



## ROUNDTABLE

# Delivery of Male Circumcision Services: “*Festina lente*”\*

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THREE randomised clinical trials on the effects of male circumcision on HIV acquisition in men have been stopped by their data safety and management boards as the interim analyses showed a large protective effect, in the range of 50 to 60%.<sup>1-3</sup> It is not only this large effect that makes male circumcision very appealing as an intervention for HIV prevention. Male circumcision is a one-time intervention, and unlike other prevention tools, such as use of condoms, vaginal microbicides and pre-exposure prophylaxis, it is not dependent on high compliance by the users for its effectiveness. However, this is the first time in the history of modern medicine that a surgical procedure has been recommended as an intervention to prevent a major public health problem and there are major challenges ahead in the design and implementation of male circumcision programmes.

In this paper we will discuss issues in the delivery of male circumcision services, in particular services for adult men. We will try and identify the essential components of male circumcision services and examine which model of service delivery is likely to be the most cost-effective, and discuss some of the challenges involved.

### How to ensure maximal benefits from male circumcision at a population level

Mathematical modelling suggests that large-scale uptake of male circumcision – in the range

of 50–80% – could lead to a substantial reduction in incidence and prevalence of HIV infection, but also that it could take up to ten years before the full effect of a male circumcision programme is seen.<sup>4,5</sup> A high uptake of male circumcision is critically dependent on two factors: a high demand for male circumcision, and services that are able to meet the demand.

A review of studies on the acceptability of male circumcision in traditionally non-circumcising populations in sub-Saharan Africa identified 13 studies from nine countries (Uganda, Kenya, Tanzania, Zambia, Malawi, Botswana, Zimbabwe, Swaziland and South Africa). The level of acceptability of male circumcision was found to be quite high, with 29–87% of men stating that they would be willing to be circumcised.<sup>6</sup> These results are encouraging but it remains to be seen whether uptake of male circumcision will indeed be high once programmes are introduced. For instance, one of the studies in the review was conducted in Western Kenya among the Luo, and found that 70% of uncircumcised men said they would be willing to be circumcised.<sup>7</sup> However, a few days after WHO and UNAIDS released their recommendations regarding male circumcision, the Luo Council of Elders expressed concerns. They went on record as saying that they would “not allow the erosion of their culture”, though Luo men were free to be circumcised if they wanted to.<sup>8</sup>

It is crucial that male circumcision as an HIV prevention intervention is introduced as part of a package that includes correct information about its partially protective effect and

\*“Make haste slowly”, attributed to the Roman Emperor Augustus.

counselling on risk behaviour. The effect of male circumcision programmes on the spread of HIV may be jeopardised if men who are circumcised engage in higher risk behaviour because they falsely assume that circumcision gives them sufficient protection against HIV on its own\*. The trial in Kenya found a decrease in risky sexual behaviour among both circumcised and uncircumcised men.<sup>3</sup> But 24 months after enrolment in the trial, circumcised men reported more unprotected sexual intercourse and less consistent condom use than men in the control group. In the trial in Uganda there were some differences in condom use between men who were circumcised and men who were not circumcised, at the first follow-up visit, which was six months after enrolment. At 24 months there were no differences in sexual behaviour between the intervention group and the control group.<sup>2</sup> The trials in Kenya and Uganda did not find evidence for major changes in risk behaviour in circumcised men, but the follow-up period in the trials was relatively short, 24 months, and it is impossible to say whether the reduction in risky behaviour or the lack of difference between circumcised and uncircumcised men will be sustained. Moreover, men in the trials received counselling at each follow-up visit, i.e. four to six times over a period of 24 months. Such intensive follow-up could not be replicated in large-scale male circumcision programmes.

