**CHATTISGARH TRAGEDY: A MIRROR TO OUTCOME-BASED APPROACH TO MASS SURGERY CAMPS**

*Surgical outcome contention and responsible reporting in improving community-oriented en masse surgery system*

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**View point:** The *recent* Chhattisgarh tragedy (November 2014, Chhattisgarh, India) was an adverse fallout of a state-driven birth-control campaign for females where surgical intervention (laparoscopic tubectomy) left fourteen women dead and over seventy critically ill,[1]. Post-surgery, the affected women complained of severe pain abdomen/cramps, vomiting, sinking feeling, and presented to emergency in shock with renal shutdown. The Government ordered a state enquiry into the unfortunate episode. The lead surgeon was apprehended for the alleged act of commission and possibly, on errors of omission. [2] The tragedy attracted sharp reactions from community and institutional fraternity (social science, human rights, law, bioethics, medicine) alike. However, none offered any constructive criticism with remedial potential. The intensity of critical initial analysis and related considerationsdwindled with time and gave way to random social debates and political opportunism. Interestingly, an eminent surgeon’s *post hoc* take on 'who-is-a-good surgeon' opened up a hitherto untouched line of thinking on surgical healthcare delivery (SHCD). [3] He came down heavily on surgeons who rely on their speed/quantum of surgery to exclaim fame and do not care to wait for the final surgical outcome.

The correlation between ‘successful surgery’ and ‘surgical outcome’ balances intricately on a pivot; which on one side has the surgeon-dominant metrics/ definition of a procedure, and on the other, accounts for patient-outcome, i.e. the post-surgical functional rehabilitation of the patient. Queerly, while the notion of a ‘successful’ operation tends to be surgeon-inclined and draws .the long-term follow up substantiating the real outcome, i.e. surgical success facilitating patient’s return to normal life, has embraced thin air. **Routine surgeries apart, prevention of surgical morbidities following *en masse* surgery in a community set up presents with uncontrolled environment outside the operation theatre, making comprehensive control of SHCD process to reach the patient outcome end-point a challenge.**

This *paper* aims to assess whether, within the SHCD expanse, resetting/moving the threshold for 'surgical success' (point beyond which a surgery is deemed successful) from the time of ‘surgery completion’ to ‘final patient outcome’, holds the key for prevention of similar future catastrophes and present a mirror to the policy makers.

**The History:** India has the oldest medical/surgical ‘camp’ system in the world. Typically, the surgical camps undertake *en masse* surgery for the benefit of community deprived of surgical care for a host of reasons: inaccessibility to medicalcare, inadequate surgical healthcare infrastructure, weaker/vulnerable sections of the population; and various other purposes: achieving state level targets of birth control (vasectomies**,** tubectomies**)**, ‘corrective’ (cleft lip/palate repair, club foot correction), ‘therapeutic’ surgeries (cataract surgery), among others. Typically, once the surgical camp site is decided, the state’s healthcare unit moves in, gets stationed in a primary healthcare set up or in the nearest district hospital, re-organizes the local medical system to create an optimal environment (e.g. sterile equipments, theatre) for surgery, gets as many patients operated, and moves out leaving the local medical authority to oversee the follow up. What started as Government of India population control strategy in its first five-year plan (1951) with its first male sterilization (vasectomy) camp in Ernakulam, Kerala (1970); gained momentum over the passage of time to become a significant component of the state initiative to sub-serve a target-oriented approach to population control. For reasons thereof, over the next four decades, the camps evolved and expanded its scope: transiting from male vasectomy to female tubectomy; from targeted to non-targeted objectives; and from random mass surgeries system to the one based on Standard Operating Procedure (SOP),[4].

Critical overview suggests that although the changes may have been intuitive and virtuous to begin with, and directed at upgrading the system effectiveness and efficiency for patient safety; they were unable to project upfront the serial micro-targets in the right perspective. Further, in the absence of any mechanism to identify the benefits thereof, the surgical camp system struggled to accrue accountability and garner public faith. Thus, despite sustainability, the camp system continues to draw unfavorable criticism, invoke socio-political conflicts, and stimulate reflex media responses. Among other problems, these community surgery camps got riddled with *human resource challenges* (shortage of public relation team to manage patient attendees, shortage of surgeons) and *media sensationalism* around the morbid/extreme outcomes. In all these mayhem to organize such extensive camps and manage expectations of healthcare providers, people, and media; nowhere the surgical outcome was specifically scrutinized and assigned a core position to ingrain proactive corrective measures.

**The SHCD Challenge:** Literature review has suggested that the following aspects merit consideration to analyze ‘surgical outcome’ and veer the debate towards system-oriented SHCD, to achieve clinically relevant end-points.

