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Implementation of Quality Assurance in Reproductive & Child Health Services Project in Maharashtra State

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ABSTRACT

Introduction: Globally 'quality health care' and particularly the domain of Reproductive and Child Health (RCH) services attract substantial attention. United Nations Population Fund (UNFPA) implemented Quality Assurance in Reproductive and Child Health Services Project in India. This study was conducted to document evolution and process of implementation of that project.

Methodology: It was a descriptive study using mixed methods. Authors analysed statistics generated through reviewing secondary data, visits to health care institutions, interviewing various stake holders and focused group discussions.

Results: Regular visit to health institutions by a multidisciplinary trained team was the core strategy. The districts in the project were added in four phases. In each selected district institutions were added in rounds. The number of institutions covered in first three phases was 1,231. Checklists and grades were prepared for different types of institutions. Government trained 903 personnel for paying visits to institutions. Only 53.65% planned visits were actually paid. There was improvement in grades. The women appreciated the quality improvement activities.

Conclusions: The process of expansion adopted in this project demonstrates its applicability in any large geographical areas and particularly resource-crunch areas. The involvement of in-house multidisciplinary team is effective and self-sustaining.

Keywords: Checklists, Team, Assessment, Visits, Grading

INTRODUCTION

Globally 'quality health care' and particularly the domain of Reproductive and Child Health (RCH) services has recently received substantial attention [1]. Although improving quality services had been one of the objectives of RCH program in India since inception in 1997; the focus on quality health services was enhanced after launching National Rural Health Mission (NRHM) in 2005. As a result Indian Public Health Standards (IPHS), exclusively for institutions in public sector and National Accreditation Board for Hospitals and Healthcare Providers (NABH) were established. Internationally the Population Council devised a framework for Quality of Care (QOC) for family planning services, which outlined the fundamental elements of care while capturing both technical and interpersonal, dimensions [2-4]. The Client-Oriented, Provider-Efficient (COPE) framework of quality assessment gave further impetus to efforts for operationalizing QOC in health services [5]. An Indian experience of the project which can be replicated elsewhere is presented here. The quality of RCH services has been criticized in 2003 by Ramakant Rai and in 2012 by Devika Biswas through Public Interest Litigations against Union Government of India. Supreme Court gave directives to Government of India, for ensuring quality of family planning services. As one of the fallout of these directives, United Nations Population Fund (UNFPA) initiated Quality Assurance in Reproductive and Child Health Services Project in India from 2006-07 in six

states including Maharashtra. In Maharashtra it was expanded in phase wise manner. The core strategy in the project was regular visits to selected institutions by a multidisciplinary team for assessment and support. The team was from the system and not from any accreditation institution. Assessment by external team is a typical feature of internationally well-known accreditation systems. This was an attempt to improve the quality of services in public sector and that too in small hospitals and centers which were located in small towns and villages. The study was carried out by principal investigator at the behest of State Health System Resource Centre, Government of Maharashtra. The study design was finalized after discussion with state level officers and persons from UNFPA. The primary purpose of the study was to disseminate the implementation process details to enable public health administrators to follow such approach in varied geographical areas. The specific objectives were to report the process of expansion of the project in Maharashtra State; to understand specially the planning and performance of visits by the district teams to the institutions including regularity and problems faced during visits; to measure the improvements in grades obtained by the institutions; and to understand the perceptions of women about quality services provided by health facilities.

MATERIALS AND METHODS

It was a descriptive study carried out in 2015-16 using sequential mixed method design. First quantitative data was collected from available records and then in depth interviews/FGDs were conducted. The study was carried out in Maharashtra State, India having 112,374,333 population as per last census carried out in 2011. There are six revenue divisions viz. Konkan, Pune, Nashik, Aurangabad, Amravati and Nagpur and total 36 districts in the state. The health institutions under public health sector are is given in table 1. From the six districts included in the first phase, two (Kolhapur and Aurangabad) were randomly selected by lottery method for comprehensive study.

