

The Evaluation of the East, Central & Southern Africa Health Community Surgical Camp

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Abstract: Background: Lesotho experiences human resources for health crisis, thus creating challenges in accessing specialist surgical services. In 2008, doctor-patient ratio was 1:16298. In mitigation, the ECSA Health Community initiated a south to south collaborative strategy by mobilizing a surgical camp team of 25 specialists from ECSA virtual colleges that conducted an inaugural regional surgical camp. Sixty-five complex surgeries were performed. Objectives: Our aim was to evaluate the camp and document lessons for application in future camps on planning, organization, roles of stakeholders and determine immediate patient outcomes. Methods: We used quantitative and qualitative methods to evaluate the adequacy of planning, organizing, coordinating and executing the camp. We collected data through self-administered questionnaires and focus group discussions. We used qualitative and quantitative methods for data analysis. For qualitative data, we used a multilayered approach of triangulation, data coding and categorizing based on emerging themes. Results: We found that camp objectives were met. Participants were satisfied with organization and coordination of the camp although 91% preferred advance notification of 6-12 months. All patients had successful outcomes. 61.9% rated partners/donors involvement as inadequate. Majority (90.5%) reported adequacy of equipment. Mobilizing participants from various countries ensured a highly qualified experienced surgical team. Conclusion: The ECSA camp was a best practice for fostering south to south cooperation in bridging knowledge and skills gap through pooling of regional expertise. The camp has potential for replication and sustainability. The high calibre and experience of the team may have contributed to the 100% success rate.

Key words: Surgical camp, evaluation, ECSA camp, Lesotho camp

1. Background

Lesotho has a critical shortage of HRH (human resources for health). The ratio of nurse/midwife per 1,000 population was 0.5 [1]. The number of doctors was a lot less, given that Lesotho does not have a medical school. In 2008, doctor-patient ratio was 1:16298 [2]. To bridge this surgical knowledge and

skills gap, the East, Central and Southern Africa Health Community (ECSA HC), conducted an inaugural regional surgical camp October 26-November 6, 2012. A total of 25 highly qualified specialists from ECSA region were mobilised through ECSA Colleges: College of Surgeons—COSECSA, College of Nursing—ECSACON, College of Anaesthesiologists—CANECESA and the Association of Obstetricians and Gynaecologists. Two pre-camp visits to Lesotho were conducted determine camp needs and level of preparedness. The camp ran for 12

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days at QMMH (Queen Mamohato Memorial Hospital) in Maseru city. Four surgical teams were formed, each focusing on a specific specialty area and successfully performed surgical procedures that benefitted a total of 65 Basotho patients. The major operations included hip and knee replacements, prostatectomies, cholecystectomy, laparotomies and repair of obstetric fistulae (Table 1). ECSCA intends to conduct more camps in other countries. It is against this background that this evaluation is being conducted to document lessons for application in future.

2. Objectives for Post-camp Evaluation

(1) Obtain feedback on camp organization and identify gaps in the preparatory activities;

(2) Determine expectations of the surgical camp specialists;

(3) Gather evidence on the expected roles of stakeholders for future camps;

(4) Determine immediate patient outcomes (4 weeks post operatively).

3. Methods

We used both quantitative and qualitative methodology to evaluate the adequacy of processes in planning, organizing, coordinating and executing the camp. We used a self administered questionnaire and a FGD (focus group discussion) guide for data collection. We collected data during the last 2 days of the camp.

The questionnaire comprised of 36 items, a mixture of closed (26) and open ended (14) questions that elicited both quantitative and qualitative data. Six

Likert items were also included to elicit responses on: general organization of this camp, overall transportation of participants, accommodation and meals, preparation of patients, publicity of the camp and Partner/NGO participation. Participants were to rate the Likert items on a 5 point scale where a score of 1 represented poor and a score of 5 represented excellent. Thus, the range captured the intensity of participant feelings for a given item [3]. The way we structured questions aimed to reduce the possibility of acquiescence and social desirability biases because we did not provide a statement to be agreed with or not to be agreed with. We posed an open ended question on an item for respondents to rate along the provided scale.

