

Surgical Outreach as a Tertiary Hospital's Corporate Social Responsibility: Shall we do more?

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Abstract

Introduction: The underserved populations of the rural and suburban communities of developing countries are challenged by the twin hurdles of low-income earning and out-of-pocket payment for surgical care services. This study aims at appraising the process, outcome, and impact of a free surgical outreach programme carried out by a Federal Teaching Hospital in South-western Nigeria. **Methods:** A free day-case surgical outreach programme was announced through a popular radio jingle for a period of 1 week to attract would-be beneficiaries of the programme. A 2-day screening exercise was conducted by the concerted efforts of various specialists in the department of surgery and ophthalmology to select those who are suitable for day-case surgery. A cross-sectional survey of patients who participated in the 5-day surgical outreach programme was carried out. A structured questionnaire was used to obtain information on biodata, diagnosis, surgical operations, complications, and level of satisfaction. A 3-point bipolar satisfaction outcome scale was used to assess the level of satisfaction. The data obtained were analyzed using the SPSS software version 20.0. **Results:** One hundred and fifty-eight patients were screened, but only 124 participated. Ophthalmic cases constituted 60.5%, whereas the rest (39.5%) were non-ophthalmic cases. Patients with cataract were 73 (58.9%) of all the surgical lesions operated during the outreach programme. Two (1.6%) patients with pterygium were the other ophthalmic cases, whereas the non-ophthalmic cases were mainly hernias. A total of 129 surgical operations were performed in the 124 patients, with 5 (0.4%) of them having bilateral cases. One hundred and seventeen patients (94.4%) expressed satisfaction with their experience of the programme. **Conclusions:** Optimal corporate social responsibility of tertiary hospitals can be performed effectively and satisfactorily through a properly organized surgical outreach.

Keywords: Corporate social responsibility, day-case surgeries, surgical care access, surgical outreach

INTRODUCTION

Surgical outreaches are frequently carried out by both local and international health-care workforce,^[1-5] in response to the appealing need to bridge the gap of access to quality health care for the majority of the inhabitants of sub-Saharan African countries who are burdened with the twin challenges of low-income earners and out-of-pocket payment for health-care services.^[6] In these low- and middle-income countries, poor infrastructures and lack of health awareness often compound the people's desire for a prompt solutions to health challenges. Experts have estimated that treatable surgical conditions are responsible for 28% of the global burden of diseases^[7] and outreaches provide avenues for reaching out to inaccessible populations to ameliorate this worrisome surgical lumber. Surgical operations carried out in an outreach milieu, however, call for skillful

allocation of scarce resources and demand a harmonious display of collegiate teamwork. Recently, the call toward hospitals' corporate social responsibility (CSR) has transcended beyond the passive elements of social civic duties such as protecting the investment of shareholders (Government, in public hospitals), providing employment and creating wealth, respecting human rights and protecting the environment (particularly safe disposal

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of toxic waste). Hospitals are now being geared toward active engagement in socially and culturally acceptable common good purely out of beneficence, particularly as the right of access to quality health care.^[8] In furtherance of this thought, the report of the International Bioethics Committee of UNESCO on Social Responsibility and Health identified that a fundamental right is at stake which must be balanced with the limit of attainability.^[9] The report further noted that the private sector and governments are called upon to jointly take up the task of social responsibility and meet specific obligations while maximizing the available resources to execute and progressively achieve the full realization of this right.^[9] In this light, a cross-sectional appraisal of a free surgical outreach of a suburban government hospital was carried out. This study aims at providing an objective evaluation of the process, outcome, and impact of such a venture with a view of harnessing lessons applicable to future exercises.

METHODS

Study location, design, and population

The present study was conducted at the Federal Teaching Hospital, Ido – Ekiti. The hospital is situated in a suburban community of Ekiti – State, Nigeria and serves the largely agrarian and civil service population of the state and the environs. It is a 290-bedded hospital that provides specialist health-care services, training, and research in the diverse fields of medicine and surgery.

