Journal of Pediatric Surgery 49 (2014) 786–790

Contents lists available at ScienceDirect

Journal of Pediatric Surgery

journal homepage: www.elsevier.com/locate/jpedsurg

Pediatric surgical camps as one model of global surgical partnership: A Way Forward

Geoffrey K. Blair [a,*], Damian Duffy [a], Doreen Birabwa-Male [b], John Sekabira [b], Eleanor Reimer [c], Martin Koyle [d], Guy R. Hudson [e], Jennifer Stanger [a], Monica Langer [a], Gareth Eeson [a], Heng Gan [c], Sean McLean [c], Nikki Kanaroglou [d], Phyllis Kisa [b], Nasser Kakembo [b], Katherine Lidstone [f]

[a] Division of Pediatric Surgery, University of British Columbia, Vancouver, Canada
[b] Department of Surgery, Makerere University, Kampala, Uganda
[c] Department of Anesthesia, University of British Columbia, Vancouver, Canada
[d] Division of Urology, Hospital for Sick Children, Toronto, Canada
[e] Swedish Medical Center, Seattle, USA
[f] British Columbia Children's Hospital, Vancouver, Canada

ARTICLE INFO

Article history:
Received 10 February 2014
Accepted 13 February 2014

Key words:
Surgical camps
Global partnerships

ABSTRACT

Background/Purpose: A uniquely Ugandan method of holding surgical "camps" has been one means to deal with the volume of patients needing surgery and provides opportunities for global partnership.
Methods: We describe an evolved partnership between pediatric surgeons in Uganda and Canada wherein Pediatric Surgical Camps were organized by the Ugandans with team participation from Canadians. The camp goals were to provide pediatric surgical and anesthetic service and education and to foster collaboration as a way forward to assist Ugandan health delivery.
Results: Three camps were held in Uganda in 2008, 2011, and 2013. A total of 677 children were served through a range of operations from hernia repair to more complex surgery. The educational mandate was achieved through the involvement of 10 Canadian trainees, 20 Ugandan trainees in surgery and anesthesia, and numerous medical students. Formal educational sessions were held. The collaborative mandate was manifest in relationship building, an understanding of Ugandan health care, research projects completed, agreement on future camps, and a proposal for a Canadian–Ugandan pediatric surgery teaching alliance.
Conclusion: Pediatric Surgical Camps founded on global partnerships with goals of service, education, and collaboration can be one way forward to improve pediatric surgery access and expertise globally.

There are recognized need and desire to assist in the delivery of surgical care, especially to children, in countries where there are scarce clinical resources and a deficiency of trained subspecialty surgeons [1–3]. To that end, over the years many models of assistance and surgical partnerships have been devised wherein services and education may be afforded to low income nations. These have taken different forms; from individual surgeons simply spending time in those countries providing what service they can, through to mission-surgical teams that arrive, operate, then leave, to remote partnerships forged through social media connections that realize surgical help and knowledge-sharing enacted over the internet [4,5]. All have their advantages and disadvantages. All have been variously praised and criticized [6,7] and there must be no mandate for absolute perfection because that is surely unachievable. The question of what model of global surgical assistance and partnership is ideal may not be currently- or ever-answerable, but in the quest for the best paradigm we present herein our evolved model for international cooperation in pediatric surgery.

Uganda is ranked 161 out of 187 countries according to the 2013 Human Development Index (HDI). The HDI is based on standard measures of "three basic dimensions of human development: a long and healthy life, access to knowledge and a decent standard of living [8]."

With a population of just under 35 million, approximately half of the citizenry of Uganda is less than 15 years of age [9]. Canada, with a population just over 35 million and only 17% of its population less than 15 years of age [10], has more than 60 specialty-trained pediatric surgeons [11]. Uganda has two.

This is a retrospective study the purpose of which is to describe the evolution over the past 11 years of what has developed into what we believe to be a workable model of global surgical partnership. This

* Corresponding author at: Department of Pediatric Surgery, Room K0-106, British Columbia Children's Hospital, 4480 Oak St., Vancouver, V6H 3V4, BC, Canada. Tel.: +1 604 875 2706; fax: +1 604 875 2721.
E-mail address: gblair@cw.bc.ca (G.K. Blair).

http://dx.doi.org/10.1016/j.jpedsurg.2014.02.069
0022-3468/

model has evolved with three evident pillars in its mandate: service, education and collaboration.

1. Methods

A uniquely Ugandan method to help deal with the sheer volume of patients needing surgery, sanctioned and encouraged by the Association of Surgeons of Uganda, is to stage surgical "camps" throughout the country wherein surgical personnel travel to and gather for a week or more in one community, providing surgery to individuals in need, free of charge [12]. A collaboration between two pediatric surgeons, one a Canadian (GB) and the other a Ugandan (DB-M) was initiated following their first meeting in 2002 in Uganda. This collaboration strengthened over the subsequent years following a number of visits to each other's countries and health centres. In 2007, a plan was discussed and agreed upon to collaborate in a "Pediatric Hernia Camp" in 2008. This was to be held at Mulago Hospital in Kampala, the university teaching hospital of Makerere University School of Medicine and Uganda's main tertiary referral centre. As indicated by its title, the focus of surgical activity was on the repair of children's hernias. There were to be a Canadian team and a Ugandan team to work in the camp in partnership. It was the first of three subsequent Canadian–Ugandan pediatric surgical camps (PSCs) held in Uganda; in 2008, 2011 and 2013.

