristol-Myers Squibb, and GlaxoSmithKline can be read as an attempt to protect their market share in the face of competition from generics. In fact, generic antiretrovirals are now being manufactured in Thailand and Brazil as well as in India. As a result, Brazil has been able to achieve public health benefits from combination therapy that are similar to those of Western countries, but at a fraction of the cost. More worrisome for these companies, however, is the threat posed to their patents, which they have been enforcing vigorously through international intellectual property conventions such as TRIPS, and lobbying of the U.S. government to keep other nations in line.

The access-to-treatment campaign has brought to the fore the role of international conventions and agreements governing intellectual property, and the institutional mechanisms by which these are enforced, in ensuring the profitability of the pharmaceutical industry. Recent attention has also focused on patenting of the human genome and indigenous knowledge. While not strictly part of the process of drug production, this transnational institutional sphere nonetheless is an important part of bio-capitalist accumulation. In this case, changes in drug pricing and in the capitalist regulation of intellectual property cannot be viewed separately from the conjugation of biosocial forms (HIV-positive groups) and technologies of the self that leveraged the broad transnational advocacy coalition that has contributed to bringing down drug prices. Increasing drug availability will have a multiplier effect, as the voices of people with HIV are no longer extinguished by illness but grow louder as their bodies respond to the treatments. It is this dialectic between a global therapeutic economy, local tactics for mobilizing resources, and the biopolitical processes through which humanitarian interventions produce particular subjectivities that gives birth to what I have called a therapeutic citizenship – a form of stateless citizenship whereby claims are made on a global order on the basis of one’s biomedical condition, and responsibilities worked out in the context of local moral economies.

In many Northern countries, national health insurance has meant that citizenship automatically confers access to treatment. This is obviously not the case in developing countries. There, individuals must draw on their financial capital or, as is the case for the vast majority who cannot afford medicines, on their social capital to pay for drugs. Social capital, in this case, designates the proximal network of social relations through which resources may be mobilized. Material resources may be used directly to pay for drugs, or they may be used to invest in businesses that will generate revenues to cover the cost of procuring drugs. In the latter case, one’s social network can be used to obtain introductions to individuals – such as physicians or politically powerful figures – who may be able to help access drugs.

Individuals make use of social networks to mobilize the resources they need to purchase medicines or gain access to sites where these are available – public health facilities, research institutes, or NGOs, where drugs may be available at lower cost than in the private sector, or may be completely free, as in the case of research protocols. Social networks may also channel treatments directly to affected individuals, as when relatives, friends, colleagues, or fellow activists in Northern countries with access to drugs send medicines to individuals or institutions in countries with limited access, a process referred to as “drug recycling.”

The ability of individuals to leverage social relations to obtain treatments, however, is constrained by the political economy of the transnational pharmaceuticals industry and, behind it, the global organization of capitalist production. Transnational advocacy groups appear to have achieved some success in pointing out, and reducing, these structural barriers to treatments, but it remains to be seen how sustained these will be.

Treatments influence biology, and through these embodied effects representations of the disease, and in turn the subjectivity of those who are able to access them. One result has been the advent of a therapeutic activism spearheaded by those who have had access to treatment on behalf of those who do not. This concatenation of biology (epidemics and the therapeutic effect of drugs) and social relations (those that condition the spread of epidemics and those that condition access to treatments) is an example of biosocial change. The biosocial changes brought by the epidemic have begun to crystallize in a notion of “therapeutic citizenship.”

Therapeutic citizenship is emerging as a salient force in the local African settings that have been explored here, where widespread poverty means that neither kinship nor a hollowed-out state can offer guarantees against the vicissitudes of life. It has also emerged as a rallying point for transnational activism in a neoliberal world in which illness claims carry more weight than those based on poverty, injustice, or structural violence.

Notes

- 1 C. Patton, *Globalizing AIDS* (Minneapolis: University of Minnesota Press, 2002).
- 2 M. Pandolfi, “L’industrie humanitaire: une souveraineté mouvante et supracoloniale: réflexion sur l’expérience des Balkans,” *Multitudes* 3, 2001, pp. 97–105.
- 3 S. Pigg, “Introduction,” in *The Moral Object of Sex: Science, Development and Sexuality in Global Perspective*, Vincanne Adams and Stacy Leigh Pigg, eds. (Durham, NC: Duke University Press, forthcoming).
- 4 Arjun Appadurai, “Introduction: commodities and the politics of value,” in *The Social Life of Things*, Arjun Appadurai, ed. (Cambridge: Cambridge University Press, 1986), 3–63.
- 5 The notion of a “moral economy” draws on E. P. Thompson, “The moral economy of the English crowd in the eighteenth century,” *Past and Present* 50, 1971, pp. 76–134. Thompson shows how capitalist markets brought into conflict different régimes of value. I use it here in a somewhat broader sense, to draw attention to how different social relations produce value.
- 6 The manner in which individuals access therapy has also been a staple of medical anthropological studies of patterns of resort, also called “therapeutic itineraries.” Multiple medical traditions can be accessed either serially or simultaneously. These have drawn attention to “therapy managing groups” that debate options and make decisions on both economic and cultural grounds about which practitioners should be consulted and when. See John M. Janzen, *The Quest for Therapy* (Berkeley: University of California Press, 1978); Marc Augé and Claudine Herzlich, *Le sens du mal: anthropologie, histoire, sociologie de la maladie* (Paris: Editions des archives contemporaines, 1984).
- 7 See M. Lock, *East Asian Medicine in Urban Japan* (Berkeley: University of California Press, 1980); Paul Brodwin, *Medicine and Morality in Haiti: The Contest for Healing Power* (Cambridge: Cambridge University Press, 1996).
- 8 A normal T4 cell count is over 600; with less than 50 cells, patients are at high risk of serious opportunistic infections and death within the year.
- 9 Vidal Msellati and J.-P. Moatti, eds., *L’accès aux traitements du VIH/sida en Côte-d’Ivoire: Évaluation de l’Initiative Onusida/ministère ivoirien de la santé publique, aspects économiques*,

sociaux et compartementaux (Paris: Éditions de l'Agence nationale de recherche sur le sida, Collection sciences sociales et sida, 2001).

- 10 C. Adjé et al., "High Prevalence of Genotypic and Phenotypic HIV-1 Drug-Resistant Strains among Patients Receiving Antiretroviral Therapy in Abidjan, Cote d'Ivoire," *Journal of Acquired Immune Deficiency Syndromes* 26(5), April 15, 2001, pp. 501-6.