The study design is a cross-sectional survey of the surgical outreach process, outcome, and impact, and the study population consists of all the beneficiaries of the outreach programme.

Ethical approval

Approval for this research was received from the Human Research and Ethics Committee of the Federal Teaching Hospital, Ido – Ekiti. Ethical Approval Reference Number is ERC/2019/12/30/319A. Informed consent was obtained from all participants at the outreach.

Patients' recruitment and selection

The free day-case surgical outreach programme was announced through a popular radio jingle for a period of 1 week in December 2019 to attract would-be beneficiaries of the programme. A 2-day screening exercise was conducted by the concerted efforts of various specialists in the department of surgery and ophthalmology to select those who are suitable for day-case surgery.

The inclusion criteria were as follows:

1. Adults who suffer visual impairment from cataract and pterygium without any disabling comorbid condition
2. Adults who have simple day-case surgical conditions without any disabling comorbid condition
3. Children with simple day-case surgical conditions.

The exclusion criteria were as follows:

1. Comorbidity requiring preoperative hospital admission
2. Major surgery requiring peri-operative hospital admission
3. Lack of consent.

A structured questionnaire was used to obtain the data from the participants. A suitable candidate had blood and urine samples taken for packed cell volume and urinalysis with the results obtained the same day to validate his or her suitability. A patient thus certified as a beneficiary of the programme is assigned a date in the following week already designated as the surgical outreach week.

Peri-operative protocols

The team of surgeons, anesthetists, and other health professionals involved were divided into four functional units, namely (a) preoperative preparation, (b) intraoperative unit, (c) postoperative unit, and (d) logistics.

Preoperative preparations

This group is comprised of senior resident doctors, interns, and nurses. Its function is to ensure the right patient is scheduled for the right procedure. The personnel reviewed the particulars of the patient, ascertain compliance with instructions and finalize fitness for surgery.

Intra-operative unit

Seven surgical teams comprising two ophthalmology teams and five other surgical specialty teams (two general surgical teams, plastic surgery, paediatric surgery, and urology) were formed. The hospital's four main theater suites were used for the surgical operations. The procedures were done over a 5-day duration, Monday through Friday with cataract patients done in the ophthalmology suite and the other surgical lesions attended to in the other three operating suites of the main theater. Surgical procedures were done between the hours of 8 a.m. and 4 p.m. The target number of procedures per day already set and the patients invited for that day, hence the need to ensure surgical procedures are concluded before 4 p.m. to allow recuperation and hitch-free home return.

Postoperative unit

This unit comprising of doctors, nurses, pharmacists and information officers are saddled with postoperative medications, fixing of follow-up appointments and record validation. The outcome measures as regards the presence or absence of surgical site infections, wound hematoma, wound dehiscence, and recurrence was noted in the course of follow-up visit at the outpatients' clinics at 1 week, 2 weeks, and 1 month postoperation. The degree of satisfaction of the participants with ophthalmic lesions was assessed at 1-month follow-up visit while that of other surgical lesions were assessed at 6-months postoperation through a telephone interview. A 3-point bipolar satisfaction outcome scale was used to assess the level of satisfaction.

Logistics unit

This group of personnel is primarily concerned with arranging the order of the surgical operations, reception of patients in and out of the operating theater, ensure the smooth running of the entire process and the welfare of the workforce, the patients and their relatives.

Analysis of data

Data obtained were analyzed using the Statistical Package for the Social Sciences (SPSS) IBM Statistics for Windows, Version 20.0. (IBM Corp., Armonk, N.Y., USA). The results arrived at using descriptive and inferential statistics were presented in prose and tables.

RESULTS

A total of 158 persons participated in the 2-days screening out of which 124 met the inclusion criteria and benefitted from the surgical outreach. Patients who did not meet these criteria were counseled and appropriately referred to their respective specialist clinics. All the selected patients presented for the surgical operations at their respective dates, and there was no incidence of case cancellation during the 5-day programme.