We also conducted 4 FGDs to obtain in-depth qualitative information to evaluate the preparations, organisation and implementation of the surgical camp [4]. The 4 groups were structured based on common surgical specialty areas as follows: the orthopaedic group, urology group, fistula repair group and anesthesiologists group. They comprised of 5 to 7 participants each. This selection facilitated interacting individuals having some common surgical interest to provide information about specific issues that impacted positively or negatively on their participation in the camp. While this method is typically for individuals unfamiliar to each other, our surgeons had been together for a period of 12 days but we still considered the method useful because participants were from various countries, where experiences, facilities and even clients differ in so many ways. It was this rich diversity that led us to decide on utilising FGDs and also the fact that people naturally interact and are influenced by others, thus promoting high face validity.

The different groups also engendered an environment that encouraged exploration of different perceptions and points of view. From the focus group discussion we intended to get information on how groups of people think or feel about participating in the camp, developing greater insight into why certain

Table 1 Types of surgical procedures performed.

Type of patients	Surgical procedures
Urology cases	21
Fistula repairs (VVF)	12
Emergency hysterectomy for severe PPH	1
Orthopaedic cases	22
Gastro-enterology Endoscopy	10
Grand total	65

opinions are held such as the way the camp is organised or why a certain equipment is preferred as compared to the other, how to improve the planning and design of the next camp and also to provide a means of evaluating the just ended camp. While we took cognisance of the fact that information from FGDs can not be generalisable, given that group selection uses convenience and purposive approaches, we also understood that surgical teams were most likely to be similar from camp to camp, and that it would be the same ECSA colleges contributing the HRH component of every regional camp. It was therefore appropriate to use FGDs for the purposes of improving the future surgical camps.

4. Profile of Respondents

The regionally-based specialists consisted of 2

orthopaedic surgeons, 4 urologists, 2 fistula repair specialists (obstetricians), 4 anaesthesiologists, 1 laparoscopist/gastro-enterologist, 8 theatre trained nurses and 4 critical care nurses from the following countries: Botswana, Kenya, Malawi, Tanzania, Uganda, Zambia and Zimbabwe (Table 2).

We did not consider the inclusion of the home team in the evaluation process at this point and time except for determining patient follow up and post camp outcomes because the focus of the evaluation was to get information for improving future regional camps from the perspective of participating specialists. Given, this, the findings should be considered in that light rather than lacking the breath of typical programme evaluation processes.

Table 2 Profile of participants: Lesotho surgical camp, Oct.26-Nov.6 2012.

