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REPORT

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REPORT ON MALE CIRCUMCISION: AN ARGUABLE METHOD OF REDUCING THE RISKS OF HIV TRANSMISSION

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An initial short-term study on male circumcision led by the Agence nationale de recherche sur le sida (ANRS) at Orange Farm in South Africa revealed a reduction of 60% in the risk of HIV transmission among circumcised men who have heterosexual sex¹. Thereafter, two further studies carried out by the National Institutes of Health (NIH), one in Kisumu in Kenya², the other in Rakai in Uganda,³ demonstrated a reduction of around 50% in the risk of HIV infection within the context of heterosexual sex practiced by men who had been circumcised. Following on from these results, the WHO and UNAIDS quickly organised a congress of experts whose conclusions envisage "considering male circumcision as a significant supplementary means of reducing the risk of heterosexual HIV transmission in men."⁴ Male circumcision therefore appears to be a possible method of reducing risk in specific situations. However, in parallel to the interpretation of the results, studies are generating debate among the scientific community and are also raising a number of questions with regard to its implementation and role in terms of public health strategy. The heavy media coverage of the recent results of this research and the confusion that this has caused in terms of understanding of the messages of prevention has prompted the Conseil national du sida (CNS) to take steps to clarify the situation.

I THE RELATIONSHIP BETWEEN MALE CIRCUMCISION AND HIV PREVALENCE

A MULTIFACTORIAL APPROACH NEEDS TO BE TAKEN TO INTERPRET THE LEVELS OF PREVALENCE

The point of departure for this research into male circumcision originates from the observation of an overlap between regions where male circumcision is more common and areas with low HIV prevalence. Consequently, in Sub-Saharan Africa where the proportion of

¹ Auvert B, Taljaard D, Lagarde E, Sobngwi-Tambekou J, Sitta R, Puren A. Randomized, controlled intervention trial of male circumcision for reduction in HIV infection risk: the ANRS Trial. *Plos Med* 2005; 2(11): e298.

² Bailey RC, Moses S, Parker C, Agot K, Maclean I, Krieger JN, Williams CFM, Campbell RT, Ndinya-Achola JO. Male circumcision for HIV prevention in young men in Kisumu, Kenya: A randomised controlled trial. *The Lancet* 2007; 369: 643-56.

³ Gray RH, Kigozi G, Serwadda D, Makumbi F, Watya S, Nalugoda F, Kiwanuka N, Moulton LH, Chaudhary MA, Chen MZ, Sewankambo NK, Wabwire-Mangen F, Bacon MC, Williams CFM, Opendi P, Reynolds SJ, Laeyendecker O, Quinn TC, Wawer MJ. Male circumcision for HIV prevention in young men in Rakai, Uganda: A randomised controlled trial. *The Lancet* 2007; 369: 657-66.

⁴ Joint press release between WHO / UNAIDS issued on 28 March: *WHO and UNAIDS announce recommendations from expert consultation on male circumcision HIV prevention*. <http://www.who.int/mediacentre/news/releases/2007/pr10/en/index.html>

circumcised men is relatively low (less than 20%), prevalence is higher than in regions where male circumcision is more widespread (above 80%)⁵.

Other studies, however, indicate that a population where male circumcision is widespread can also exhibit a high HIV prevalence. In Cameroon, where 93% of the population is circumcised, HIV prevalence among circumcised men is 4.1% compared to 1.1% among uncircumcised men. In Lesotho, where half of the population is circumcised, the prevalence among circumcised men is 22.8% compared to 15.2% among uncircumcised men⁶. There are numerous other contradictory examples. The transmission of HIV infection depends on various factors, and a multifactorial approach needs to be taken to interpret the levels of prevalence. Cultural and religious factors have an important role to play in terms of their impact on behaviour⁷. It is also important to bear in mind the fact that the African population travels and moves around a lot⁸. However, these do not invalidate the concordant results of the studies, which have been verified⁹. The reduction in the risk of transmission linked to male circumcision appears to be very real. Male circumcision, however, although it reduces the risk of HIV transmission, does not provide total protection against it: Let's remember that, in the studies on male circumcision, new cases of HIV infection were reported in circumcised and uncircumcised groups even though the individuals had been told of the importance of using condoms.

