ROYAL TROPICAL INSTITUTE

Sexual & reproductive health, including HIV/AIDS

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ASSIGNMENT **197**

HIV/AIDS: The relative importance of allocating resources to treatment rather than prevention or vice versa

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Financing HIV/AIDS programs in Haiti:

Decision making tool, 2007- 2011

Since first the cases of AIDS occurred in 1981 and started to decimate populations, prevention efforts were the only one weapon public health experts had to fight against the deadly virus. Following ARV introduction in 1996, health policymakers decided to strengthen treatment programs. This philosophy started at global level in 2002 in Barcelona. In 2004, in Toronto people decided "Access for all" strategy. WHO/UNAIDS policy 3x5 phased out with nearly 1.5 millions people under treatment in developing countries. HAART coverage in developing countries increased from 7% at the end of 2003 to 20% at the end of 2005. We are now in the phase of "Universal Access" by 2010. Over time tritherapy have proved its effectiveness. Increasingly, more funds are been mobilized at global level to fight HIV/AIDS. This raises the concern about allocating funds to prevention rather than treatment or vice versa throughout the world in terms of cost-effectiveness. As an example, PEPFAR allocates over 70% of funds to treat and care[1] PLWHA in developing countries whereas GFATM related policy is more flexible. How do developing countries have to invest their scarce resources in order to expect benefits for future generations? Have priority be given to prevention strategies or treatment and care?

I worked in Haiti during years as international health worker for the United Nations. The purpose of this paper is to provide Haitian Ministry of Health guidance to decide HIV/AIDS interventions which are to be prioritized in terms of prevention or treatment. This work is organised as follows. Part one is a baseline that informs the reader on the general situation and health policies in Haiti. In part two, I firstly used evidences and lessons learnt on the ground to highlight advantages and limits of treatment and prevention. Secondly, according to my understanding of the country capacities and difficulties, I propose the best alternatives HIV/AIDS public resources might be effectively and efficiently allocated during the next five years in Haiti. The third part concludes and formulates main recommendations reflective of my point of view. In order to achieve my goal I reviewed literature by searching on the Website of Medline, WHO and UNAIDS. My keys words were: HIV/AIDS in combination with each of the terms: cost, cost-effective, benefits, treatment, prevention financing, pharmaceutical, Haiti. I did not find studies analysing cost-effectiveness of HIV/AIDS programs in Haiti.

Part One: **Background**

General context: Haiti, the poorest country in the Latina America and the Caribbean region sheltered 8.4 millions of inhabitants in 2004. 50% of the population is under 15 years old[2]. It ranks 153 out of 177 countries on the Human Development Index of UNDP in 2004 with 76% of the population living below the poverty threshold of 2 $ per day.[3] According to the FAO, Haiti is the third country (behind Somalia and Afghanistan) in the world where people are most suffering of hunger. Reliable access to basic public services such as: health, education, potable water and electricity, are a matter of wealthy people. Over to 70% of the population

[1] The Guttmacher report on Public Policy, U.S AIDS Policy: Priority On Treatment, Conservatives Approach to Prevention, Heather Boonstra, August 2003.
[2] "The Pan American Health Organisation", PAHO, *Promoting Health in the Americas,* PAHO Basic Health Indicator Data Base, http://www.paho.org/English/DD/AIS/cp_332.htm
[3] International Monetary Fund, *Haiti: Interim Poverty Reduction Strategy Paper* ,Country Report No .06/411, http://www.imf.org/external/pubs/ft/scr/2006/cr06411.pdf, 5-5-2007

are unemployed. One out of 50 people has a regular professional occupation[4].This dramatic situation is caused by the political instability the country is going through those last 20 years.

Public health system and funding: A national Public Health strategy framework exists and is based on the primary care. The health system is a complex one which includes: the public sector MSPP, the private for profit sector (health professional in private practice) the mixed non-profit sector (MSPP staff working for a religious institution or a NGO), the private non-profit sector and the traditional health system (traditional healers or Hougan). In Haiti: **"**Public funds spent on health represent only 0.8% to 1% of the GDP. Most of the MSPP allocation" (US $ 57 millions in 1999, unchanged since 1996) is spent on salaries. Execution of the investment budget, which depends largely on foreign aid, was 49% in 1999.[5]**"** To solve this problem, policymakers attempted to create a decentralised system to make departmental administration accountable of health expenditures**.** Unfortunately this solution is not operational**.** The health sector is being supported by external partnerships since the political instability started. United State funds' (USAID & PEPFAR) and GFATM are the largest providers for public health expenditures followed by others bilateral cooperation funds (mainly Canadian French cooperation), and multilateral funds (European Union).