**First**, in a community set up, the relative vulnerability of the *patients and their attendees* incurs serious ethical burden; including, violation of ‘autonomy’ (informed consent form merely a paper to put thumb impression on, 'coercion' to participate),[5] ‘conflicts’ (e.g. justified ‘incentives’ may act as ‘inducements’ for below-poverty-line recipients!), and ‘maleficence’ (surgical complications, infection, lack of follow-up medical support); thus sets the SHCD process to failure at its very outset.

**Second,** often the community surgery program schedule and functioning stretches the surgeons beyond their professional capacity primarily because: *i)* the patients are not always ‘walk-ins’, *ii)* the surgeons have no control over the type of patients being enrolled, *iii)* presence of a skewed surgeon-patient ratio (1:25-100); and *iv)* surgeons are made to operate within a tight schedule (fly-in→operate→leave) that lacks individualized post-operative care plan. Paradoxically, the surgeon/s (*e.g.* like the one implicated in Chhattisgarh Tragedy). [1, 2] Despite being in the knowthat the above may potentially impact and confound their *professional conduct* (absent surgeon-patient relationship/ fiduciary responsibility), *accountability* (surgery finesse, patient outcome), and *credibility*; get allured to incentive/s and publicity (Chhattisgarh surgeon was conferred a State Award, appeared in Limca Book of World Records) and embrace the ‘crown of thorns’.

**Third**, although the ‘non-operative’ aspects of SHCD, like, preoperative patient preparation, postoperative rehabilitation, and supportive medical care is very important in contributing significantly to the surgical outcome; it trails the ‘operative’ component in terms of their relative importance, and often gets compromised. The Chhattisgarh surgical camp failure is a case in reference to what mired the 'non-operative' SHCD; including (but not limited to), the dearth of trained personnel (nurses, operating room technicians, anesthesiologists), and infrastructure (inadequately sterilized instruments, spurious drugs, among others);[2] and necessitates a refocus on the entire continuum of care of the SHCD process.

**The communication challenge:** The significance of media as a communication partner to Government to cover *en masse* surgeries camps seems out of sync with the concept of SHCD. In the aftermath of Chhattisgarh tragedy, unlike the previous failures to reflect public health debacles,[6] media activism accounted for much hue-and-cry and open community criticism. The outcome-centric discussions highlighted the social fallout of the extremes of outcome, but failed yet again to portray to the public what can be considered as an adequate care-continuum and a 'good’ surgical outcome.

**The exposure challenge:** **The community surgical camps seems to be affected by diagonally opposite intent of media-polity (extroversion) and the executing surgeon-bureaucracy (introversion); in a stark departure from the very essence of ‘surgical outcome’ contention. Further, the extrovert media hype to place the surgeons among the contemporary greats instills false confidence in them, and they in turn, start to find ways to indulge in surgical adventurism.** The desire to shorten the journey from being good to becoming great entangles the surgeons on several occasions into creating records to catalyze dissemination of their ‘pseudo-success’ for a variety of ‘motives’ and conflicts-of-interests (self-esteem, peer recognition, attracting patients, impressing political masters and bureaucrats, increasing earnings),[8]. Mass surgery settings, like the infamous Chhattisgarh episode is one such case in point wherein opportunist surgeons for getting billed as the quickest/fastest, grandly ignored/neglected impending risks including 'infection' (compromising instrument sterilization time); 'anesthesia complications' (one anesthesiologist on many patients, anesthetized patients to support staff ratio, inadequate postoperative nursing care), and 'infrastructural compromises' (disproportionate number of beds forcing patients lie on floor), lack/absence of post-surgery care, among others[1, 2, 9].

**The way forward:** Therefore, in order to take comprehensive control of SHCD in mass surgery settings, advocacy and around final ‘surgical outcome’ as a central contention seems to be the way ahead. Meaning there’s a need to consider:

1. Upgrading/developing quality assessment module (Table.1),[4] with clear *outcome-analysis mechanism* that targets retrieval of information on surgical outcome from:

i) Surgeons’ outcome audit

ii) Active tracking and long-term reporting by local healthcare workers over the period of complete internal healing in the community

iii) Patient feedback/e-feedback [WhatsApp, facebook etc.] (*passive:* patient-reported outcomes; *active:* incentive-based!)