FROM THEORY TO PRACTICE

The extrapolations drawn from these results regarding the possible impact on the epidemic are more arguable. Several researchers have attempted to use these results to illustrate the impact of male circumcision on the epidemic of HIV infection by modelling the spread of the incidence. Male circumcision could reduce the number of new infections by around two million and the number of deaths by around 300,000 over the next ten years¹⁰. These mathematical models are extrapolations based on the hypotheses that underpin them. They do not take into account sociological or anthropological data, nor the likelihood of reproducing the results obtained under controlled experiments in real life. Transmission of the virus by an infected woman to a non-infected man is a random event whose cumulative probability over 12 months, assuming repeated exposure, is between 10% and 20%¹¹. In the case of repeated exposure, even though the circumcised man is less at risk of contracting any possible infection, the phenomenon of repetition will eventually lead to him becoming infected too – although it will take longer¹².

Moreover, although male circumcision reduces the risk of infection for men, it does not protect women, who will continue to become infected. The cost/efficiency assessment of carrying out male circumcision on a large scale in regions with high prevalence has been positive. However, behavioural factors leading to risk-taking may cancel out the possible benefit of male circumcision on a wider scale¹³.

THE NEED FOR COMPLEMENTARY RESEARCH IN SOCIAL SCIENCE

Although male circumcision is without doubt an important element in reducing the risks of HIV transmission from women to men, there are other factors at stake¹⁴. A study in Rakai in Uganda shows that circumcised men increase the frequency of their sexual relationships in the 12 months following circumcision, and can increase their number of partners by more than 25%¹⁵. Furthermore, a study in Kenya on men who had decided to be circumcised shows that they had a higher tendency to take greater sexual risks than those who had not been circumcised¹⁶. In the same way, the population's beliefs regarding male circumcision and sexual activity vary, as this study carried out in South Africa shows: 30% of uncircumcised men believe that it will increase their sexual

⁵ WHO, UNAIDS, Unicef, FNUAP, World Bank, Information Package on Male Circumcision and HIV Prevention, Insert 4.

⁶ Demographic and Health Surveys, Table of men circumcised vs. HIV prevalence in women and in circumcised and uncircumcised men. <http://www.measuredhs.com/countries/start.cfm>

⁷ CNS interview.

⁸ CNS interview.

⁹ CNS interview.

¹⁰ Williams BG, Lloyd-Smith JO, Gouws E, Hankins C, Getz WM, Hargrove J, De Zoysa I, Dye C, Auvert B. The potential impact of male circumcision on HIV in Sub-Saharan Africa. *Plos Med* 2006; 3(7): e262.

¹¹ Garenne M. Male circumcision and HIV control in Africa, *Plos Med*, 2006, 3(1): e78.

¹² Kalichman S, Eaton L, Pinkerton S. Circumcision for HIV prevention: failure to fully account for behavioral risk compensation. *Plos Med* 2007; 4(3): e138.

¹³ Kahn JG, Marseille E, Auvert B. Cost-effectiveness of male circumcision for HIV prevention in a South African setting. *Plos Med* 2006; 3(12): e517.

¹⁴ Gray RH, Li X, Kigozi G, Serwadda D, Nalugoda F, Watya S, Reynolds SJ and Wawer M. The impact of male circumcision on HIV incidence and cost per infection prevented: a stochastic simulation model from Rakai, Uganda. *AIDS* 2007; 21(7): 845-850.

¹⁵ Gray RH, Reducing HIV transmission: Lessons from Rakai and other African studies, *International AIDS Society* 2005, Rio, Brazil.

¹⁶ Kawango EA et al. Male circumcision in Siaya and Bondo districts, Kenya: prospective cohort study to assess behavioral disinhibition following circumcision. *J Acquir Immune Defic Syndr* 2007; 44: 66 -70.

performance and 14% believe it will reduce their pleasure¹⁷. In Kenya, in the province of Nyanza, more than fifty percent of uncircumcised men think that women enjoy sex better with circumcised men. Women take a similar view¹⁸. Studies on changes in sexual behaviour following campaigns promoting male circumcision need to be carried out over a prolonged period. The ANRS is carrying out a new study over the course of 5 years across the entire Orange Farm region. The study will involve at least 30,000 people. It aims to evaluate the impact of a prevention programme on understanding and practices relating to male circumcision, as well as the HIV prevalence in the region¹⁹. However, even then, it is not certain that this wider study will be sufficient to conclude a reduction in the transmission of HIV through male circumcision across the entire continent.

II THE DANGERS OF AN AFFIRMED POLICY OF MALE CIRCUMCISION

PROMOTING MALE CIRCUMCISION MAY CONFUSE EXISTING PREVENTION MESSAGES.