	Surgical speciality	Country	Experience	Qualification/Area of Specialty
1	Orthopaedic surgeon	Tanzania	23 years	Orthopedics trauma Joints and spine
2	Orthopaedic surgeon	Uganda	30 years	Orthopaedics
3	Obstetrician/Gynaecologist	Kenya		Obgyn-fistula specialist
4	Obstetrician/Gynaecologist	Tanzania		MD, MMED—Obs Gynae
5	Anaesthesiologist	Uganda	15 years	Bachelor of Medicine and Surgery Masters of Medicine in anaesthesiology
6	Anaesthesiologist	Tanzania	17 years	Doctor of Medicine, Master of Medicine (Anaesthesiology), MBA, Fellow CardioThoracic Anaesthesia
7	Anaesthesiologist	Kenya	11 years	Physician, Masters Degree in medicine (M.med) Specializing In Anaesthesiology, Bachelor of Surgery (MB.ChB)
8	Anaesthesiologist	Uganda	4 years	MMED Anaesthesiology
9	Urological Surgeon	Zimbabwe	11 years	SPECIALIST Urologist 1989
10	Urological Surgeon	Uganda	11 years	Specialist Urologist
11	Urological Surgeon	Tanzania	25 years	Specialist Urologist
12	Urological Surgeon	Namibia		Urologist
13	Endoscopic/laparoscopic /gastro-enterologist	Kenya	17 years	Gastroenterology surgeon/Endoscopist
14	Theater nurse specialist	Zambia		Theatre nursing
15	Theater nurse specialist	Zambia		Theatre nursing
16	Theater nurse specialist	Zambia		Theatre nursing
17	Theater nurse specialist	Zimbabwe	9 years	Matron-perating Theatres
18	Theater nurse specialist	Zimbabwe	2 years	Theatre Nursing Diploma-December 2010
19	Theater nurse specialist	Zimbabwe	3 years	Theatre Nursing Diploma-December 2009.
12	Theater nurse specialist	Zimbabwe	13 years	RN. Theatre Scrub Nurse (2001)
21	Theater nurse specialist	Zimbabwe	6 years	RGN Jan. 2002, Theatre Nursing-July 2007
22	Critical Care Nurse specialist	Zambia		Intensive Care
23	Critical Care Nurse specialist	Zimbabwe	9 years	Diploma in Intensive Care Nursing-June 2003
24	Critical Care Nurse specialist	Tanzania		M.Sc.ICU care
25	Critical Care Nurse specialist	Tanzania		M.Sc. critical care nursing

MBA—master of business administration; RN—registered nurse; ICU—Intensive care unit; MD—medical doctor; M.med—masters in medicine.

5. Data Analysis and Interpretation

For qualitative data, we used a multilayered approach. Analysis began with data generated from self administered questionnaires. We read and annotated each transcript and identified preliminary themes. We then initiated preliminary coding scheme to guide further thematic analysis [5]. We proceeded to analyze data from the FGDs. We then undertook further thematic analysis of the data and compared the themes with those from the preliminary coding scheme. We triangulated [6] the data and re-grouped it under the appropriate categories. After repeatedly going over and over the coded data, a narrative account of the findings was developed. We then identified key themes that informed our write up.

For the data collected using the Likert scale, we treated Likert items as ordered-nominal categorical data. We analyzed each item separately and did not come up with a summative scale because the items were only six. Furthermore, we could not guarantee that the respondents approximated equal interval between each nominal variable. In this case, interval data assumptions were not applicable and therefore our data could not be subjected to parametric statistical tests such as the analysis of variance [7]. Given the Likert Scale's ordinal nature, we summarized the central tendency of responses from the scale by using both the median and mode [8].

Objective type of data was analyzed using quantitative methods. While we understood that computer analysis is always easier and better, we chose hand tabulation as this was more efficient given the small size of our data set. We organized the data in the form of tables, did calculations of percentages, and observed the mode.

6. Findings

The response rate to the self administered questionnaire was 23 out of 25. We organized findings around the key issues emerging from our data in the

quest to obtain feedback and lessons that will enable ECSA to improve future camps.

6.1 Purpose and General Organization of the Camp

All participants stated that objectives of the camp were met.

"I think it was very successful camp and we need to continue the same spirit" (specialist surgeon).

On organization of the camp, all except one participant were satisfied despite the fact that this was an inaugural camp. The modal rating was 4 on a scale of 1-5 ($N = 13$).

"The organizers were excellent, we were well supported and we got feedback on time" (specialist surgeon).

Factors that contributed to participants' satisfaction include patients' needs identification, mobilization of participants from various countries facilitating the formation of multi-skilled teams, fellowship and sharing new innovations that gave the camp a truly regional perspective. This was critical because no one country has the full complement of surgical specialists to meet the host country's needs. The one who was dissatisfied cited late issuing of the air-tickets. This concern, in addition to late notification of the dates for the camp, was corroborated with concerns raised by all FGDs.

"I am recommending having the date of the next camp ready from January, so the volunteer colleagues have a proper plan" (specialist surgeon).

The majority of participants preferred to be notified within 6-12 months before due date ($N = 22$).