Necessary permission was obtained from health authority for reviewing the data. All relevant information was collected from State Family Welfare Bureau and also from the two districts. Three interview guides were prepared; one for state level officers, second for district level officers and third for other members of District Quality Assurance Group (DQAG) engaged in implementation of the project. The proformas for visit and interview were validated and pretested. All interviews, field visits and focus group discussions were conducted by the public health specialist along with one mid-level manager, having master's degree in social work. Initially State Level Nodal Officer, State Consultant for Quality Assurance Project and UNFPA State Coordinator were interviewed. In each selected district, Civil Surgeon (In-charge of District General Hospital and supervisory officer for hospitals in the district), District Health Officer (DHO), District Nodal Officer (designated for quality assurance project), Quality Coordinator (contractual officer for quality assurance project), concerned Principal from Health and Family Welfare Centre (HFWTC) and few members of the quality assurance group were interviewed. Similarly, in each district two sub centers, two Primary Health Centers (PHC), one Community Health Center (CHC) or Sub District Hospital (SDH), district hospital and concerned HFWTC were visited, and the documents were reviewed. Additionally, two focus group discussions (one in each selected district) with women form reproductive age group at a sub center village were also undertaken.

RESULTS

Observations emerged after review of documents, visits and interviews/FGDs are presented here. The focus almost exclusively was how the government carried implemented the project. This project was initiated by UNFPA in six states and in each state one district was selected. From Maharashtra, Ahmednagar district was included. The experience of implementation of the pilot was encouraging, hence the State Government up-scaled quality assurance project in 2009-10 to five more districts so as to have one district from each revenue division. It was incorporated in the state 'Project Implementation Plan' of then National Rural Health Mission. Entire Maharashtra State excluding Mumbai Municipal Corporation was covered in four phases. In first three phases, in each phase one district from, each revenue division was selected, totaling 18 districts. The study was conducted when fourth phase of inclusion of remaining 16 districts was just initiated. Hence, the further observations and discussion pertain to 18 districts covered under the first three phases. The qualitative aspects are from two selected districts.

In the districts, up-scaling was in rounds. Almost all CHCs, some PHCs which were having proper infrastructure and usually two sub centers from each PHC, one good plus one poorly performing were included in first round. District hospitals, super specialty hospitals were not included. It was also decided to include maximum 50 health institutions in first round. In the second round about 25 more facilities were added. Depending up on feasibility, additional facilities from the districts were added in the third and subsequent rounds. Inclu-

sion of additional facilities was usually included after at least one year implementation. Generally, when 90% earlier institutions achieved 'A' grade status, more institutions were added. While selecting Health Facility in the third round and fourth round, sub centers were not included. Only designated delivery points (depending upon deliveries conducted in the institution per month) defined by National Health Mission (NHM; renamed NRHM) were considered for inclusion from second round. The number of institutions covered is given in table 1 and phase wise inclusion of institutions is given in table 2.

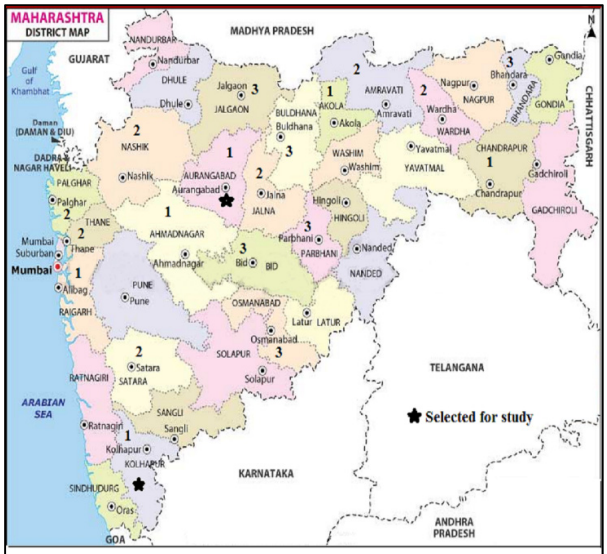

Figure 1. Phases of inclusion of districts and selected districts for the study

Table 1: Health infrastructure in Maharashtra State

Health Institutions	Total	Covered in project
Sub Centre	10,580	429
Primary Health Centers	1,811	593
CHC/SDH	446	209

