There are significant problems surrounding lack of access to surgical services, surgical training and surgical safety in Africa. There are many reasons for this. A recent report suggests that the ongoing healthcare workforce crisis is set to get worse in sub-Saharan Africa, with an estimated shortfall of 800,000 health professionals by 2015 and a required additional wage bill of approximately US $2.6 billion. Reasons include a lack of medical school places to meet demand; poor wages, facilities and infrastructure; impact of the HIV/AIDS epidemic; and migration to urban areas and developed countries. For example, although Kenya has trained 300 surgeons since 1972 only 120 of them remain in public service, with 27 of its 63 district hospitals having no qualified surgeons. Similarly, in Uganda there are only 75 general surgeons and 10 physician anaesthetists for a population of 27 million. Modelling shows that poor countries, accounting for 34.8% of the global population, undertook only 3.5% of all surgical procedures in 2004. The majority of these procedures will have been undertaken in urban areas. The result is that rural areas, in particular in sub-Saharan Africa, lack basic resuscitation training and equipment as well as the ability to perform essential and emergency surgical procedures.

In 2007 Lord Crisp was asked to assess how the UK should respond to international health challenges. In his report, Global Health Partnerships, he states that: ‘Everywhere I went people told me they were keen on greater partnership and links with the UK, sometimes built on our shared history and tradition. They want – and need – more funding for health, but they also want to draw on UK experience and expertise in health and to work together in a spirit of mutual respect.’ He recommended that such partnerships should be supported and coordinated both at governmental level and through organisations such as the Tropical Health and Education Trust (THET). The report also recommends that individuals wishing to work abroad be supported and their time be recognised by the NHS.

So far worldwide health policies have tended to focus on maternal mortality and infectious disease. However, access to good surgical services is a significant problem and needs to be more adequately addressed in order to prevent the significant mortality and morbidity caused. Intervention has been shown to be cost effective.

We suggest that there is a role for UK hospital partnerships in supporting surgical training and improvement of surgical services and that such partnerships can be mutually beneficial and may, in the long term, have a significant effect on surgery in Africa. We look at how UK surgical departments can use partnerships to benefit themselves and partner organisations abroad.

Methods

The Medline database was searched using the medical subject headings ‘Surgery and Africa’, ‘African Workforce’, ‘Hospital Links/Partnerships’ and ‘Health Links/Partnerships’. The internet was also searched for organisations involved in surgical training. Websites and journal articles were examined for other relevant articles or organisations. In addition, hospital links and organisations were contacted directly to clarify their role and involvement and to obtain further information.

There have been a number of different organisational responses to the need for improved surgical training in Africa and some of these are detailed below.

WORLD HEALTH ORGANIZATION (WHO): THE GLOBAL INITIATIVE FOR EMERGENCY AND ESSENTIAL SURGICAL CARE (GIEESC)

Launched in 2005, the overall objective of GIEESC is to improve collaborations...
among organizations, agencies and institutions involved in reducing death and disability from road traffic accidents, trauma, burns, falls, pregnancy related complications, domestic violence, disasters and other emergency surgical conditions* (www.who.int/surgery/globalinitiatives/en). Its strategy includes developing a national plan for surgical services at a district level, training of staff, strengthening capacity and improving patient safety.

COLLEGE OF SURGEONS IN EAST, CENTRAL AND SOUTHERN AFRICA (COSECSA)
COSECSA is an independent body set up in 1999 with the aim of ‘fostering’ and ‘harmonising’ postgraduate surgical education within its constituent countries. It has its own diploma exams for fellows and members of the college, and basic and higher surgical training programmes. It organises workshops, lectures, seminars and conferences.

CANADIAN NETWORK FOR INTERNATIONAL SURGERY (CNIS)
CNIS is non-governmental organisation that aims to ‘empower low income countries to create an environment where the risk from injuries is minimal and all people receive adequate surgical care’ (www.cnis.ca). It has four programmes: surgical and obstetric skills training; an injury control and safety promotion programme; a surgical information programme; and a primary surgery wiki and web-based injury database. It also facilitates projects from individual and organisational members.