Table 1 shows the age and sex distribution of the outreach beneficiaries with the elderly age group (65 years and above) accounting for 49.2% (61) of the total population and a male preponderance of 67.7% (84). Table 2 shows the distribution

of clinical diagnosis of participants based on their presentation with 60.5% (75) having ophthalmic conditions, cataract accounting for 58.9% (73) and hernias being the most common non-ocular condition 26.6% (33). A total of 129 surgical operations were done in 124 patients with 5 (0.4%) of the beneficiaries having bilateral lesions. Table 3 displays the distribution of the surgical operations performed and the anesthesia used at the outreach programme. Eleven herniotomies were done in 9 children with 2 (22.2%) of them having bilateral lesions. Other bilateral cases were vaginal hydrocele, inguinal hernias, and cheek keloid. Three (16.7%) out of 18 patients with inguinal hernia had recurrence which was repaired by mesh hernioplasty. Local anesthesia was performed for 119 (92.2%) operations, whereas 10 (7.8%) operations required general anesthesia. Nine (90%) of the cases done under general anesthesia were herniotomies for congenital hernias while the only adult surgical operation done under general anesthesia was herniorrhaphy for inguinoscrotal hernia that was converted from local anesthesia to general anesthesia. The simple inguinal herniorrhaphies were done by the surgical residents, whereas the recurrent and more complex inguinoscrotal ones were performed by the consultants. There were no complications observed in 119 (96%) patients while surgical site infection was recorded in four (3.2%) patients. Surgical site infection was observed in 3 (16.7%) out of 8 patients who had inguinal herniorrhaphies.

Evaluation of the level of satisfaction showed that 117 (94.4%) patients expressed satisfaction with the outcome and impact of the programme while no response was received in 5.6%. None of the patients expressed dissatisfaction with their experience of the programme. The complications and level of satisfaction are displayed in Tables 4 and 5, respectively. Out of the 14 solid lesions excised, histopathological examinations were done for eight cases, representing 57.1%. The spread of the histopathological confirmation of the clinical diagnosis is presented in Table 6.

Table 1: Age and sex distribution of the patients operated during the outreach programme

	Frequency (%)
Age range (years)	
<18 children	10 (8.1)
18-44 young adult	18 (14.5)
45-64 middle age	35 (28.2)
65+elderly	61 (49.2)
Total	124 (100)
Sex	
Male	84 (67.7)
Female	40 (32.3)
Total	124 (100)

Table 2: Distribution of surgical cases operated during the outreach programme

Diagnosis	Laterality						Total		Gross total (%)
	Right		Left		Bilateral		Male (%)	Female (%)	
	Male	Female	Male	Female	Male	Female			
Cataract	21	14	18	20	-	-	39 (31.5)	34 (27.4)	73 (58.9)
Pterygium	1	1	-	-	-	-	1 (0.8)	1 (0.8)	2 (1.6)
Congenital hydrocele/hernia	3	-	4	-	2	-	9 (7.26)	-	9 (7.26)
Inguinal hernia	7	1	9	-	1	-	17 (13.7)	1 (0.8)	18 (14.5)
Inguinoscrotal hernia	5	-	1	-	-	-	6 (4.8)	-	6 (4.8)
Vaginal hydrocele	1	-	1	-	1	-	3 (2.4)	-	3 (2.4)
Nasal alar papilloma	-	-	-	1	-	-	-	1 (0.8)	1 (0.8)
Cheek keloid	-	-	-	-	1	-	1 (0.8)	-	1 (0.8)
Breast lump	-	1	-	-	-	-	-	1 (0.8)	1 (0.8)
Angular dermoid	-	-	1	-	-	-	1 (0.8)	-	1 (0.8)
Giant cell tumor of the index finger	-	-	1	-	-	-	1 (0.8)	-	1 (0.8)
Lipoma	6	1	-	1	-	-	6 (4.8)	2 (1.6)	8 (6.5)
Total (%)	44 (35.5)	18 (14.5)	35 (28.2)	22 (17.7)	5 (0.4)	-	84 (67.7)	40 (32.3)	124 (100)