Other concerns raised were: the composition of the pre-camp-visit team that should have included representatives of all professional groups and the need to communicate surgical cases in advance so that volunteers could make informed decisions. While 69.5% of participants reported that they had enough time to understand cases, pre-camp expectations were different. Anaesthesiologists expected a lot of cases to

be done under local anaesthesia but this was not the case.

“I would like in the next camp that there will be a communication about the cases” (anaesthesiologist).

6.2 Partner Support

Partner participation was rated by 21 respondents on a scale of 1-5 and only 38.1% ($N = 8$) rated it as 5. The lowest score was 2 ($N = 4$). When asked what kind of partner support would be required in future camps, the majority mentioned financial resources (91.3%) and medical supplies (82.6%).

6.3 Roles and Responsibilities

All participants reported that they appreciated the roles of MOH, ECSA and ECSA Colleges in this camp. MOH was expected to publicise the camp, mobilize patients observing geographical equity, mobilize resources, own the programme and participate effectively to avoid the camp from generating into a parallel programme compromising sustainability and continuity.

The role of ECSA-HC was seen as key to the coordination and organizing logistics for the camp especially the convening power.

“ECSA is the key for the preparation of the logistic and communication with the host country which cannot be done without ECSA” (surgical specialist—Kenya).

Participants encouraged ECSA to maintain this good initiative and institutionalize the camp to enable the poor to access special services

The role of the ECSA colleges was seen as mobilization of professionals to participate in the camp, conduct pre-camp visits to identify camp needs, promote continuing professional development, and to continue to volunteer and be role models.

“I would like to be involved more...and better to have it (camp) twice per year. You have 9 countries remaining, so you will have a camp once every 9 years in each country which is too far” (surgical specialist).

Participants observed that the choice of clinicians

matched types of enlisted cases but the number of specialist was too small for the number of patients leading to long working hours and exhaustion.

6.4 Types of Surgery for Future Camps

When asked what types of surgery should be included in future camps the participants felt that more paediatric cases.

Participants were requested to compare the regional camp with the camps that they have in their home countries. They noted that the regional camp was professionally challenging and complex. Main differences were unfamiliarity with environment and unclear expectations from country & patients.

“...also at home. I know exactly what I am going to do, I know the cases before arrival to the camp and it is more clearer for me what is expected of me” (specialist surgeon).

It appeared as if patients had not been informed about the “new” doctors. Confidence and trust of patients was built later based on the successes of the surgical team.

6.5 Camp Settings and Medical Equipment and Supplies

The majority (65.2%) reported that future camps should be held only in hospitals given specialists’ expertise would rather be fruitfully utilized by focusing on major complex cases and such cases are best operated in hospitals where appropriate equipment and support systems are found. 91.3% and 78% of the participants reported that equipment and medical supplies were adequate, respectively. Generally the equipment at QMMH was reported to be modern and of high quality.

“Very good and world Class...”.

6.6 Continuous Professional Development

Participants felt that CPD (continuous professional development) should be part of every camp and that it should start before the camp, topics to include

pre-operative, post-operative and critical care, patient monitoring and infection control. Teaching should also involve mentoring in the hospital setting.

6.7 Perception of Participants on How the Host Country Received Them

Participants felt that the host country received them fairly well.

“...we were well hosted, had a great welcome and good dinner send off.”

The team was happy with transport arrangements and food. However being accommodated in hospital was rated unfavorable.

7. Discussion

Many developing countries have been holding surgical camps such as the ones held by FOCI (Friends of Christ India) [9]. There were similarities and differences between the FOCI camps and ECSA camp. Both teams comprised of various professional cadres, services were provided in hospital settings voluntarily. However, there were major differences in that their camp was organized by a Christian Organization, the hospital (St. Mary’s Hospital) was in the remote area unlike QMMH located in the capital city—Maseru. In their team, they had pharmacists, and Christian counsellors. As such, the gaps of initial patients’ mistrust were not reported. With the hive of activities, associated with the camp, it is easy to forget about patient counselling, sharing information about the “new” highly qualified doctors and nurses coming to provide services so as to allay patients’ anxieties.

