place and who performs it. However, data from Nyanza, Kenya suggesç that circumcision can be done in medical facilities for about US$ 25 per procedure. This includes US$ 8 for medical expendables such as sutures and needle, bandaging and analgesics, US$ 7 for surgical preparation (preparing the room, cleaning linens, sterilizing instruments, and US$ 10 in overheads (physician's fee, maintenance of room and equipment). Professor Tom Quinn from Johns Hopkins University told the 2006 Conference on Retroviruses and Opportunistic Infections that he calculated that 16 operations would prevent one incident HIV infection over 10 years. The cost per HIV infection averted could be as low as US$ 1052, if protection occurs in both sexes, making circumcision extremely cost effective.

The current position of WHO is that safe circumcision should be provided where people want it but that a policy decision on whether to promote it should wait until the results of the Kenya and Uganda trials are available. In the meantime a UN Work Plan on Male Circumcision is being implemented to help countries improve the safety of their circumcision practices. WHO has produced a technical manual, *Male circumcision under local anaesthesia*, which addresses the provision of safe male circumcision services for newborns, adolescents and adults and gives detailed technical information on the different surgical approaches.

> ### How could male circumcision protect against HIV?
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> Male circumcision is the surgical removal of all or part of the foreskin of the penis. There are several biological explanations at to why this operation may reduce the risk of HIV infection. Removal of the foreskin reduces the ability of HIV to penetrate the skin of the penis. In addition, on the underside of the foreskin are located many special immunological cells such as Langerhans cells which are prime targets for HIV. Another possible explanation is that small tears in the delicate skin of the inner surface of the foreskin during sexual intercourse could allow a portal of entry for HIV. Men with a foreskin are more prone to have some infections, including sexually transmitted infections, which can enhance HIV transmission. Male circumcision is associated with a much lower risk of penile cancer. Several studies now suggest that female partners of circumcised men have a lower risk of cancer of the cervix. Other benefits include prevention of inflammation of the glans and foreskin (balanitis) and prevention of scar tissue causing an inability to retract the foreskin (phimosis).

If the two ongoing trials are positive then governments in sub-Saharan Africa may want to decide whether to commit funds to train medical staff and provide appropriate equipment and facilities. Dr Puren says: "It will put further stress on a health-care system already straining to roll out an ARV (antiretroviral) programme."

Bailey warns: "People want the services. If they are not provided with the services they will seek unqualified practitioners who will exploit the situation. We have to build the capacity to provide safe and affordable services." Venter adds: "There are already long queues for circumcision in South Africa so there will need to be careful planning. We need to train more people to carry out the operations safely. There is no need for doctors to do it. It is a simple procedure that trained technicians could carry out."

When should circumcision take place? One option would be to promote routine circumcision of infants, possibly as part of the antenatal care package. Botswana, in fact, took a policy decision to offer this some years ago but it has not been implemented. Circumcising at this age would reduce the complications that result from traditional circumcision rites in adolescence. But the major benefits of preventing HIV infections would take more than 20 years to be realised.

The other alternative is to offer circumcision through health facilities, and possibly schools and youth centres to young men before they become sexually active. Dr Venter believes a proactive recruitment programme should be carried out. "We need to incentivize circumcision. For example every man who comes forward should be given 100 rand (US$ 14.50)." ■

Jacqui Wise, *Cape Town*

WHO coordinates health provision for quake survivors

Days after a devastating earthquake hit two Indonesian provinces, 6000 health workers from across the country were dispatched to the disaster zone. To help Indonesian Government efforts to provide emergency health care, WHO has been coordinating dozens of international organizations and charities to aid survivors.

Within hours of a 6.2 magnitude earthquake that hit the Indonesian provinces of Yogyakarta and Central Java on May 27, a massive relief effort, comprising both Indonesian and overseas organizations, got under way. A fortnight after the quake, approximately 75 international nongovernmental organizations (NGOs), and more than 10 government teams and UN agencies had sent personnel and supplies to the stricken region to support the Indonesian Government's own relief efforts.

WHO's role was as the lead agency of the Health Cluster, set up in June 2005 as one of the key components of wider humanitarian reforms within the UN. At the country level the Health Cluster's role is to coordinate the health response. The Cluster system proved successful in the South Asia earthquake in 2005. In Indonesia,

> **❝WHO mobilized its team within a few hours.❞**
>
> *Dr Arturo Pesigan, Head of the Health Cluster in Yogyakarta.*

this approach helped to involve most of the NGOs engaged in relief efforts in efforts to assist the two provincial health authorities, as they grappled with the aftermath of the quake: over 5700 dead, nearly 38 000 injured, 470 000 dwellings damaged or destroyed and 1.5 million people affected.

"WHO's main role is supporting the Indonesian Government in its work responding to the emergency situation, particularly on human health-related concerns, and WHO has been in close relationship in supporting the work of the Ministry of Health (MoH)," says Dr Arturo Pesigan, Head of the Health Cluster in Yogyakarta.