Implementation of single-dose nevirapine for prevention of MTCT of HIV – lessons from Cape Town

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To the Editor: The HIVNET 012 study[1] in Uganda demonstrated the efficacy of the single-dose nevirapine regimen in prevention of mother-to-child transmission (PMTCT) of HIV in developing countries. However, recent reports of implementation studies in Kenya, Botswana, Zimbabwe and West Africa show that there may be an important gap between the efficacy in clinical trial circumstances and the effectiveness of PMTCT programmes when implemented in field conditions.[2-7] Return rates for test results and collection of the drugs, adherence to infant feeding recommendations and the antiretroviral drug regimen and follow-up turned out to be suboptimal, thereby limiting the reduction of MTCT of HIV. These findings indicate serious obstacles for future interventions.

As many PMTCT programmes based on the HIVNET 012 nevirapine regimen have been gradually set up in the Western Cape from January 2001, lessons learned in this region could be useful in other settings. Therefore, the objectives of this study were: (*i*) to explore barriers, limitations, pitfalls and potential solutions in implementing the single-dose nevirapine regimen for PMTCT; and (*ii*) to propose and discuss potential solutions to overcome the drawbacks and improve implementation at other sites.

Subjects and methods

A non-directive approach using semi-structured in-depth interviews was adopted, and a question guide, consisting of 12 open-ended questions, was used for each interview. All questions were based on the *Interim Findings on the National PMTCT Pilot Sites*[8] and the question guide was ethically cleared by the ethical commission of the Faculty of Health Sciences of the University of Cape Town. Fourteen senior nursing and paediatric staff members currently co-ordinating and/or executing PMTCT programmes in the Cape Town metropolitan region were identified by the study supervisor as key informants. Written informed consent was obtained from all participants. Interviews were recorded by audiotape recorder and a computer-assisted qualitative analysis was performed.

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Results

Between 25 September and 15 October 2003, 5 midwives in charge of a midwife obstetric unit (MOU), 3 programme co-ordinators, 2 midwives in charge of a labour ward, 2 neonatologists, 1 pharmacist and 1 obstetrician were interviewed.

Problems experienced

After categorising the data derived from the interviews, it became clear that obstacles, limitations and pitfalls experienced could be divided into the three main categories, viz. health policy, health services, and health-seeking behaviour, as summarised in Table I.

Health policy

Inadequate planning of and preparation for the PMTCT programme was indicated as a major drawback, resulting in a stressful atmosphere of confusion and frustration. Many health care workers did not know what was expected of them. No extra staff had been allocated for the PMTCT programme, extra stationery was promised but delivery was repeatedly delayed, and it took many months before most of the staff received basic HIV awareness and counselling training. As the programme had been rolled out for more than a year, most of these organisational problems were solved by the time of the interviews. Nevertheless there was still an ongoing request for logistical support in some places, and many people felt that the training could still be improved.

Health services

Staff shortage was an ever-recurring theme. Although this constraint was partly relieved by temporary staffing services, many people regretted the freezing of staff allocations. Reasons mentioned for the staff shortage were the brain drain of nurses and midwives to other countries and limited resources to pay for extra staff. As PMTCT programmes have increased the workload for nurses and midwives, it was said to be even harder now to send staff members for training courses since this meant a heavier workload for those remaining in service. This staff shortage may have resulted in lack of supervision in the postnatal wards. It was mentioned that babies might not always have received their nevirapine at times of heavy workload in the labour and postnatal wards. Furthermore, both the quality and quantity of HIV counselling sessions were perceived as being insufficient. The counselling rooms were too small, there was a lack of privacy and there were very few rooms on site. In addition, some counsellors appear to be dedicated and many of

Table I. Problems experienced during implementation of PMTCT programme

Health policy	Health services	Health-seeking behaviour
Resource constraints	Staff shortage	Inadequate knowledge/awareness
Inadequate planning and preparation	Increased workload	Lack of partner involvement/serostatus disclosure
Role players not consulted	Few, small VCT rooms	Social stigma
Tardy HIV counselling training for staff	Low quality of counselling	Shock/denial
Limited training facilities	Lack of follow-up support	Low compliance
Lack of logistics	Absenteeism among counsellors	Low socio-economic status (electricity and clean water)

the interviewees expressed their doubts about the quality of the counselling service offered.