7.1 Regional Nature of the Camp

There have been no reports of African sub-regional bodies to have ever conducted a camp of this nature. However there are many reported surgical camps by international organizations providing services in developing countries. A camp in Nepal in 2009 by HPN (Health Partnership Nepal) [10] comprised medical students as well. Similarly, many other camp

teams included medical students, non, health professionals, medical assistants nursing students, and non-medical assistants [11]. Unlike the ECSA camp, it comprised of high calibre, highly qualified and experienced professionals-many of whom had more than 30 years of practice in their area of specialty.

7.2 Focus of the Surgical Camp

In many instances, surgical camps focus on one condition like defective lips [12, 13] or eye surgeries [14] or club foot or repair of fistula [15], or reconstructive surgery [16].

The ECSA camp team was multi-skilled and had capacity to focus on 4 specialty areas: orthopaedic, urology, endoscopic surgery, and VVF repair. This was expressed as the best way to utilize specialists in a country with limited resources like Lesotho.

7.3 Support and Funding for Surgical Camps

Of special note was the fact that the majority of surgical camps were supported by international organizations such as AMREF, Fistula Foundation, MSH (Management Sciences for Health), Northern Cleft Foundation of United Kingdom [17] IMPACT, American faith based organization like CARIS that supported 25 medical missions of Nigeria, Kenya, Tanzania, Ethiopia [11], German [18] and Canada [19]. The ECSA camp had minimal external funding. This came in the form of reduced air tickets. The ECSA camp was supported by the GOL, MOH and QMMH in terms of accommodation food and transport.

7.4 Universal Aspects

Three things that appear to be universal for camps are the spirit of volunteerism and sacrifice. Camp surgeons have been accommodated in make-shift tents, hospital compounds and hospitals. This is in line with Lesotho experience. The team was accommodated in a hospital wing. While all this improvisation and sacrifice may cut costs, there is also need to balance quality with cost-savings. In a study conducted in India

to compare eye camp cost-effectiveness, almost half the patients operated on in government mobile camps as opposed to hospital settings, were dissatisfied with the outcome (34/70, 49% [95% CI 36-61]). More than one third were blind in the operated eye (25/70, 36% [25-48]) [20]. In the ECSA camp, a saving of almost 1 million Maloti (US\$100,000) was made and all patients had a satisfactory outcome.

8. Key Lessons Learnt

ECSA demonstrated a best practice of south to south cooperation with potential to be replicated in the region. Pooled expertise promotes regional self-sufficiency.

Planning and organization of the camp requires time to enable mobilization of resources, pre-camp visits by appropriate professional representatives, informing participants about cases, publicity and advocacy meetings.

Partners' support is critical to the success of the camp as this will translate into more resources, more surgeons and a greater number of patients accessing services without working long hours and exhausting the team.

Each key stakeholder—ECSA, MOH, Hospital, ECSA Colleges—has specific responsibilities that are independent and yet complementary for the realization of the camp, hence should be implemented harmoniously for the smooth organization and execution of the camp.

Pre-camp training on pre-op care, post-op care, critical care and patient monitoring, infection control of the home team, mentoring during surgical procedures and grand rounds are integral camp elements that provide CPD opportunities.

9. Conclusions

We came to the conclusion that the ECSA camp was a best practice for fostering south to south cooperation in bridging knowledge and skills gap in the region through the pooling of regional expertise. We also concluded that this camp demonstrated several

strengths in that it has the potential to be replicated, was funded by an African indigenous organization, realized a 100% success rate and the camp team was multi-skilled, highly qualified, of high calibre. We learnt that successful camps require enough time for planning, intensive resource mobilization, partner support and effective communication by all stakeholders. While surgical camps may come with challenges, there are ways to overcome such challenges and still meet the objectives.

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