HIV/AID in Haiti: "Today, Haiti faces a generalised epidemic fuelled by endemic poverty, high illiteracy rates and inadequate health and social services that have been further weakened by chronic political instability, high internal migration rates and a high prevalence of sexually transmitted infections**.** The prevalence of HIV/AIDS among adults was estimated to be between 2.5-11.9% in 2003."[6] It is over 7% in specific towns due to the high turn-over of Diaspora people like in St Marc and Port de Paix. Overall, border regions have the highest rate; an example is Ouanaminthe which is the border between Haiti and Dominican Republic. The common transmission mode is heterosexual intercourse. Although blood screening reliability has increased those last ten years blood transfusion continue to be at risk of HIV infection in Haiti due to the weakness of infrastructures. It is believe that in recent years, several women become infected with HIV after being sexually assaulted.[7] In 2005, 300'000 people were estimated to be living with the virus in Haiti[8]. Drugs are donated mainly by PEPFAR. First line regimen cost US dollars 200 per year per patient eligible for ARVs.

Part Two: **Findings and making decision**

Prevention programs impacts

Cost/effectiveness: Many surveys conduced in sub Saharan Africa and Asia found that prevention programs are more cost-effective in scare resources setting than treatment.[9] The cost of treating one person with antiretroviral drugs for a full year (at full Price) is equivalent to that of preventing almost 50 cases[10]. Marseille et al study suggests that prevention is 28 times more effective than treatment.[11]

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[4] Paul Farmer & al, DOT-HAART Explained Community-Based Approaches to HIV Treatment in Resource-Poor Settings, ***Why AIDS prevention alone is insufficient ?,*** 4-5-2007 http://www.impactaids.org.uk/farmer.htm

[5] "The Pan American Health Organisation", PAHO, *Promoting Health in the Americas,* PAHO Basic Health Indicator Data Base, http://www.paho.org/English/DD/AIS/cp_332.htm, 7-5-2007

[6] PAHO, "The Pan American Health Organisation", *Promoting Health in the Americas,* PAHO Basic Health Indicator Data Base, http://www.paho.org/English/DD/AIS/cp_332.htm

[7] UNAIDS, United the world against AIDS, Country situation Analysis

[8] MSPP

[9] *Lancet 2002*; 359: 1851-56, Marseille E. & al. HIV prevention before HAART in sub-Saharan Africa.

[10] Hogan et al 2005 Cost/effectiveness analysis of strategies to combat HIV/AIDS in developing countries BMJ 2005;331:1431-1437

[11] Marseille E. & al. HIV *Prevention before HAART in sub-Saharan Africa*. Lancet 2002; 359: 1851-56

- Reduction of HIV prevalence rate at national level: Many countries like Senegal and Uganda succeeded in reducing their prevalence rate even before ARVs became available by implementing policies that are based on behaviour change including condom use**.** For example ABC strategy in Uganda, 100% condom use in Thailand proved effectiveness.[12]

- **Benefit for others Sexually Transmitted Infections prevention**: Studies found that others STIs incidence is lately decreasing at global level because of condom promotion emerging from HIV prevention.

- **Reduction of infected new-borns:** ART decreases infection risk among new generations. In Thailand, intake twice-daily doses of ARVs (Zidovudine) from 36 weeks of gestation and every three hours during labour (vaginal delivery) reduced risk by 50% if the mother did not breastfeed her infant[13].

However, in their study of a hypothetical country that will implement only prevention programs Emiko M et al find out that: "Allocating all resources to prevention programs would not eradicate the disease…HIV prevention programs only – 83% of the assumed new infections annually would be averted, and even an ideal prevention campaign may not be able to fully contain the disease."[14] In addition, based on patient rights and humanitarian principles, those who are already infected are entitled of treatment and care.

Treatment advantages and disadvantages

Reduction of morbidity and mortality: A randomized survey in United Kingdom asserts that HAART produced 90% reduction in mortality and improvement in quality of life[15].