Health-seeking behaviour

The success of the PMTCT programme depends for the most part on patient co-operation. High uptake of voluntary HIV counselling and testing (VCT) and compliance with both the drug regimen and mode of infant feeding are vital to reduction of MTCT. According to the interviewees, lack of knowledge, shock and denial may have been responsible for suboptimal VCT uptake and follow-up. Furthermore patients sometimes lost their nevirapine tablets or sold them in the community. In addition, non-disclosure to the partner sometimes posed problems of confidentiality during nevirapine administration to the baby and with regard to choice of feeding method. When the male partner was present at delivery it was difficult to administer the nevirapine syrup or give exclusive formula feeding without raising suspicion. Not surprisingly this led to women changing their minds and breastfeeding rather than formula feeding. On the other hand there was still a risk of pushing patients to formula feed exclusively, even if they did not have access to clean water and proper heating. In this context it was perceived as extremely important to counsel the clients very well so as not to cause a situation in which more neonates died of diarrhoeal disease than as a result of HIV infection.

Solutions

Measures taken in the past

Many interviewees emphasised the progress made since the start of the roll-out. In general there was a feeling of 'being on the right track'. Although not specifically asked for, many interviewees mentioned positive aspects of the current PMTCT roll-out, such as the monthly MOU meetings and the monthly meetings with area managers. Other evolutions perceived as being positive were more political will and community awareness, the foundation of support groups such as 'Mother to Mothers to Be', and the frequent monitoring of the provincial HIV rate.

Additional measures planned

Co-ordinators and programme managers called urgently for more lay staff and trained counsellors. Although efforts had been made, there was still a call for additional training facilities, preferably in-service training, as this kind of training means a lower burden for the health care facility and provides real-life experiences during training. The need for more and larger counselling rooms was also expressed. In addition, plans were made to install computers and the internet so as to facilitate information exchange and access to databases. As far as the actual counselling was concerned, this seemed to be a source of tension and conflict. To improve the counselling quality and to prevent burnout among counsellors, it was suggested that counsellors be employed on a half-day basis and that a system of supervision be implemented. In order to improve compliance with the drug regimen, drug administration in the MOU/hospital was being piloted at the time of the interviews. Finally, some interviewees recommended stronger efforts to involve the women's partners and communities. It was thought that this strategy would help mothers to bear the heavy burden of their HIV status and contribute to a process of destigmatisation and awareness.

Discussion

Our study describes two distinct but closely related phenomena. Firstly, we ascertained that there are numerous obstacles to integrating PMTCT programmes into routine antenatal care in respect of health policy, health services and health-seeking behaviour. Secondly, concerted efforts, originating from both top and ground levels of the health care facilities in the Cape Town metropolitan region are being observed so as to identify and overcome the obstacles experienced. Lessons can be learned from Cape Town when considering measures to improve the performance of PMTCT programmes. Although timely staff education and on-site training in addition to ongoing quality control through audit are likely to improve the acceptability and utilisation of PMTCT programmes, staff shortages may impact on the ability to secure participants to attend training courses.[9] Therefore, adequate staffing should be pursued at all times; this is likely to prevent nursing staff and counsellor burnout and staff resignation from the health care facility. Furthermore, when considering upgrading of VCT facilities, more efforts should be made to ensure confidentiality and to involve male

partners in antenatal VCT.[10] Additionally, we recommend the founding of community-based support groups as they provide psychological and social relief for women struggling with shock, denial and fear of stigmatisation; such support groups also raise community awareness and facilitate partner involvement. Finally, we wish to emphasise that this study took place before the roll-out of Western Cape dual therapy for PMTCT, which was introduced in October 2003. However, as most of the obstacles experienced and solutions proposed are not specifically related to the single-dose nevirapine regimen, our findings may be useful and valuable for future PMTCT programmes, even if regimens other than the single-dose nevirapine regimen are to be implemented.

We thank the Faculty of Health Science of the University of Cape Town and the Faculty of Medicine and Health Sciences of Ghent University, Belgium, for providing logistical support.

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