Men requesting circumcision should be fully informed about its advantages and disadvantages, about the procedure and what it means in terms of post-operative abstinence (the time estimated for the wound to heal is six weeks). They should then be counselled on sexual risk reduction and condom use and an HIV test should be offered. (However, compulsory, pre-operative HIV testing may have a deterring effect.) Screening for surgical contra-indications should include screening for sexually transmitted infections (STIs) and for advanced HIV infection. Men found to have an STI or to be HIV-positive should receive immediate care or be referred to another service. The different essential components of the male circumcision pack-

age imply that it should be offered by health care providers with a variety of skills, including counselling, surgical skills and management of STIs, or a team of providers who together have those skills.

The biggest challenge is how to deliver a complex prevention package that combines a surgical procedure with a behaviour change intervention, and achieve high coverage in a relatively short time. The services delivering the male circumcision package should be acceptable to the population and accessible. This means that:

- They should be of high quality and should also be perceived as such by the population. The health care providers should be trusted and there should be a relationship of mutual respect between the community and the providers. Confidentiality appears to be an especially important determinant of acceptability in a cultural context where circumcised men might experience discrimination.<sup>6</sup>
- The services should be physically accessible. Numerous studies have documented the relationship between health care utilisation and the distance people have to travel. In general attendance at health services decreases with distance from the health services.<sup>9</sup> But the distance people are willing to travel to reach a health service is determined by a number of factors, including the perceived seriousness of the health problem. How far men will be willing to travel to be circumcised is as yet unknown and will likely vary from one context to another.
- The services should be financially accessible. Cost of the procedure appears to be an important determinant of willingness to be circumcised.<sup>6</sup>
- The services should be permanently accessible and offer prompt treatment of any complications that may arise, after-care and follow-up counselling. In the studies on acceptability of male circumcision the risk of complications was a concern, and people will have to be reassured that the risk is low and that any complications will be dealt with promptly.

### **Integrated services vs. vertical programmes**

By integration of the male circumcision package we mean that male circumcision would be

\*Any such higher risk behaviour, based on the man believing that he is fully protected by male circumcision is described as "behavioural disinhibition" or "risk compensation".

delivered as part of the existing package of activities of general health services. This means that male circumcision services would be delivered by staff that are part of a team of health care providers in a first-line facility or a hospital that delivers a more or less broad range of health services. Ideally, the team will be well-integrated into the community and trusted by community members. Nevertheless, integration of services does not necessarily mean that training, supervision, quality control and monitoring also have to be integrated into existing structures up to the level of the Ministry of Health.

A major problem is that over the past decades the performance of general health services in sub-Saharan Africa has declined dramatically. This decline is due to a variety of factors, one of the most important being the worsening economic situation and the dwindling of resources for health care. Structural adjustment programmes have further worsened the situation. Infrastructure has deteriorated, staff are increasingly de-motivated and stock-outs of essential commodities have become a daily reality in many facilities. While the performance of general health services has declined, poverty and health problems have increased and the need for health services has soared. In order to address so-called "public health problems", donors and global programmes opted for the setting up of parallel and vertical programmes. Some of these programmes have indeed achieved impressive results within a relatively short time period, e.g. childhood immunisation campaigns by mobile teams to "mop up" sections of the population that do not have ready access to health services providing vaccination. Integrating a male circumcision package into health services that are "limping along" may thus not appear to be the most attractive option. But the advantages and disadvantages of integration and strengthening of existing services must be weighed against the alternative options, i.e. free-standing or mobile male circumcision services.

Mobile services initially sound appealing as they would remove the barrier of physical accessibility. Large numbers of men might be reached who would otherwise have to travel long distances to get circumcised. From a technical point of view, it is possible: counselling services can be offered by a mobile team and surgical procedures can be carried out in mobile

clinics. However, continuity of care and counselling would not be assured. In addition, mobile services would be very expensive and there is the question of cost-effectiveness. At present it is difficult to estimate how big the demand for male circumcision will be. There appears to be some increased demand in towns, but we do not know yet whether uptake will also be substantial in rural areas. As long as the size of the demand is unknown where general health services are difficult to access, mobile services may be a "solution" to a problem that does not exist. Finally, attendance at a mobile circumcision service will not go unnoticed in rural communities and would not be attractive if circumcised men experience discrimination.