**Table.1**: Salient Features of Sterilization Camp Standard Operative Procedure (SOP),[4]

|  |  |
| --- | --- |
| **Scope of Surgical Camp** |  |
| **Range of Services**: | Counseling  Clinical Services  Laboratory testing |
| **Pre-requisites:** | Site  Client load  Staff  Equipment- instruments and supplies |
| **Responsibilities and Roles of Managers/Service Providers** | |
|  | Pre-camp/ during camp/ after camp |
| **Prevention of Infection**: | Asepsis and Antiseptics  Processing Usable and Reusable Items Sterilization, High-level Disinfectant Disposable of Waste/needles/other materials |
| **Assurance of Quality: Quality Assessment at each Level** | |
|  | Role of Quality Improvement Committee |
| **Mishaps and Negligence** |  |
| **Updating SOP** |  |

B) Cultivate ‘*responsible reporting*’ routines that covers every patient from the time of recruitment for surgery to the final outcome in the form of ‘completed camp reports.’ To sustain public faith in the surgical camp system and justify their position (effective and unbiased reporting), the media must:

i) Curb its ‘first-out’ instincts on summing up ‘surgical outcome’ considering that the ‘time gap’ between ‘surgical intervention’ and ‘therapeutic effect’ the reporting system should refrain from their first news out instincts

ii) Desist premature glorification of ‘surgeons’ solelyon quantum of operations

iii) Avoid immediate post-hoc dissection of tragic ‘surgical outcomes’ in public domain before investigations are completed

iv) Proactive coverage to disseminate real-time details on a public information platform, e.g. closing/opening dates, FAQs, advisory, feedback portal, etc. to the community

C) Setting up dedicated ‘*post-camp access*’ that facilitates positive ‘surgical outcome’ by offering post-surgery medical consultation, essential medicines, rehabilitation, and healthcare counseling.

D) Balancing COI-induced inter-principle ethical burdens: Not uncommonly, *en masse* surgical camps are riddled with ulterior motives and COI of the major stakeholders. While polity and policy makers are often pre-ordained with utilitarian (maximum benefit for maximum people) imperatives of surgery camps and look forward to hoist the flag of *Principle of Justice* for popularity gains, they completely ignore *Principle of Respect for Patient Autonomy* (information giving, knowing desires, share decision making). The surgeon and the SHCD team, in the garb of giving the benefits of his/her expertise to maximum no. of patients (*Principle of Beneficence*), work for self to seek monetary returns, quick laurels, and recognition. Also, operationalizing the expansive surgery list in a very short time, these camps stand to severely undermine *Principle of Non-maleficence* because of increased propensity of failure of surgery and incidence of severe complications. Ironically, the patients, who are the most important stakeholder of a mass surgery camp, in the want of getting free treatment near their home, are pre-adjusted to compromise on their decision-making autonomy despite the knowledge that there is a greater risk of complications in settings where surgery turnover is quick and overall care is suspect. Therefore, shifting the poles by reinstating long-term surgical outcome as a new vantage point for analysis of impact would better substantiate success of surgery, dilute stakeholders’ COI, and improve inter-principle harmonization.

**Key Messages:**

1. *To prevent patient morbidity, full control of SHCD process is of paramount significance and*

En masse surgery camps’ targets, i.e. number of patients to be operated at a time, should be commensurate to and align with the available human resource (surgeons, anesthetist, staff) and infrastructure capacity.

2. For enhanced patient safety, proactive policy upheaval is required in the following areas; SHCD capacity building, patient selection ethics, outcome analysis, and responsibility allocation (both individual and collective!).

3. In case of inadvertent problems with surgical camp process affecting innocent patients, the communication media including the record resources (newsprints, gazettes, books, report manuals) should invest in scientific analyzes and discussions that identifies problems (and offers solution too!) in the SHCD than in non-domain overtures around probity-legality and politicization.

4. The recipient community and institutional fraternity (academia, social science, bioethics, medicine, media, law/judiciary) is advised to take note of the final patient outcome as an index of surgery success and not to get swayed by incomplete, commercially-empowered public resource that overstate facts for all reasons other than the actual outcome.

**Conclusions:**

In state backed *mass surgery* initiatives for the community, the overall responsibility of thesurgical healthcare delivery rests with the ‘*Institution*’ than with the ‘*Individual*’ (e.g. coordinators, surgeons’, anesthesiologists, nurse, technologists, healthcare workers, support staff) employed to carry out designated work. Conversely, to ensure patient safety, it is the individuals' responsibility to undertake the assigned work allocated to them. Therefore, in order to elevate SHCD practices, one need to move from merely carrying out technical operative procedures to a process serially connected with objectively defined conduct and completion end-points. Finally, a well defined and robust SHCD system complemented by collective organizational responsibility seems the way forward to positive ‘surgical outcome’ and prevention of morbid events associated with community surgical camps.

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