Others advantages of HAART: Studies found that HAART slows down viral load then might lower the **infectiousness**. However adherence is essential to low viral load. Recent findings from Uganda indicate that the risk of transmission is highly correlated with HIV viral load[16].In short HAART is a prevention strategy as well.

HAART constraints : HAART is far more **expensive** than prevention activities. Moreover HAART is a **long-life** engagement. HAART monitoring needs financial efforts and skilled human resources added to ARV costs. Adherence issues are a threat to HAART success. On top of that, adherence *failure* might cause the development of news trend of the virus.

- ***My point of view***

Hypothesis: Given the context of severity of resources limitation, Haitian ministry of Health must avoid financing HIV/AIDS treatment and prioritize long term feasibility approach.

Prioritizing cost/effectiveness, sustainability, affordability and equitable interventions: As the country's development indicators have clearly demonstrated, top priorities issues which need investment today in Haiti are many: fight against hunger, improve education quality and increase numbers of pupils, resolve unemployment issues, increase public health

16 Gary Slutkin et al, University of Illinois, Chicago, USA, *How Uganda Reversed Its HIV Epidemic* http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=1544374

13 Lancet 1999; 353:773-80, Schaffer N et al, Short –course zidovudine for perinatal HIV-1 transmission in Bangok, Thailand, a Randomised controlled trial. Bankog Collaborative Perinatal HIV transmission Study Group.

14 University of California, Berkeley, Bay Area International Group, Cost-effectiveness of HIV Interventions for resources Scares Countries: Setting Priorities for HIV/AIDS, Emi Masaki and al, http: repositories.cdlib.org/big/hiv_prev, 2003

15 J S Mukherjee et al, *Tackling HIV in resource poor countries,* British Medical Journal, http://www.bmj.com/cgi/content/full/327/7423/1104

16 *Decreased HIV Transmission after a Policy of Providing Free Access to Highly Active Antiretroviral Therapy in Taiwan*, In The journal of Infectious diseases, vol 190(2004), pages 879-885, Pubmed ID: 15295691

budget, among others. On the other hand there are no reliable funds available at national level. HIV/AIDS programs depend on external funds. We also know that financial mechanism is unsustainable as donors commitment are always instable and link to a given political interest at global or national level. If change intervenes in donors' commitments for some reasons then all efforts will collapse.

- Logically, ***low budgets prevention programs*** are the best strategies that have to be promoted in Haiti for the 5 next years. Those strategies will focus on vulnerable groups (women, migrants, sex workers, adolescents, etc) using: IEC & PBC process including condom distribution. IEC uses mass media, posters, and education in schools, outreaching programs, etc. PBC means sexual partners number reduction, delay of sexual debut among youth, and abstinence at a specified time period. PBC does require distribution or selling, only low cost channels and mechanisms such as peer educators and sensitizing local leaders. [17] Before HAART era, Senegal and Uganda, two poor countries had already success in reducing the incidence of HIV/AIDS by focusing only on human behaviour changing programs and condoms use. *Blood screening* and prevention of PMTCT strategies have to be included in the package of low cost prevention to avoid nosocomial transmission.
In fact, *Prevention* is an activity undertaken to avoid or reduce a healthy person being infected. Prevention includes PMTCT and PEP. *Treatment* is care and drugs provide to infected people. This includes HAART, opportunistic infections and psychosocial support. However practice shows us that both of them are linked. ARVs are used in prevention cases: PMTCT and PEP. We also use prevention strategies at infected people level.

What about VCT promotion? Personally I am not in favour of continuing testing promotion in Haitian context apart from in *pregnant women* population. 3 motivations lead me to adopt this view. 1) Only an average of 10% of the population knows its HIV status. In VCT promoting case the numbers of PLWHA will increase. Knowing that the current coverage rate of HAART is less than 50% in Haiti, then how are we going to pay treatment for newly tested positive people? In others words, what for pushing people get tested and not being able to treat them? In case people integrate well behaviour change in their life thank to prevention awareness activities, being unknown HIV positive will not harmed. 2) VCT has already being sufficiently promoted. Moreover, people who decide to get married have to take HIV test before being allowed for weddings (pre nuptial test). There are currently more than 20 VCT in the country. 3) Running VCT is a costly activity which depends (as ARV) on external donors funds. That means it is not a sustainable strategy to fight HIV/AIDS. 3) Moreover, in Haiti despite the existence of pre and post counselling, some people have a misunderstanding, thinking that attending VCT is a preventive measure against HIV/AIDS.

