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"Blitz Surgery": Redefining Surgical Needs, Training, and Practice in Sub-Saharan Africa

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Abstract
Background Most reconstructive surgery in Sub-Saharan Africa is provided by numerous noncoordinated individuals and organizations, in multiple short trips, or "surgical blitzes." Because many such groups do not train local surgeons, these communities have become dependent on unsustainable systems. By providing much-needed care to otherwise neglected areas, the blitzes offer an easy solution to what would otherwise be the source of a significant headache to local governments.
Methods The collection of data and other material in this highly ambiguous and fluid field is nearly impossible, as scientific papers on the results of poor surgical treatment, especially in the realm of humanitarian medicine, do not exist: The author has had to rely on personal experience and community interaction to reach the views and conclusions articulated in this article.
Results Although not the rule, blitz surgeries have poorer outcomes than in-hospital procedures, primarily because of inadequate preoperative and postoperative care.
Conclusions Although the value of blitz surgery in meeting some of the surgical needs of otherwise neglected communities is undeniable, the author seeks to provoke a sober reexamination of these efforts vis-à-vis the long-term sustainability of such programs, with the objective of harnessing strengths that would see the evolution of a new reconstructive surgical service tailor-made for Africa—affordable and sustainable yet able to deliver quality surgical care to the remotest villages. Otherwise, these humanitarian efforts' will continue to be 'drops in the ocean, meeting the needs of a few in the community but resulting in no long-term gains.

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Introduction

"Blitz surgery" has been used in the popular press [1] to denote a swift, short surgical campaign that is focused on an area of specific need. For the purposes of this discussion, blitz surgery encompasses any such program that lasts 3 weeks or less. Sub-Saharan Africa has for many years offered a fertile ground for surgical blitzes, providing a huge reserve of surgical pathology as well as the prospect of savoring her rich natural heritage of unspoilt scenery and wild life. Most blitz surgeries, also included in "humanitarian medicine" [2, 3], are organized and funded by nongovernmental organizations (NGOs) or philanthropic individuals. Humanitarian medicine flows from the wealthier nations to resource-poor countries where surgeon-to-patient ratios are high and surgical needs continue to be largely unmet [4, 5]. Most blitz surgeries are generally reconstructive in nature: the correction of cleft lips and palates, correction of other congenital anomalies, and burn sequelae. Cancrum oris, "the face of poverty," also attracts significant interest [6, 7].

The problems

Dependence

Dependence is an important word on the African continent as most governments on the continent are dependent on financial aid from the International Monetary Fund and the World Bank. These institutions both prescribe and finance

major programs for these governments. Because most "blitzes" do not generally transfer skills to the locals served, these communities are likewise dependent on them for their surgical care. A body of medical literature whose origin and content is African, but whose entire authorship is foreign, lends further credence to the argument that to a large degree local doctors and the community are uninvolved in these ventures. Unfortunately, even where programs have succeeded in co-opting local doctors, an inequality in partnership is likewise portrayed [8–11]. The blitzes provide an easy solution to what would otherwise be the source of a significant headache to local governments by providing much-needed health care to otherwise neglected areas.

Poor outcomes

Blitz surgeries often provide quick-fix solutions to some surgical needs in a given geographic area over a short period of time. This engagement may be anything from a single visit to multiple visits over succeeding years. A team consisting of surgeon(s), anesthetist(s), residents/students, and scrub nurses arrive at a rural hospital with their own equipment and quickly but briefly transform its otherwise decrepit operating rooms into state-of-the-art operating rooms, ready to assault the community's surgical problems [12]. Most teams have the same modus operandi. Patients previously identified by the local doctor(s), collaborators, or team members are reviewed and scheduled for surgery [13]. The sheer volumes of surgical cases, the drive to log as many procedures as possible, coupled with an ill-prepared local hospital staff, contributes significantly to poor preoperative patient evaluation and, more importantly, poor postoperative monitoring.

In an attempt to help as many patients as possible, the quantity of procedures performed may override their quality and consequently their outcomes. Pressed for time and aware that follow-up is nearly impossible [14], teams are forced to provide simple "quick-fix" solutions for most problems. The surgical pathology is such that many such specialists may find themselves stretched way beyond their areas of training and practice. Additionally, accompanying trainees may work independently, performing unsupervised procedures way above their level of competence [5].