Table 3: Distribution of the surgical operations performed and anesthesia used at the outreach programme

Operations	Anesthesia		Total (%)
	Local	General	
SICS+PCIOL	73	-	73 (56.6)
Herniorrhaphy	22	1	23 (17.8)
Herniotomy	2	9	11 (8.5)
Lipoma excision	8	-	8 (6.2)
Hydrocoelectomy	4	-	4 (3.1)
Mesh hernioplasty	2	-	2 (1.6)
Keloid excision	2	-	2 (1.6)
Pterygium excision	2	-	2 (1.6)
Excision of giant cell tumor	1	-	1 (0.8)
Angular dermoid excision	1	-	1 (0.8)
Papilloma excision biopsy and nasolabial flap	1	-	1 (0.8)
Breast lumpectomy	1	-	1 (0.8)
Total (%)	119 (92.2)	10 (7.8)	129 (100)

SICS: Small incision cataract surgery, PCIOL: Posterior chamber intraocular lens

DISCUSSION

Surgical outreaches have become an established modality of increasing and improving access to quality surgical services to the rural populace and low-income earners of developing countries with nonexistent or dysfunctional health insurance coverage for their teeming masses.^[1,10] Significant delays, high morbidity, and sometimes mortality are caused by the difficult access to quality health-care services.^[11] While most surgical outreaches are carried out in camps and district hospitals close to the intending beneficiaries,^[7,12] specialist and teaching hospitals with such location advantage become a much-preferred choice to deliver surgical services in outreach settings. These hospitals provide easy access to inter-professional team of health-care workforce that was able to deliver holistic surgical care.^[13] This model fits the specialty hospitals type surgical outreach described by Kynes *et al.*,^[4] but with the peculiar advantage of easy access to the suburban location by the rural dwellers.

Table 4: Complications observed in the patients operated during the surgical outreach

Surgical cases	Complications			Total
	None	Surgical site infection	Recurrence	
Cataract	72	1	0	73
Congenital hydrocele/hernia	9	0	0	9
Inguinal hernia	15	3	0	18
Inguinoscrotal hernia	6	0	0	6
Vaginal hydrocele	3	0	0	3
Others	14	0	1	15
Total (%)	119 (96.0)	4 (3.2)	1 (0.8)	124 (100)

Table 5: Level of satisfaction of patients operated upon at the surgical outreach

Surgical cases	Level of satisfaction				Total
	Very satisfied	Satisfied	Not satisfied	No response	
Cataract	72	1	0	0	73
Congenital hydrocele/hernia	7	0	0	2	9
Inguinal hernia	14	2	0	2	18
Inguinoscrotal hernia	6	0	0	0	6
Vaginal hydrocele	2	0	0	1	3
Others	7	6	0	2	15
Total	108 (87.1)	9 (7.3)	0 (0)	7 (5.6)	124 (100)

Table 6: Clinically diagnosed solid lesions excised and histopathological confirmation

Age (years)	Sex	Clinical diagnosis	Histopathology
51	Female	Upper back papilloma	Fibro lipoma
41	Female	Left alar papilloma	Squamous papilloma
60	Female	Left posterolateral chest wall lipoma	Lipoma
31	Male	Bilateral cheek keloid	Keloid
21	Female	Left breast lump	Lactating adenoma
74	Male	Right groin lipoma	Lipoma
58	Male	Left wrist lipoma	Lipoma
34	Female	Giant cell tumor of the left index finger	Tenosynovial giant cell tumor

Most beneficiaries of this surgical outreach belong to the elderly age group with meager or nonexistent earning capacity. Cataract surgeries were the most frequently performed operations at the outreach, and the mean age of patients with cataract was 66.2 years. This is comparable with a mean age of 61.8 years reported by Uhumwangho *et al.* during a similarly conducted hospital-based cataract surgical outreach.^[14]

