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Chris Lavy *is an orthopaedic surgeon in Oxford (UK) who lived and worked in* **Malawi** *for ten years. There he helped build an orthopaedic hospital and research unit. He was also one of the founders of COSECSA, the regional College of Surgeons for East and Central Africa in 1999.*

Medical aid work: what can you do?

The biggest orthopaedic problem in the world is not how to place the stem of a total hip replacement into a femur and make it last 20 years. Nor is it how to deal with the ever-increasing number of patients with osteoporotic vertebral fractures. It is simply that the majority of the world's patients with orthopaedic conditions do not have access either to an orthopaedic surgeon or a properly equipped orthopaedic operating theatre. Most general hospitals in the developed world have more orthopaedic surgeons in one hospital than there are in many African countries. When I first arrived in Malawi in 1996 there was one orthopaedic surgeon for 12 million people. This lack of access to surgery of all types is a major problem in many countries[1,2] and deserves more attention as a global public health issue.

The orthopaedic pathology that can be seen in sub-Saharan Africa is diverse and flamboyant. Much of rural Africa shares with the West the problem of road traffic accidents. These can sometimes be extreme. For example, when a minibus built to seat 12 passengers, but actually carrying 35, collides with a truck overladen with five tons of maize and with half a dozen passengers on top, the result is carnage. The chance of any emergency medical response is negligible. Passers-by do what they can but many injured will perish through lack of resuscitation while many others will be destined to develop severe disabilities.

Degenerative conditions of the hip, knee and spine, which are the mainstay of elective orthopaedics in the West, certainly exist in Africa but as life expectancy is short such conditions are less common. However, bone and joint infections, untreated congenital and developmental conditions such as clubfoot (Fig. 1) and Blount's disease (Fig. 2a) are frequent. The spectrum of pathology is wide and the rewards that come from performing simple procedures such as tibial osteotomy (Fig. 2b) and fracture fixation (Fig. 3) are immense.

One common question asked by orthopaedic surgeons who wish to visit the developing world is "what can I do?" In this short article I attempt to outline some approaches that might be used.

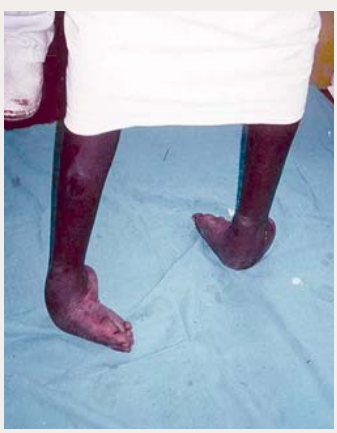
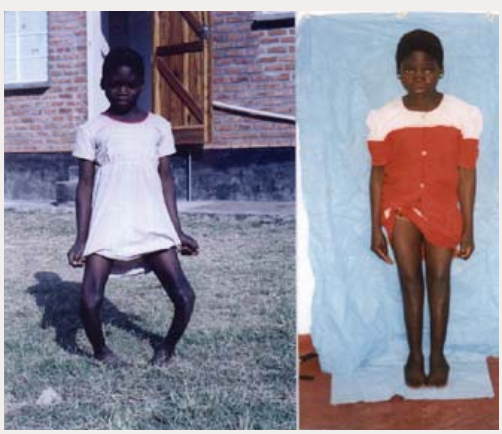
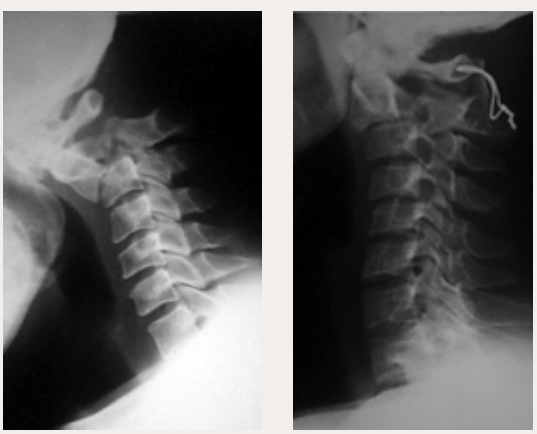


Fig. 1. Photograph of untreated club foot in a teenage boy resulting in severe deformity



a b

Fig. 2. Photographs of a) a 14-year old girl with Blount's disease and b) after treatment with bilateral tibial osteotomy



a b

Fig. 3. Radiograph showing a) fracture of the pedicle of C2 sustained during a road traffic accident leading to C2/3 subluxation and b) after being treated by wiring and bone graft

VISIT

There is no substitute for first-hand experience. Visit and make friends with local surgeons who are working in difficult circumstances. The more you visit the more easily you will understand the complex issues involved with working in a resource-poor setting. You will also learn about the pathology that exists. Go with your eyes open and make every effort to listen before speaking. Be careful of criticism and do not keep saying how you would manage a condition back home. Do not expect to spend all your time in the operating theatre. Although orthopaedic surgeons generally love being in an operating theatre they can frequently be more useful by teaching in wards and clinics. The more you visit a facility the better known you will become and the more valuable you can be. Some surgeons have been instrumental in developing a formal link between their own hospital and the unit they seek to visit.[3] For a first visit to rural Africa, I would recommend the annual congress of the College of Surgeons of East, Central and Southern Africa (COSECSA).[4] This meeting takes place in early December each year and offers an ideal opportunity to make contacts.

TEACH

Teaching and encouraging others in surgery is more important than operating oneself. Keep an eye out for teaching opportunities and become involved with them. It is one of life's great rewards to witness the transformation of a keen, young trainee into a skilled surgeon in a needy country. Be cautious about offering doctors the opportunity to train in your home country. There are certainly some instances where this can be of value, but it is far better to develop services and improve training within the country where the surgeons live.

RESEARCH

Orthopaedic research in the West probes ever deeper into the minutiae of knowledge about musculoskeletal conditions. Studies frequently start with extensive literature reviews to describe what has been done before. When setting up studies in sub-Saharan Africa these reviews are often short because so little research has been done. There are huge subject areas within epidemiology, aetiology, and the treatment of common conditions that demand investigation, both to improve services locally and also to be more accurate internationally in advocacy for those in need of the services.

SUPPORT ORGANISATIONS THAT MAKE A DIFFERENCE

If you do not have time to visit an African country yourself, why not donate your earnings for the time you might have given? World Orthopaedic Concern[5] is an orthopaedic charity linked to national orthopaedic associations in the UK, India and France. In the USA there is a sister organisation called Health Volunteers Overseas.[6] Other international organisations that are undertaking orthopaedic work in Africa are CURE International,[7] CBM International [8] and Global Clubfoot Initiative (GCI).[9] CURE has five orthopaedic hospitals, in Ethiopia, Malawi, Kenya, Zambia and Niger. GCI has the dream of developing clubfoot treatment by the Ponseti method across the world so that the 200,000 children born annually with this condition might avoid a lifetime of disability.

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