The intention of most such teams is noble, temporarily filling a gap in local capabilities, with plans to train and equip local professionals with time [2, 3]. Unfortunately, there are some whose intentions are not so noble—they "train on job"; these blitzes provide the opportunity to improve skills or try out new procedures, such that complications are not uncommon in these well meaning exercises [15]. Data collection and evidence in this highly ambiguous and fluid field are difficult to come by, as scientific papers on the results of poor surgical treatment, especially in the realm of humanitarian medicine, do not exist: the author has had to rely on personal experience and community interaction to arrive at the views and conclusions articulated in this article.

Although not the rule, blitz surgeries have poorer outcomes than in-hospital procedures. Simple surgical techniques that can treat large populations of patients have been advocated and, where possible, taught [3, 8, 16]. Poor postoperative care is the main reason behind this approach.

The solutions

In the search for more acceptable postoperative care, oversight, and improved outcomes, especially where complex surgical procedures are required (e.g., for cancrum oris [6, 7]), some result-oriented teams transfer such patients to the more sophisticated operating theaters of the developed world, preferring to perform only simple procedures during their surgical blitzes. Although the results may be excellent, the costs involved can be enormous, and only a few patients benefit from such programs [7, 13]. A major advantage of surgical blitzes is that patients remain within their home environment with family support at hand.

Surgical blitzes in developing countries, and surgical airlifts to hospitals in developed countries have been used for many years. These stand at two opposing ends—both providing care that is otherwise lacking locally, yet none providing lasting solutions to the communities served. Ultimately, these solutions lie within these communities [17].

Strategies

Locally, the African Medical and Research Foundation (AMREF), a local nongovernmental organization (NGO) of international repute, and the Surgical Society of Kenya, among others, provide surgical care to otherwise poorly served areas through similar blitzes. Other teams have found that training local surgeons through temporary translocation to a developed country offers a much more effective strategy. They provide needed support for the surgeon upon the return to their country of origin and foster the establishment of reconstructive surgical services in the community. The surgical blitzes continue while simultaneously building a local base of well trained reconstructive surgeons, ensuring sustainability.

The emigration of the expatriate surgeon(s), either temporarily or permanently, into the community is another strategy. Unfortunately, the departure of this specialist also spells the end of the specialty care provided—the experience

of many mission/church hospitals in Kenya, with many collapsing as a result of lacking the previously available free, skilled manpower.

It is noteworthy that most of those involved in surgical blitzes in Sub-Saharan Africa have in common the goal of helping transform the health care system, especially the universal availability of quality surgical care to the people in the regions they visit. However, the long-term sustainability of these programs remains precarious by their very nature—all the major players are foreigners, and the departure of a principal player or the lack of funding often brings the program to a grinding halt. Similarly, political interference or social upheaval, so common and unpredictable on the African continent, spell doom to such programs, holding many patients hostage [3].

Community involvement: sustainable quality surgery and training

The 1987 conference of African ministers of health under the auspices of the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) developed the Bamako Initiative [18]. Its subsequent implementation across Africa taught us that community ownership of projects in Africa is the key to success and sustainability. While borrowing from this strategy and using it in surgery may not be as easy, a review of the above-mentioned strategies, vis-à-vis the envisioned goal of providing sustainable, quality surgical care in Sub-Saharan Africa, reveals an urgent need for the development and implementation of a approach that includes community participation—the basis for any successful project in the short term that is sustainable in the long term. Failed projects can often be linked to community noninvolvement. To have an effective impact on a community, team members must be well trained, set up long-term goals, and establish a good relationship with local professionals. Understanding and respecting local culture and values are additional, essential ingredients; although most organizations involved in blitz surgeries mention community integration and training as core to their activities, there are no means of measuring the extent to which this is achieved [5, 13, 19].

Success stories of mission/church hospitals after the departure of missionaries/expatriates in Kenya are few, but those that have survived are evidence that the progressive transfer of skills and technology to local health care institutions and professionals ensures continuity way beyond the missionary's term of service. These institutions invested in the training of local professionals, including nurses and doctors, to whom missionaries had passed on their skills.

Surgical blitzes run by large, well funded groups, such as the "Smile Train," do not have the inherent problems of the more numerous smaller groups, as they are able to provide acceptable preoperative and postoperative care by training and incorporating local doctors into their programs. Some such organizations subsidize the costs of procedures performed by collaborating with local surgeons and maintain surgical standards by developing quality control measures with regular feedback. The sustainability of programs thus initiated is ensured, except for the funding.