The nonophthalmic cases seen were predominantly inguinal hernias; both pediatric and adult types, comprising a total of 26.6% of the outreach cases. Inguinal hernias continue to be the most common elective surgical condition in our environment and most frequently encountered in outreach programs.^[1] Even though hernias are quite easily amenable to surgical care, significant morbidity, and mortality often follow neglected and complicated cases.^[1] Any intending surgical outreach programme must adequately prepare for varying grades of presentation and severity of the lesion. Three of the inguinal hernias operated were recurrent cases, requiring mesh hernioplasties. Hernioplasty procedures are currently seen as the gold standard of hernia repair with laparoscopic techniques utilized in most centers.^[15]

Local anesthesia was deployed for all surface lesions in adults and older children. There was, however, a case of an intra-operative conversion of local anesthesia to general anesthesia due to continuous bowel evisceration and difficulty in achieving sustained visceral reduction necessary for the posterior wall repair of the inguinoscrotal hernia. Instructively, adequate preoperative screening, careful patient selection, appropriate facilities, and expertise are non-negotiable basic requirements to ensure uneventful anesthesia experience in any outreach programme.^[7]

The measurable outcome of the programme included a morbidity rate of 4% and no mortality. This is comparable to the experience of another programme of the same duration and similar surgical workload.^[16] While the overall infection rate is acceptable for clean surgeries, the case-specific infection rate (16.7%) recorded for inguinal herniorrhaphies is beyond the acceptable limit of 2%–4% for clean surgical operations. The reason for this isolated finding might be related to the less careful attention paid to tissue handling during these operations. The affected patients had their surgeries toward the end of the day's work, and operation team fatigue might have set in. All surgical wounds, however, healed within 2 weeks of regular wound care with normal saline and povidone-iodine dressings. The impact of the programme assessed postoperatively through direct and telephone interviews of the beneficiaries revealed a 94.4% satisfaction rate. The remaining 5.6% of the patients could not be reached due to hitches of telecommunication networks. The gratifying outbursts of appreciation of those contacted were noteworthy. The huge satisfaction rate recorded might not be unconnected with the all medical expense-free status of the clinical services received, particularly in an environment suffused with a high level of out-of-pocket payment. Even though most patients are

known to express satisfaction with the clinical care received,^[17] several authors have reported a negative association between increasing medical expenses and patients' satisfaction.^[18,19]

The low ebb in the programme outcome is the unavailability of all the tissues excised for histopathological examination. This may not be unconnected with inadequate collaboration with the pathologists and assumption of apparent clinical diagnosis. Future exercises will improve on this. In the solid lesions examined, the histopathological report correlated with the clinical diagnosis, and no evidence of malignancy was detected.

In all, the inaugural surgical outreach programme of the hospital did not only achieve the prime purpose of CSR, but also delivered other advantages of training, awareness, appropriate referrals, and community collaboration.^[6,16,20] The surgical outreach programme was limited to day-cases only. This ensures the hospital renders optimal CSR and therewith produces meaningful improvement in social welfare. The concept of optimal CSR which allows for no compromise in the continuous demand for investment in quality health-care service delivery has been advocated while ensuring optimal benefits of the resulting quality improvement.^[21]

CONCLUSIONS

Surgical outreach remains an important strategy to improve access to surgical care for underserved people of rural and suburban communities. Cataract and inguinal hernias were the most common surgical pathologies encountered in the outreach programme. Adequate preoperative screening, careful patient selection, and harmonious inter-professional teamwork are the basic prerequisites for successful surgical outreach.

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Conflicts of interest

There are no conflicts of interest.