In March 2007, the WHO and UNAIDS published the findings of an international technical consultation and reiterated the fact that "male circumcision does not provide complete protection against HIV"²⁰, but is a supplementary means of reducing the risk of infection. It must only be used within the framework of a wider strategy aimed at preventing HIV. Even though no studies demonstrate this at the moment, there is a serious risk that people will mistakenly believe themselves completely protected from the virus and will use fewer condoms. How can it be explained clearly to people that they must be circumcised in order to reduce the risk of transmission, but the use of other forms of prevention (abstinence, fidelity, condoms, etc.) remains essential despite this?

MALE CIRCUMCISION MAY INCREASE THE NUMBER OF INFECTIONS

Various authors have highlighted the importance of ritual male circumcision in certain African populations and the inherent risks of infection²¹. In certain communities, it forms part of a rite of passage to adulthood, or it is a ritual associated with marriage that leads to rapid and repeated sexual activity after the act of circumcision itself²². In the first month, while scar tissue is forming, men are much more vulnerable to the transmission of HIV and increase their risk of infecting or being infected by their partners. Similarly, a study in Uganda that was part of a trial showed that around 10% of serodifferent couples, where the man was infected with the HIV virus, resumed sexual activity before the doctor had declared the man's scarring process to be complete – ultimately leading to infection of his partner²³. The few studies on the links between male circumcision and sexual activity may lead us to believe that the beliefs held by the population concerning male circumcision could give rise to paradoxical effects. It is primarily the symbolic aspect that the population has in mind; it is also chiefly ritual practitioners who carry out the circumcision²⁴ and in terms of hygiene and safety the results are far from ideal²⁵. There have even been incidences where people have died²⁶. Circumcision is therefore linked to socio-cultural concerns that set in competition hospital workers, who use it as a means of supplementing their salary, and the ritual practitioners who occupy a central role as the "cutter" in their traditional society²⁷. The wider use of male circumcision therefore calls for an examination of the place of ritual practitioners, "cutters", compared to hospital workers at the core of this public health policy²⁸. This examination also needs to be carried out on the risks of virus transmission during the surgical procedure itself. A study performed in Kenya, Lesotho and Tanzania has demonstrated that a significant proportion of children who were infected with HIV and who had not had prior sexual relations were probably infected through the act of circumcision as a result of poor hygiene²⁹.

¹⁷ Lagarde E, Dirk T, Puren A, Reathe RT, Bertran A. Acceptability of male circumcision as a tool for preventing HIV infection in a highly infected community in South Africa. *AIDS* 2003; 17(1): 89-95.

¹⁸ UNAIDS, *Male circumcision: context, criteria and culture*, 26 February 2007, p.3, http://www.unaids.org/en/MediaCentre/PressMaterials/FeatureStory/20070226_MC_pt1.asp

¹⁹ CNS interview.

²⁰ World Health Organisation / UNAIDS, *New Data on Male Circumcision and HIV Prevention: Policy and Programme Implications*, March 2007, Montreux.

²¹ Doyle D. Ritual circumcision: a brief history. *JR Coll Physicians Edinb* 2005; 35(3): 279-285.

²² Thomas A. *Circumcision: an ethnomedical study*, The Gilgal society. 2003

²³ Women may be at heightened risk of HIV infection immediately after male partner is circumcised, *aidsmap*, <http://www.aidsmap.com/en/news/3CBF12A3-A1AC-4A0E-A79C-54FC6EF93E28.asp>

²⁴ Bailey RC, Egesah O, Assessment of clinical and traditional male circumcision services in Bungoma district, Kenya: complication rates and operational needs, April 2006.

²⁵ WHO, UNAIDS, *Male circumcision: Global trend and determinants of prevalence, safety and acceptability*, February 2007, p 26.

²⁶ WHO, UNAIDS, Unicef, FNUAP, World Bank, *Information Package on Male Circumcision and HIV Prevention*, Insert 3.

²⁷ CNS interview.

²⁸ CNS interview.

²⁹ Brower DD, Potterat JJ, Roberts Jr JJ, Brody S, *Male and Female Circumcision Associated With Prevalent HIV Infection in Virgins and Adolescents in Kenya, Lesotho, and Tanzania*, *AEP* 2007, 17(3), 217-226.