TROPICAL HEALTH AND EDUCATION TRUST
THET is a charity established in 1988, which supports health links between institutions in the UK and abroad in order to improve health services in the world’s poorest countries (www.thet.org.uk). It currently supports a number of links between the health institutions in the UK and Africa and is the most significant resource for anyone establishing a link.

SURGICAL TRAINING IN AFRICA NETWORK
The Royal College of Surgeons of Edinburgh recently launched the Surgical Training in Africa Network (www.stan-online.org). This is a collection of initiatives and projects that includes running courses such as Training the Trainer in Africa in collaboration with COSECSA, Interburns (an initiative to reduce mortality and morbidity from burns through training, education and research) and an e-logbook for African surgeons.

UROLINK
UROLINK represents the British Association of Urological Surgeons (BAUS) (www.urolink.org) and aims to promote the provision of appropriate urological expertise in the developing world. Its key areas of activity are in encouraging the establishment of links; facilitating professional visits; support of urological training; provision of books, journals and equipment; and providing the BAUS council with advice on overseas matters.

OPERATION HERNIA
Operation Hernia is a UK-registered charity established by an initiative between the European Hernia Society and the Plymouth–Takoradi (Ghana) hospital link. It trains and teaches hernia surgery in Africa (www.operationhernia.org.uk). It sends out teams of volunteers to work alongside African surgeons, training them in administration of local anaesthetic and performing hernia operations. Teams operate on a large number of cases over a short period, often in two theatres simultaneously.

POTENTIAL OF UK HOSPITALS
Healthcare links are partnerships between hospitals in an economically developed country and healthcare institutions in a developing country. Parry and Percy have suggested that links should have the following three characteristics: first, they should be responsive to the needs of the less developed partner; second, the link should be flexible to the local needs; and third, they should be long term in nature. Similar guidelines have been suggested for established surgical colleges and may equally be applied to hospital links. They include the need to respond to a request for help, to ensure projects are achievable and satisfy the recipient, and that technical equipment must be appropriate and include a maintenance component. It is essential that such partnerships be sustainable, build capacity and be in for the long haul.

Surgical health links have been shown to offer potential benefits to both partners including sustainable collaboration, targeting of resources, training opportunities, regular personal contact, troubleshooting, mutual research opportunities and potential involvement of other specialties. They also increase global awareness and stimulate an increase in capacity of the partner institutions for research and training. There are a number of reports by individuals from the UK that highlight the importance of spending time in the developing world. Benefits and disadvantages to the NHS are listed in Table 1.

EXAMPLES OF HOSPITAL LINKS
University Hospitals of Leicester established a link with Gondar University Hospital, Ethiopia, in 1996. This has resulted in development of a postgraduate training programme in general surgery and an exchange of professionals in both directions (www2.le.ac.uk/institution/gondar-information-hub). The first clinical audit programme in Ethiopia has also been set up at Gondar and there have been joint publications in several different specialties.

Northumbria Healthcare has developed a link with Kilimanjaro Christian Medical Centre, Tanzania (www.nugis.nhs.uk/menu.asp?id=260109). In surgery this has included the training of theatre nurses and training in laparoscopic surgery. An internet link has been recently set up enabling ‘telementoring’ of surgeons in Tanzania so that UK surgeons can watch Tanzanian operations and Northumbrian Upper Gastro Intestinal Team of Surgeons training courses can be transmitted live to surgeons and nurses in Africa.

The Blackpool Victoria Hospital has a link with Kamuzu Central Hospital in Lilongwe, Malawi. This link established in 2003 facilitates visits by a consultant orthopaedic surgeon and a clinical team.
It provides training in orthopaedic surgery and cerebral palsy.

