Zidovudine to prevent mother-to-infant HIV transmission in developing countries: any questions?

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Editorial: **Zidovudine to prevent mother-to-infant HIV transmission in developing countries: any questions?**

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There were times when the unborn was sacred and no choice was left to the family, let alone the woman, whose life to privilege in case of pregnancy complications: the mother's or the child's. In the developed world, technical progress and health service development have almost forgone the need for this disheartening choice, while at the same time ethical and religious interpretations have evolved and the power of the medical profession has allegedly been curtailed. Reminiscences of ancient debates nevertheless popped up during some discussions at the 12th World AIDS Conference in Geneva, Switzerland, 28 June – 3 July 1998.

Pursuing the noble aim of bridging the HIV control/AIDS care gap between the developing and developed world, UNAIDS, UNICEF and WHO will jointly take an initiative to reduce mother-to-child perinatal HIV transmission in developing countries. They will seek support to provide a short zidovudine regimen to 30000 HIV-infected pregnant women living in 30 project areas in 11 pilot countries (UNAIDS 1998). This activity will be expanded in the years to come. Arguably this constitutes a cheap makeshift attempt to treat all HIV-infected and AIDS-affected men, women and children worldwide; this being deemed unaffordable – and indeed unfeasible – under the present politico-economical paradigm. Doing something, albeit imperfect, may be better than doing nothing at all, but a critical appraisal of the technical, operational and ethical characteristics of the selected strategy seems warranted.

The evidence in favour of the proposed short regimen is all but overwhelming: one randomized placebo-controlled trial (Vuthipongse *et al.* 1998) showed reductions of 15% to 71% (95% confidence interval) of the risk of perinatal transmission after a short zidovudine course (300 mg orally twice a day from 36 weeks' gestation until onset of labour and 300 mg every 3 h from onset of labour until delivery) conditional on not breast-feeding afterwards. The choice of endpoint (transmission or survival), the possible short and long-term side-effects for both mother and child of the proposed treatment regimen, the external validity of the trial, and the difference between efficacy and effectiveness will not be further questioned here.

The cost of drugs under the proposed short regimen seems promising, some US$ 50 per treatment course, but as can be derived from simulations by Mansergh *et al.* (1996), the recurrent programme cost – excluding all investment and fixed costs will amount to more than US$ 20 per pregnant woman covered by the programme. The median *per capita* health expenditure in sub-Saharan Africa and many other developing regions lies well below this figure. Furthermore, since only some 25% of the above expenditure is related to drugs, generous offers of the pharmaceutical industry to substantially lower the price of zidovudine will hardly enhance financial sustainability. More refined evaluations of real data in terms of cost per DALY gained will permit appreciation of its opportunity cost and comparisons of the cost-effectiveness of the advocated strategy with other HIV/AIDS control strategies as well as interventions addressing different priority health problems. Simulations based on a somewhat different treatment regime and efficacy assumptions predict US$ 274 per DALY (Marseille *et al.* 1998). Heuristically extrapolating from Mansergh *et al.* (1996), it can be foreseen that at a cost of some US$ 4000 per infection averted, the recurrent programme cost alone will be well above US$ 100 per DALY gained. This compares rather unfavourably with roughly US$ 5 for standard AIDS prevention programs (World Bank 1993) and would commonly be described as not very cost-effective.

Operationally, some long-standing health service organization constraints will have to be resolved in passing. For the short zidovudine regimen to be effective, at least one ante-natal visit is needed before 34–36 weeks of gestation. At that moment pregnant women should have access to voluntary and nonstigmatizing HIV testing. In less developed countries (LDC) less than 50% of pregnant women have one or more antenatal consultations (WHO 1998), and even routine syphilis testing at this occasion still tends to be the exception. Comprehensive research into the stigmatization and negative social consequences of an HIV diagnosis remains scanty. Since the strategy involves drug administration during labour and delivery, skilled care is also needed at this point, but only some 20% of deliveries in LDC

occur in health facilities (WHO 1998). Besides, patient adherence to zidovudine treatment schemes is low, even among well-counselled women using well-structured western health systems (Siegel 1997), and for the majority of families in developing countries there are no safe alternatives to breast-feeding (Nicoll *et al.* 1995).

Finally, several ethical problems remain to be considered. Pleas for a model of care that assures comprehensiveness (at least paying attention to women's other health problems), integration (HIV/AIDS-related promotion, prevention and care) and continuity (*après l'accouchement le déluge?*) may by some be dismissed as old-fashioned. Equity, sustainable development and women's and patients' rights are, however, still highly valued political goods. Concede that UNAIDS were aware of the implicit ethical choices they made by picking the strategy of least resistance, and that they tacitly accepted the unjust distribution of global health resources. Suppose that they can be confident that the available scientific evidence justifies preferentially allocating scarce resources to a short zidovudine regimen and preventing vertical HIV transmission. Imagine that the debate on privatizing or socializing the costs of caring for the orphans whom this intervention will eventually leave behind has been settled, and that the necessary funds are secured. Will healthworkers then be prepared to boldly tell a woman: 'We have the treatment you may need, but since you cannot pay for it we shall only provide you with prevention for your baby'? And will women be granted respect and the right to refuse?

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