CIRCUMCISION CAN LEAD TO UNETHICAL PRACTICES

The act of circumcision brings with it numerous ethical risks. Circumcision must not be carried out without the informed consent of the individual or his parents³⁰. The recommendations of the WHO indicate that circumcision is not advisable for men infected with HIV, which implies that a screening test needs to be offered with the circumcision³¹. As the issue of mandatory screening is becoming increasingly prevalent in the countries of Africa, the risk that male circumcision could serve as a pretext for enforcing testing in a coercive manner must not be underestimated. This would merely lead to screening being rejected by the population – even though it is one of the key pillars of prevention policy. The issue of stigmatisation must be carefully watched for, as the painful memories of the Second World War must not be forgotten. Non-circumcision could equally be a reason for stigmatisation. Indeed, twenty Kenyan pupils have already been sent home from school for not being circumcised, as the headmaster wanted these pupils to be circumcised in order to reduce the risks of HIV transmission³².

RITUAL MALE CIRCUMCISION AND MEDICAL CIRCUMCISION

In many countries in Africa, male circumcision and excision are linked in people's minds. It is impossible to consider circumcision independently of other forms of physical mutilation, such as excision in Central and Western Africa. The same word, meaning "to cut", is used for the two procedures in a great number of African languages, while in English the terms used are male and female circumcision, or excision in the latter case. There is therefore a risk of confusion. Circumcision and excision are part of the individual's personal and physical development, allowing the man or woman to identify him or herself within their society. This ritual act of circumcision or excision reinforces the separation of the sexes and their hierarchy within their society, and both acts are hard to dissociate in people's minds³³. Physical mutilation is often a rite of passage and inscribes a personal and collective memory on the body. Circumcision often represents a symbolic death and rebirth. Circumcision is a significant ideological and religious issue. In Gabon, for example, circumcision is carried out a second time when the individual reaches adulthood. In societies where women must have children before they are officially married, excision only takes place after the children are born³⁴. The encouragement of male circumcision for medical reasons and not for traditional reasons could also destabilise the policy aimed at eliminating female circumcision, especially at a time when certain traditional practices which had fallen into disuse are being revived. This is reflected in considerable identity movements. Moreover, in order to discourage ritual circumcision, some countries are planning to forbid the act before the age of sixteen³⁵, whereas one of the WHO's recommendations is to encourage circumcision of newborns, since this is simpler and less risky³⁶.

III THE PLACE OF MALE CIRCUMCISION IN STRATEGIES AIMED AT FIGHTING AIDS

MALE CIRCUMCISION AND UNCLEAR COMMUNICATION

It may be somewhat surprising to see that the WHO has published its recommendations so quickly, while at the same time stressing the need for supplementary research³⁷. The media resonance that has surrounded the publication of the study results on male circumcision by the ANRS is harmful, even though it declares that further studies are required. The act of encouraging male circumcision must not follow on from the fatigue or partial failure of the fight against the spread of HIV/AIDS³⁸. The impact of this discovery has even been compared to that of multiple treatments, or even of a vaccine, and in so doing confuses the issue. There have even been reports in the medical press with titles such as "Male circumcision protects men from HIV"³⁹. Nevertheless, in these eleven recommendations, the WHO appears more cautious, principally reiterating the fact that male circumcision must form part of a full raft of preventative measures, and that healthcare services must be reinforced in order to ensure the safe delivery of high-

³⁰ WHO, UNAIDS, Male circumcision: Global trend and determinants of prevalence, safety and acceptability, February 2007, p 34.

³¹ World Health Organisation / UNAIDS, New Data on Male Circumcision and HIV Prevention: Policy and Programme Implications, March 2007, Montreux.

³² BBC News, *Uncircumcised pupils sent home*. <http://news.bbc.co.uk/1/hi/world/africa/6355447.stm>

³³ Obermayer CM, The consequences of female circumcision for health and sexuality: an update of evidence, *Cult Health Sex* 2005, 7(5), p 443-61.

³⁴ CNS interview.

³⁵ CNS interview.

³⁶ World Health Organisation / UNAIDS, New Data on Male Circumcision and HIV Prevention: Policy and Programme Implications, March 2007, Montreux.

³⁷ World Health Organisation / UNAIDS, New Data on Male Circumcision and HIV Prevention: Policy and Programme Implications, March 2007, Montreux.

³⁸ CNS interview.

³⁹ Benzadon G. La circoncision protège les hommes du VIH, *Le Quotidien du médecin*, 26 February 2007, p. 8.

quality services⁴⁰. But it is the message of a "miracle cure" that has taken precedence in the media, despite the WHO's reservations. If the promotion of male circumcision were to cause a relaxation in preventative behaviour with less use of condoms, then the results would be dramatic. The dangers of reducing efforts relating to prevention are real if communication is not handled correctly.