A large-scale programme of delivery of the male circumcision package will require investments in infrastructure, including small operating theatres, surgical instruments and sterilisation equipment. Male circumcision is a minor surgical procedure that can be carried out in a small operating theatre. Crucial for the procedure is infection control, including the availability of equipment to sterilise surgical instruments, a sufficient number of surgical sets and, above all, staff who are trained in infection control. Delivery of the male circumcision package through a vertical programme would require the construction of large numbers of surgical units. Integration of male circumcision services into existing health services would imply rehabilitation of existing infrastructure for surgery. Rehabilitation of existing surgical theatres or addition of a surgical theatre to existing health infrastructure is likely to be more cost-effective than building new units.

However, the biggest bottleneck when going to scale with male circumcision will be the lack of human resources, and this problem will take more time to resolve. It has been estimated that an experienced provider will need about 20 minutes to do one circumcision. One such person could thus circumcise about 75 men per week – that is, if he does not do anything else. But the populations that would benefit most from this programme are already heavily affected by HIV and AIDS. The health services in those countries are faced with a human resources crisis that is deepening precisely because of HIV care programmes. Several initiatives are under way to shift certain tasks in HIV care to personnel

with minimal or no training in health care, in order to reduce this burden. A similar approach might be considered for the male circumcision package; for example, counselling on risk behaviour does not require medically trained staff. The surgical procedure itself could perhaps also be carried out by staff with a minimal training, for instance by nurse-aids, who operate in virtually every surgical ward in African district hospitals. Can staff with minimal training be held responsible for complications, however? Another problem is the career structure of "circumcisers" and their place within the health staff cadres in a given country.

Whether the male circumcision package is delivered through integrated services or as a vertical programme, the problem of lack of human resources will exist. If anything, integration of the package into existing services may be more cost-effective than setting up single-purpose services. For instance, after a short extra training, voluntary counselling and testing staff can be integrated into male circumcision services yet continue to provide services to other patients.

## Conclusions

Male circumcision programmes have the potential to have a large impact on the HIV epidemics in the most severely affected regions in the world. However, the delivery of a male circumcision package poses enormous challenges. As health services in sub-Saharan Africa are in decline, single purpose services may seem an appealing option to achieve results within a reasonable time. WHO and UNAIDS suggest "that vertical, stand-alone programmes... may be useful in the short term to expand access to safe male circumcision services and to train providers in standardized procedures".<sup>10</sup> They recognise, however, that integrated approaches are more likely to be sustainable and that vertical programmes should be integrated as soon as it is

feasible. Moreover, integration in existing services could be an opportunity (once again) for strengthening health systems.

The underlying assumption of the conclusions and recommendations of WHO and UNAIDS regarding male circumcision services is that there is already a big demand for these services or that this demand can be increased quickly by promotion campaigns. This is a big assumption, and there are lessons to be learned from other prevention programmes, for instance tetanus vaccination programmes targeting pregnant women to prevent neonatal tetanus, a major cause of neonatal mortality. In Bangladesh, two years after the introduction of such a programme, only 22% of eligible women accepted the vaccination. It transpired that there was a strong reluctance among pregnant women to be vaccinated, even if services were readily accessible. This led Chen to conclude that "many strategies overfocus on the supply constraint, but forget to consider client/community demand for such services".<sup>11</sup>

Male circumcision is a much more complex intervention than vaccination. We know that acceptability of the procedure is a major issue and that there is the threat of behavioural disinhibition. The services that deliver the package should be of high quality and should be accepted and trusted by the communities. Failure to build a relationship of trust with the communities or pushing communities to accept male circumcision may have a negative impact not only on the uptake of male circumcision itself but also on the credibility of other HIV prevention interventions. We therefore propose that countries move cautiously, pilot test service delivery models appropriate to local settings and start offering the male circumcision package in existing health services, while carefully monitoring uptake, demand and satisfaction with services, as well as long-term sexual behaviour, gender impact and social changes.

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