**CHATTISGARH TRAGEDY: A MIRROR TO OUTCOME-BASED APPRAOCH TO COMMUNITY ~~EN-MAASE~~ SURGERY CAMPS!**

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

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**View point:**The recent Chhattisgarh tragedy (November 2014, Chhattisgarh, India) was an adverse falloutof 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 enquiryinto 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 fromcommunity and institutional fraternity (social science, human rights, law, bioethics, medicine) alike. However, none offered any constructive criticism with remedial potential. The intensityof 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/quantumof surgery to exclaim fame and donot 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 thepatient. Queerly, while the notion of a ‘successful’ operation tends to be surgeon-inclined and draws more from the surgery performance highs, and probably also from uneventful ‘early’ recovery and discharge;the long-term follow up to underscore *~~(substantiating~~*~~)~~ the real outcome, i.e. medical success facilitatingpatient’s return to normal life, has embraced thin air. The effective management of even a simple morbidity following surgery is difficult in a community surgery camp because of uncontrolled environment, outside the OR, involving makeshift arrangements and inadequately trained paramedical support staff. Therefore, difficulties with managing postoperative component, i.e. identifying, reporting, and responding to emergent post-surgery problems; precludes control of end-to-end SHCD process and with it the surgical success contention based on final patient outcome.

~~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/movingthe 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 ofsimilar 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 surgicalcamps 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 isdecided, 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 movesout 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) withits first male sterilization (vasectomy) camp in Ernakulam, Kerala (1970); gained momentum over the passage of time to becomea 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 camp system to the one based on Standard Operating Procedure (SOP) [4].

Critical overview suggests that although the changes may havebeen intuitive and virtuous to begin with, and directed at upgrading the system effectivenessand efficiency for patient safety; they were unable to project upfront the serial micro-targets in theright 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 positionto ingrain proactive correctivemeasures.

**The SHCD Challenge:** Literature review has suggested that the following aspects merit consideration to analyze ‘surgical outcome’ and veerthe 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* incursserious ethical burden; including, violation of ‘autonomy’ (informed consent form merely a paper to putthumb 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 surgeonsbeyond 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 askewed 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 know~~how~~ that 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 ofcare 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 ofSHCD. 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 communitycriticism. 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 final and actual surgery outcome assessment, and how it helps patients in alleviating their woes and enhance their quality of lives; requires close post-operative follow-up. However, in surgery camp settings, this well understood contention gets defeated most of the time for the want of alignment of the intent of extrovert media-polity nexus (seek quick TRP and political mileage) and the introvert surgeon-bureaucracy combine (seek adequate arrangement and flawless execution).In Arvind Eye institute and Smile Train International are excellent proponents of mass surgery access to the very poor; have been able to sustain their successful run because of the absence of intent to advertise, endorse, and disseminate. In their systems, each and every beneficiary patient becomes a champion in spreading the good work. On the contrary, in the Government backed community surgery settings, the unnecessary premature media hype shifts the focus from the surgical contention such that it instills false confidence in operating surgeons and emboldens them to surgical adventurism.

The desire to shorten the journey from being good to becoming greatentanglesthe surgeons on several occasions into creating records to catalyze disseminationof 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 theinfamous Chhattisgarh episode is one such case in point wherein opportunist surgeons for getting billed asthe quickest/fastest, grandly ignored/neglected impending risks including 'infection' (compromising instrument sterilization time); 'anesthesia complications' (one anesthesiologist on manypatients, anesthetized patients to support staff ratio, inadequate postoperative nursing care), and 'infrastructural compromises' (disproportionate number of beds forcing patients lie onfloor), lack/absence of post-surgery care, among others [1, 2, 9].

**The way forward:** Therefore, in order to takecomprehensive control of SHCD in mass surgery settings, advocacy and around final ‘surgical outcome’ as a central contention seems to be theway 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 surgicaloutcome from:

i) Surgeons’ outcome audit

ii) Active tracking and long-term reporting by localhealthcareworkers 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** |  |

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

* ~~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
* ~~Desist~~ Premature glorification of ‘surgeons’ solelyon quantum of operations
* ~~Avoid~~ Immediate post-hoc dissection of tragic ‘surgical outcomes’ in public domain before investigations are completed

The media must also invest in 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

1. Setting up dedicated ‘*post-camp access*’ that facilitates positive ‘surgicaloutcome’by offering post-surgery medical consultation, essential medicines, rehabilitation, and healthcare counseling.
2. Balancing COI-induced inter-principle ethical burdens: Not uncommonly, *~~en masse~~* mass 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 early promotions ~~monetary returns~~, laurels and recognition. Also, operationalizingthe 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.
3. Involving private healthcare Institutions to include community surgery campaigns into their corporate social responsibilities (CSR) initiative: The many private healthcare institutions who are already carrying out successful surgery camps for decades together; should be identified, supported, and recognized for their efforts.

**KeyMessages:**

1. *To prevent patient morbidity, full control of SHCD process is of paramount significance and* mass 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 followingareas; SHCD capacity building, patient selection ethics, outcome analysis, andresponsibility allocation (both individual and collective!).
3. In case of inadvertent problems with surgical camp process affecting innocentpatients, the communication media including the record resources (newsprints, gazettes, books, report manuals) should invest in scientificanalyzes and discussions that identifies problems (and offers solution too!) in the SHCD thanin 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 asan index of surgery success and not to get swayed by incomplete, commercially-empowered public resource that overstate facts for all reasons other than the actualoutcome.

**Conclusions:** In state backed *mass surgery* initiatives for the community, the overall responsibility ofthesurgical 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 outtechnical operative procedures to a process serially connected with objectively defined conductand 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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