The PSCs' aims were to provide (1) Service: specialized pediatric surgical services free of charge to Ugandan children (2) Education: knowledge and skills transfer for Surgery, Anesthesia and Nursing personnel of both nations (3) Collaboration: other collaborative opportunities in the realms of research, training, etc.

The respective roles for the Canadians and Ugandans in each of the PSCs were established prior to each PSC. Both the Ugandan and Canadian partners brought both human resources and project supplies to the camps. Upcoming PSCs were advertised regionally through radio announcements and by word-of-mouth. Posters advertising the camps were also displayed throughout the Kampala region and, in the case of the 2011 PSC, also in the Bushenyi/Ishaka region in western Uganda. Patients for the first camp in 2008 were screened in a Mulago surgical clinic by the Ugandan surgical teams where, prior to the camp, patient records were established, operative consents prepared, and clinical details recorded. In the subsequent PSCs, 2011 and 2013, both the Canadian and Ugandan teams participated variably in the initial screening of prospective camp patients, with as much as possible relevant clinical detail shared and discussed prior to the camp via email. A cadre of Ugandan general surgeons, pediatric surgeons, urologists, surgical trainees, surgical nurses, staff anesthesiologists, anesthesiology trainees and anesthesia officers who would participate in each PSC was recruited and the terms of their participation were established. Operating theatres at Mulago (and Ishaka in 2011) were reserved for use for each camp. For each PSC the Canadian team consisted of a senior pediatric surgeon, a senior pediatric anesthetist, a pediatric surgical fellow, a pediatric anesthesia fellow and/or resident, at least two experienced surgical/peri-operative nurses, a team manager/logistician and a child-life worker. In addition, there were variably, a general surgical resident, two pediatric urologists, a pediatric urology fellow, a surgical nurse practitioner, and two senior medical students. Ugandan medical and nursing licensure was obtained for all the Canadian team members prior to the camps. Funding for the camps was mutually raised and donated supplies gathered in both Canada and Uganda from many sources. Thus the travel and accommodation were provided for, where required, of all the PSC team members, both Canadian and Ugandan. The Canadian team also brought as much surgical and anesthesia equipment and supplies as they could travel with. Both teams provided anesthesia drugs, antibiotics, sutures and other expendables as needed.

2. Results

Table 1 summarizes the output of each of the PSCs under the three rubrics of their agreed upon mandates; Service, Education and Collaboration.

3. PSC 2008

The 2008 camp was focused on pediatric hernia repairs only and over a week at Kampala's Mulago National Referral Hospital, with 5 operating days only, 350 children had their hernias repaired. The ages ranged from < 1 year to 14 years and all children presented with hernias for repair. The Canadian team operated on 78 of the 350 children. Most patients were discharged within 24–48 h from the ward. The Ugandans undertook the longer-term follow-up. There were no deaths.

Trainees involved in this camp included a Canadian pediatric surgery fellow, a Canadian pediatric anesthesia fellow, four Ugandan anesthesia trainees and one Ugandan general surgery trainee. There were one formal educational lecture delivered, and a few, spontaneous and informal nursing, anesthesia and surgery care teaching sessions. From a collaborative point of view, this initial camp served to inform the Canadian team members about the Ugandan healthcare system. It was an important relationship and trust-building experience where, with a very demanding schedule of patients each day starting at dawn and finishing well after sunset, we got to know each other, both professionally and personally. Through this close working relationship we mutually agreed to partner on future PSCs.

4. PSC 2011

There were agreement and planning for a subsequent 2010 PSC in Uganda that had to be deferred to 2011 because of a temporary health

Table 1
A summary of the Service, Education and Collaboration outputs for the 3 PSCs.

	Service	Education	Collaboration
2008	Hernia repairs, 350 children	2 Canadian trainees, 5 Ugandan trainees, Informal teaching sessions I lecture	Relationship-building, Understanding Ugandan healthcare system, Agreement on future camps
2011	Hernia repairs + complex cases, 220 children	3 Canadian trainees, 7 Ugandan trainees, Numerous medical students (2 European, many Ugandan) Tutorials	2 research projects completed Agreement on a future camp
2013	Complex pediatric surgery and urology cases, 107 children	5 Canadian trainees, 8 Ugandan trainees, Daily lectures/formal rounds Tumour board participation	1 educational research study completed 1 joint research proposal drafted, Proposal for Ugandan–Canadian training alliance, 2014 Rural Uganda PSC planned