Until recently, surgical training in Kenya and the larger East African region was available only at university teaching hospitals, restricting access to a few doctors. Scholarships for surgical specialties are rare as the focus and emphasis remain on human immunodeficiency virus infection/acquired immunodeficiency syndrome (HIV/AIDS), malaria, tuberculosis, and other infectious diseases. Unfortunately, developing surgical specialties has never been a priority for Sub-Saharan governments or for the donor community that finances most health care programs in the region. This is despite the fact that in terms of the burden of disease surgical problems, such as trauma, rank the same as tuberculosis and malaria [17]. Furthermore, until recently, South Africa has provided the only regional site for reconstructive surgery training for surgeons from East Africa. Unfortunately, the cost of living and training in South Africa far exceeds local incomes, significantly discouraging the growth of this specialty locally. This state of affairs has, over the years, provided fertile ground for many well meaning surgical blitzes, which have lacked quality control and oversight [13].

Policy change in Kenya over the last two decades saw the opening of a second medical school and the expansion of internship training programs into church/mission hospitals. The founding of the College of Surgeons of South East and Central Africa (COSECSA) in the region was another milestone. COSECSA has since initiated surgical and orthopedic training programs in nontraditional teaching institutions. Continuing expansion to include neurosurgery and reconstructive surgery programs will see the country, and the region, develop specialists to cover areas that previously relied almost entirely on surgical blitzes. COSECSA also launched the *East and Central Africa Journal of Surgery*, a tool that further enhances the quality of surgical practice in the region [17].

To develop independence in the training programs, the region requires collaborative support from groups that had hitherto operated in isolation. Combined resources would see the development of excellent training programs, complete with much needed equipment. Because the focus would be the training of local surgeons, these programs would become sustainable, providing much needed surgical care and additionally cut down on duplication of projects by different teams. Continued cooperation between local and

visiting surgeons would ensure continuing medical education and technical assistance, leading to the provision of high-quality surgical care to a population that badly needs it. The surgical blitzes would then be run in a much safer environment, with secure postoperative care. Participating teams would provide rewarding humanitarian surgical care and training. Local and visiting trainees to these institutions would receive excellent experience.

Goal setting with patients and their families, a feature central to reconstructive surgery, although impossible in the setting of surgical blitzes should be part of the care in such programs [7].

Models

The initial group of local trainees may require some training outside their country so that upon return home they would be well equipped to develop appropriate programs based on local needs and available resources. This strategy is based on the premise that these surgeons will commit themselves to the development of the service within their own communities—the only unpredictable variable in this approach.

Two successful examples of this model are worth mentioning. The first is the plastic and reconstructive surgery training program in Addis Ababa, Ethiopia, which is the result of cooperation between Ethiopia (Yekatit and ALERT Hospitals), Norway (Bergen Hospital), and India (Christian Medical College, Vellore), which has seen about 10 surgeons trained to date. The program has evolved into a formal university postgraduate program, offered in Ethiopia but supported by the Norwegian government. A second success story is from Nigeria where in 1996 in Sokoto a project for surgical rehabilitation of noma survivors was initiated. The project has since expanded into a well equipped hospital for the treatment of patients with acute noma, noma survivors, and patients with other facial disfigurements [10]. Although expatriate surgeons are still involved, local surgical expertise is now available [20].

Conclusions

Although the value of blitz surgery in meeting some of the surgical needs of otherwise neglected communities is undeniable, the author seeks to provoke a sober reexamination of these efforts vis-à-vis the long-term sustainability of such programs. The experiences gained from years of using various strategies should be scrutinized with the objective of harnessing strengths that would see the evolution of a new reconstructive surgical service tailor-made for Africa: affordable and sustainable yet able to deliver quality surgical care to the remotest villages. The basis of any such program must be the involvement of local communities and the training and retention of local surgeons. Working with local training institutions not only fulfills the desire for long-term sustainability, it places resources where they are most needed. Locally trained surgeons are more likely to stay and serve in the environment in which they trained. Furthermore, partnering directly with the smaller, rural training institutions removes the bureaucratic hurdles presented when trying to work with larger institutions such as the government or universities. New skills and added health care infrastructure would strengthen these institutions as well as improve the quality of training programs. The final result will be overall improved health care delivery to the population served.

The combined resources of the teams involved in blitz surgery are enormous and, if appropriately harnessed and channeled, would help make sustainable reconstructive surgical care in Sub-Saharan Africa a reality. Otherwise, humanitarian efforts will continue to be like drops in the ocean, meeting the needs of a few in the community but resulting in no long-term gains.

In addition, national regulatory bodies must regulate medical practice within their borders, with service providers being vetted and their work overseen but without creating unnecessary obstacles [13]. These bodies should assist the evolution of any training programs for the benefit of the populace.

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