**SETTING UP A LINK**

For any institution wishing to set up a link, there are a number of significant obstacles to be overcome. These include problems with communication, bureaucracy, lack of funding, paucity of good-quality equipment and differential expectations, all of which can hamper efforts at partnership. Cultural issues can be frustrating and it is important to remember that you cannot simply apply UK methods and behaviours. It is not about giving people a UK product but about a process of working together to meet a need.4

It is important to be clear about what is agreed to be achieved. Some links have found it helpful to employ a links coordinator to facilitate communication, visits and strategy. THET and the British Council launched an International Health Links Funding Scheme in September 2009 as part of the response to the Crisp Report.

Any link should aim to support and help develop existing training schemes and personnel wherever possible rather than introducing new initiatives. It is also essential to demonstrate long-term commitment and avoid the link being used as a vehicle for a form of medical tourism.

**FUTURE DIRECTIONS**

Although links to date have concentrated on support of teaching/training of skills to professionals in larger institutions, the main problem with regard to surgery in Africa remains one of access to care within rural areas. It would be hoped that such partnerships may in due course be able to support training of rural healthcare staff.

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**TABLE 1**

**BENEFITS AND DISADVANTAGES OF HOSPITAL LINKS**

<table>
<thead>
<tr>
<th>Main benefits for the NHS</th>
<th>Disadvantages for the NHS</th>
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<tbody>
<tr>
<td><strong>Personal</strong></td>
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<tr>
<td>Personal satisfaction/inspiration</td>
<td>Risk of exhaustion, stress, from overseas link activity</td>
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<tr>
<td>Learning about different cultures</td>
<td>Neglect of family while engaged in link work on top of normal demands</td>
</tr>
<tr>
<td>Appreciation of NHS/sense of perspective</td>
<td>Some annual leave used up if no study leave allowed</td>
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<tr>
<td></td>
<td>Higher risk of accident or security problem in some cases</td>
</tr>
<tr>
<td><strong>Professional</strong></td>
<td></td>
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<tr>
<td>Understanding of patients from relevant part of the world</td>
<td>Problems of arranging cover and imposing on others when absent on link business</td>
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<tr>
<td>Hones clinical skills and refreshes basic skills without dependence on high-tech machinery</td>
<td></td>
</tr>
<tr>
<td>Familiarisation with pathologies that are less common in UK</td>
<td></td>
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<tr>
<td><strong>Non-clinical professional skills</strong></td>
<td></td>
</tr>
<tr>
<td>Improved teaching skills</td>
<td>Finding alternative cover when people are away on link business</td>
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<tr>
<td>Development of resourcefulness</td>
<td>Opportunity costs; time and resources expended on links are not available at the same time for other expressions of corporate responsibility or organisational improvement</td>
</tr>
<tr>
<td>Greater awareness of how to avoid waste and work with few resources</td>
<td>Need to manage security risks</td>
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<tr>
<td>Team skills enhanced by interdisciplinary team effort</td>
<td></td>
</tr>
<tr>
<td><strong>Organisational</strong></td>
<td></td>
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<tr>
<td>Link can enhance reputation</td>
<td></td>
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<tr>
<td>Good for job satisfaction, retention and motivation of committed staff</td>
<td></td>
</tr>
<tr>
<td>Good for recruitment of committed NHS staff</td>
<td></td>
</tr>
<tr>
<td><strong>Universities</strong></td>
<td></td>
</tr>
<tr>
<td>Can assist global cachet</td>
<td>Distraction from financial imperatives of the research assessment exercise</td>
</tr>
<tr>
<td>Good framework for student electives</td>
<td></td>
</tr>
<tr>
<td>Helps recruit committed students</td>
<td></td>
</tr>
</tbody>
</table>

or partnerships. These should be tailored to the less-developed partner and be flexible and long term in nature. Such partnerships may in the long term assist in the reduction of suffering and death from surgical conditions.

**Conclusions**

UK hospitals have the chance to benefit themselves, and colleagues and patients in Africa, by the development of health links or partnerships. These should be tailored to the less-developed partner and be flexible and long term in nature. Such partnerships may in the long term assist in the reduction of suffering and death from surgical conditions.

**References**