Treatment and care: In fact, donors do not give room to governments to decide how donated funds will be allocated. Donors fund activities they want. PEPFAR which is the largest donor in Haiti in HIV field does not finance any condom use programs. PEPFAR prevention policy is only based on abstinence and fidelity. There is a gap in providing free condom to the youth in Haiti. To full this gap a public prevention strategy that promotes condom use and provide them freely have to be implemented.

[17] Edward C. Green, Praeger, *Rethinking AIDS Prevention*, learning lessons from Successes in Developing Countries, Westport Connecticut, London, first published in 2003

Part Three: **Conclusion & Recommendations**

It is a wrong debate to dissociate *treatment* and *prevention* because treatment and care belong to a whole named *Prevention*. In my opinion *treatment* has to be seen as a strategy which strengthens *prevention*. In health and care schools, prevention has three levels: primary prevention which addresses healthy people. Secondary prevention targets people who have already been harmed, in HIV/AIDS case those who are infected. Tertiary prevention focuses on infected people who are in AIDS stage. This is the reason I would not advice in terms of giving priority neither to treatment nor to prevention. Each level of prevention should be balanced in accordance with the availability and sustainability of financial, human and infrastructures resources.
Nevertheless, in case of severe limited resources setting like Haiti, combining primary prevention and secondary prevention is financially **non-feasible**. The government is unable to mobilise public resources which are needed to fund the 3 levels of prevention. Currently HAART only may cost US dollars 2 millions per year for the (5.500 people on HAART, first line regimen) not including opportunistic infections treatment costs. The total budget of Public Health may be around 60 millions and is not even sufficient to pay health workers' salary. In addition, HIV/AIDS is not the only one topic on Public Health agenda in Haiti. Rather mobilise funds for primary prevention which is likely able to decrease new infections among extended population and among unborn new generations through PMTCT as well. It is also an **unfair** to spend available HIV/AIDS funds on 300.000 people out of 8 millions whereas primary prevention programs focus on **all.** I am not conveying that I am against secondary and tertiary prevention, I would like to emphasize that if I had limited funds, I will select primary prevention activities because they are cheap, communities can bear budgets. Moreover, those activities are more profitable at long term.

Recommendations

- Invest 100% of HIV/AIDS domestic funds into prevention. I expect donors continue to provide treatment for the next 5 years as they have signed commitment. The following prevention strategies of IEC combine to PBC have to be developed:
- Stimulate community commitment in each of the 9 departments' level: PLWHA, religious, youth, girls and women in behaviour change and awareness activities.
- Design a large behaviour change *culture-sensitive* campaign locally funded
- Train key social workers on PEP to be used within communities in sexual assault cases
- Integrate others STIs diagnosis at primary health system
- Use media to address stigma and misconceptions related to the virus transmission
- Adopt Opt –out principles concerning testing pregnant women and use of ART
- Make condom free for those in need
-Concentre effort to higher prevalence rate areas: tailored innovative interventions
- Involving more specialised United Nations agencies (their service is free of charge): UNAIDS to back up prevention programs, World Food Program to distribute food rations vulnerable people, UNFPA to supply condom needs and support behaviour changes
- Provide financial support to Haitian Red Cross to improve blood screening reliability.

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A C R O N Y M S

AIDS	Acquired Immunodeficiency Syndrome
ARV	Antiretroviral
ART	Antiretroviral Therapy
FAO	Food and Agriculture Organisation
GDP	Gross Domestic Product
GFATM	Global Fund to Fight AIDS, Tuberculosis and Malaria
HAART	Highly Active Antiretroviral Therapy
HIV	Human Immunodeficiency Virus
IEC	Information Education and Communication
MSPP	Ministry of Health and Population
NGO	Non Governmental Organisation
PEP	Post Exposure Prophylaxis
PEPFAR	President's Emergency Plan for AIDS Relief
PBC	Primary Behaviour Change
PLWHA	People Living With HIV/AIDS
PMTCT	Prevention Mother To Child Transmission
STI	Sexually Transmitted Diseases
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDP	United Nations Development Program
UNFPA	United Nations Population Funds
USAID	United States Agency for International Development
VCT	Voluntary Counseling and Testing
WFP	World Food Program
WHO	World Health Organisation