REFERENCES

- Ojo E, Okoi E, Umoyoho AJ, Nnamonu M. Surgical outreach program in poor rural Nigerian communities. *Rural Remote Health* 2013;13:2200.
- Ndubuisi E, Jebbin NJ, Mato CN. Rural surgical outreach services in the Niger Delta region of Nigeria: A preliminary report. *Sahel Med J* 2006;9:78-81.
- Wanjala N, Khainga S. An outreach experience with cleft lip/palate surgery in selected hospitals in Kenya. *Ann Afr Surg* 2011;7:32-7.
- Kynes JM, Zeigler L, McQueen K. Surgical outreach for children by international humanitarian organizations: A review. *Children (Basel)* 2017;4:53-62.

5. Dearani JA, Jacobs JP, Bolman RM 3rd, Swain JD, Vricella LA, Weinstein S, *et al.* Humanitarian outreach in cardiothoracic surgery: From setup to sustainability. *Ann Thorac Surg* 2016;102:1004-11.
6. Katz MG, Tabiri S, Gyedu A, Price RR, Abantanga FA. Patient experience and outcomes of the locally organized apridec medical outreach group. *World J Surg* 2020;44:1039-44.
7. Bhattarai B. Anaesthesia in outreach surgical camps: More of arts than science. *J Soc Anesthesiol Nepal* 2016;3:2-7.
8. Brandão C, Rego G, Duarte I, Nunes R. Social responsibility: A new paradigm of hospital governance? *Health Care Anal* 2013;21:390-402.
9. Bruhn JG. On social responsibility. *Acad Med* 1971;41:166-8.
10. Maroyi R, Keyser L, Hosterman L, Notia A, Mukwege D. The mobile surgical outreach program for management of patients with genital fistula in the Democratic Republic of Congo. *Int J Gynaecol Obstet* 2020;148:27-32.
11. Manickchund Y, Hadley GP. Paediatric surgery outreach: Analysis of referrals to a tertiary paediatric surgery service to plan an outreach programme Kwa-Zulu Natal, South Africa. *Trop Doct* 2017;47:305-11.
12. Curtin BY. Cleft surgery: Outreach not over-reach. *PMFA J* 2015;3:1-4.
13. Rai R, Mulu J, Jacobsen AS. Paediatric surgical outreach to Papua New Guinea: Initial experience. *Int J Clin Med* 2018;9:697-702.
14. Uhumwangho OM, Olowolaiyemo MU, Osaguona VB, Osahon AI. Cataract surgical outreach in a tertiary hospital in Nigeria: An appraisal. *Ann Med Health Sci Res* 2017;7:111-4.
15. Govindaraj S, Roshini AP, Prakash C, Pavithra B. The primary surgical treatment of inguinal hernia: A changing trend towards laparoscopic hernioplasty. *Int Surg J* 2019;6:764-8.
16. Anyaeze CM, Eke N, Anyanwu KK, Enendu SE. Rural medical and surgical outreach mission: Experience of international college of surgeons (the Nigerian national section). *Int Surg* 2019;103:2-8.
17. Kleefstra S, Kool R, Zandbelt L, de Haes J. An instrument assessing patient satisfaction with day care in hospitals. *BMC Health Serv Res* 2012;12:125.
18. Shan L, Li Y, Ding D, Wu Q, Liu C, Jiao M, *et al.* Patient satisfaction with hospital inpatient care: Effects of trust, medical insurance and perceived quality of care. *PLoS One* 2016;11:e0164366.
19. Obayi NO, Igwe M, Nnadozie U, Urom-Oti C, Asogwa F. Patient satisfaction with psychiatric services: A survey at a Nigerian Federal Teaching Hospital. *Open J Psychiatry* 2018;8:168-81.
20. O'Sullivan BG, McGrail MR, Stoelwinder JU. Reasons why specialist doctors undertake rural outreach services: An Australian cross-sectional study. *Hum Resour Health* 2017;15:3.
21. Xu Y. CSR impact on hospital duopoly with price and quality competition. *J Appl Math* 2014;2014: Article ID 152060,12 pages.