MALE CIRCUMCISION IS NO SUBSTITUTE FOR ANTIRETROVIRAL TREATMENTS

The strengthening of health care services requested by the WHO is countered by the issue of a crisis in terms of human resources in developing countries⁴¹. Medical personnel are already too few and far between to provide the necessary care to the fight against HIV, and it would seem difficult to add the extra burden which would arise from the circumcision of several million men. The same goes for South Africa where, although treatment is more accessible than in other countries, it is estimated that only a third of people needing treatment actually receive it, primarily as a result of a shortfall in medical personnel. Moreover, for the entire fight against the epidemic in 2008, the evaluated available resources will be no more than 10 billion dollars⁴², whereas the estimated demand for 2008 will be 22 billion dollars⁴³. Added to these anticipated needs would be the extra funding required to facilitate the more widespread implementation of male circumcision⁴⁴. This cost issue, together with that of human resources, will therefore have a knock-on effect on the priorities to be implemented within the context of health care policies. Antiretroviral treatments, as well as their curative effects, can facilitate a significant reduction in the risks of HIV transmission⁴⁵. Studies show that, between serodifferent couples, the start of treatment has effected a reduction of between 50% and 85% in the transmission of HIV⁴⁶. To date, the WHO has encouraged the start of treatment on as wide a scale as possible, a practice propagated by the member states of the United Nations who are committed to universal access to treatment, care and support services by 2010. This programme therefore facilitates the implementation of a network of care, but also a greater reduction in the risk of transmission for the population as a whole compared to male circumcision. The promotion of male circumcision must not become a lower-cost policy in the fight against the epidemic in developing countries to the detriment of access to drugs.

MALE CIRCUMCISION CANNOT BE A MEANS OF PREVENTION ON ITS OWN

Current prevention policies are essentially centred, beyond fidelity and abstinence, around the use of condoms. Individual prevention involves adopting measures that should allow each individual to avoid becoming infected, such as the use of condoms or abstinence if this is acceptable. Because male circumcision does not provide total protection against infection, it cannot be considered as an individual method of prevention. It is a means of reducing risks aimed at lowering the risks of transmission of infection among a population in the same way as reducing the number of partners or providing treatment for infected individuals. The aim is not to impose a sole method of prevention, one that is 100% reliable, and which, if it is not used all the time, will lose its effectiveness. Male circumcision should therefore form part of a raft of preventative measures, including this means of risk reduction among others. In countries with high prevalence, male circumcision could benefit the male population where the use of condoms would not be sufficiently widespread. On the other hand, women cannot benefit directly from this potential advantage. In any case, they do not have to consent to a sexual relationship with a man without using a condom, just because he is circumcised. Male circumcision should form part of a system that offers access to screening and treatment and care for infected individuals, combined with an education and information programme aimed at encouraging changes in sexual behaviour. The ultimate goal of this programme would be to promote the use of condoms by the entire population.

MALE CIRCUMCISION AS A MEANS OF RISK REDUCTION IS AIMED SOLELY AT COUNTRIES WITH HIGH PREVALENCE

The same measures are not applicable to the Northern countries. The recommendations of the WHO state that this strategy is aimed at countries with high prevalence, and not at countries with low prevalence or in countries where it relates specifically to one part of

⁴⁰ Joint press release between WHO / UNAIDS issued on 28 March: WHO and UNAIDS announce recommendations from expert consultation on male circumcision HIV prevention. <http://www.who.int/mediacentre/news/releases/2007/pr10/en/index.html>

⁴¹ Conseil national du sida, *Human resources crisis in Southern countries, a major obstacle to the fight against HIV*, statements followed by recommendations adopted at the 14 June 2005 plenary session.

⁴² Kate J, Lief E, *International Assistance for HIV/AIDS in the Developing World: Taking Stock of the G8, Other Donor Governments and the European Commission*, The Henry J. Kaiser Family Foundation, July 2006, p. 16.

⁴³ UNAIDS, *Resource needs for an expanded response to AIDS in low and middle-income countries*, UNAIDS, August 2005, p.3. Clinton HIV/AIDS Initiative, *Global ARV demand forecast, overview*, 9 June 2006.

⁴⁴ World Health Organisation / UNAIDS, *New Data on Male Circumcision and HIV Prevention: Policy and Programme Implications*, March 2007, Montreux.

⁴⁵ Montaner, JSG, Hogg R, Wood E, Kerr T, Tyndall M, Levey AR, Harrigan R, The case for expanding access to highly active antiretroviral therapy to curb the growth of the HIV epidemic. *The Lancet* 2006; 368: 531-536.

⁴⁶ Castilla J, Del Romero J, Hernando V, Marincovich B, Garcia S, Rodriguez C. Effectiveness of highly active antiretroviral therapy in reducing heterosexual transmission of HIV. *Journal of Acquired Immune Deficiency Syndrome* 2005; 40: 96-101.

the population such as in France or the United States⁴⁷. Moreover, the results on male circumcision relate solely to heterosexual, vaginal sex. As reiterated at the 4th Francophone Conference on HIV/AIDS, we must "think of means of intervention not just solely from the point of view of their legitimacy or relevance such as we see them..., but rather from the point of view of the way in which they are perceived and accepted, rejected or adopted"⁴⁸. The New York Times has also stated, somewhat misguidedly, that the city's health care services were preparing a campaign aimed at encouraging "men at high risk" to get themselves circumcised⁴⁹. The city's health chief is reported to have said that "the risk of catching HIV from anal penetration is practically the same as for vaginal penetration... hence the protection offered by male circumcision could thus be the same as that found in the African studies"⁵⁰. In France, Sida Info Service has begun receiving calls from people wanting to find out whether, if the man is circumcised, it is still necessary to wear a condom, and whether there was a need for men to have themselves circumcised. In the same way, the website The Warning has published numerous articles highlighting the fact that, at first glance, France is not implicated as a result of the low prevalence among the general population, but that "it would probably be worthwhile considering a possible recommendation for people who travel regularly to countries with high prevalence". The author adds that this recommendation could also be of interest to homosexuals and that the choice should be left to the individual⁵¹. However, no research has shown that male circumcision reduces the risk of transmission within the context of sexual relationships between men. This interpretation of the results suggested by certain sources is not borne out by any data. It does not take account of the fact that the majority of the American homosexual population is already circumcised and yet it still has a high prevalence.

The current results of studies on male circumcision illustrate the need for supplementary research in order to better define the real impact that male circumcision could have on the epidemic's dynamics. Within the context of the strategies used in the fight against infection with HIV, the implementation of male circumcision as part of a raft of preventative measures could destabilise health care delivery and at the same time confuse existing prevention messages. Experience has shown that it is extremely difficult to communicate prevention using several means, and the addition of a new 'tool' could actually cause a result opposite to that which was originally intended. As the recommendations by the WHO highlight, this strategy is not aimed at countries with low prevalence or where it relates specifically to one part of the population such as in France or the United States⁵². To date, the WHO has encouraged the start of treatment on as wide a scale as possible and male circumcision should not sway this commitment. Male circumcision must not become a lower-cost solution that has a detrimental effect on drug-based treatments in developing countries.

⁴⁷ World Health Organisation / UNAIDS, New Data on Male Circumcision and HIV Prevention: Policy and Programme Implications, March 2007, Montreux.

⁴⁸ Fassin D, "Expériences et politiques du sida en Afrique", 4th Francophone Conference on HIV/AIDS (29-31 March 2007).

⁴⁹ Mc Neil DG Jr, City Health Dept. Plans to Promote Circumcision to Reduce Spread of AIDS, *The New York Times*, April 5th, 2007.

⁵⁰ The Warning, *Circumcision suite*, 10 April. http://www.thewarning.info/article.php?id_article=0217

⁵¹ The Warning, *Circumcision suite*, 10 April. http://www.thewarning.info/article.php?id_article=0217

⁵² World Health Organisation / UNAIDS, New Data on Male Circumcision and HIV Prevention: Policy and Programme Implications, March 2007, Montreux.

LIST OF INDIVIDUALS INTERVIEWED:

The Conseil national du SIDA expresses its sincere thanks to the people below who kindly agreed to be interviewed by the Circumcision Committee:

- Professor AUVERT (AP-HP, INSERM U 687, Université de Saint-Quentin), chief investigator in the ANRS 1265 trial on circumcision carried out in South Africa;
- Professor Jean-François Delfraissy, Director of the ANRS;
- Dr Michel Garenne, demographer, director of research, IRD/Institut Pasteur;
- Dr Isabelle de Zoysa, senior adviser HIV/AIDS, WHO;
- Dr Alain Elpelboin, ethnologist, CNRS.