CHC=Community Health Centers; SDH=Sub-district Hospitals

Table 2: Phase wise and round wise institutions covered

	In first round	In additional rounds	Total
First phase districts (6)	280	177	457
Second phase districts (6)	306	134	440
Third phase districts (6)	334	0	334
Total	920	311	1231

Table 3: Change in grading of the institutions

Grades	No. of Institutes		Improvement
	Initial	Final	
A	187	816	Increase, 4.36 times
B	776	310	Decrease, 2.50 times
C	240	47	Decrease, 5.10 times
D	11	2	Decrease, 5.5 times

'A' and other grade institutions in initial and final visit (Z=26.76; p<0.0001)

Table 4: Quality assessment visits conducted (1/4/14 to 31/12/14)

District	No. of Visits conducted (%)
Ahmednagar	84 (77.78)
Aurangabad	49 (45.37)
Akola	74 (68.52)
Kolhapur	85 (78.7)
Chandrapur	63 (58.33)
Raigad	56 (51.85)
Amaravati	94 (87.04)
Jalna	76 (70.37)
Nashik	33 (30.56)
Satara	77 (71.3)
Thane	8 (7.41)
Wardha	98 (90.74)
Jalgaon	76 (70.37)
Osmanabad	40 (37.04)
Bhandara	1 (0.93)
Beed	37 (34.26)
Parbhani	3 (2.78)
Buldhana	89 (82.41)
Total	1043 (53.65)

Quality assessment check lists were jointly evolved by Government of Maharashtra, UNFPA and various other stake holders. Indian Public Health Standards were also considered to make check lists comprehensive. Following five generic elements; service environment, client provider interaction, informed decision making, integration of services and women's participation in management were included for assessing RCH services. Six types checklists were prepared to cover 100 bedded Sub District Hospital (SDH), 50 bedded SDH, CHC, PHC and sub-center. The check lists for three types of hospitals were almost similar. The check lists were dynamic. They were reviewed and modified yearly by the senior DQAG team members and Government officers. The last version of the checklist included 11 sections and under each section there was a set of questions having 'yes' or 'no' responses. Yes responses were graded into two. Best response was given 'two' marks and average 'one'. If response was no; then 'zero' marks were given by the visiting DQAG team. On the basis of the total score, the facility was graded as follows; Grade A+ = 91% and above score; Grade A = 76% – 90% score; B = 51% – 75% score; C = 26% – 50% score; D = Up to 25% score.

The manpower utilized for the project is given in figure 2. Amongst regular personnel some were identified and entrusted the project work over and above their routine work. The State Level Consultant and in each district the District Coordinator plus one data entry operator appointed on contractual basis exclusively for project. However they were the key persons in the implementation of the project. The DQAG was not an independent structure but it was an extension of the Quality Assur-

ance Committee (QAC) set up as per the directives given by the Supreme Court to ensure quality of sterilization services. DQAG was a heterogeneous group consisting 20 to 25 members. It included specialists in Obstetrics and Gynecology, Pediatrics and Surgery from district hospital, senior officers from Zilla Parishad, faculty from nursing colleges and training centers. DHO was the chairperson of the DQAG while Civil Surgeon was the Co-Chair. A Nodal Officer, a person designated by the DHO served as member secretary. DQAG had freedom to identify the nodal officer but mostly Additional DHO looking after RCH project was preferred. The roles and responsibilities of each team member were finalized after extensive discussion and communicated to all members during training as well later through written communication.

All senior officers working in RCH at state level had undergone sensitization training. The in-charge medical officers of selected PHCs and medical superintendents of selected CHCs were trained for one day. The DQAG members had undergone four days extensive training for quality assurance project. The last day of training included field visit to a health facility for actually assessing quality of services using check list. Discussions on how improvements should be achieved and conducting a mock DQAG review meeting was included in this training. State officers deliberately emphasized in the DQAG trainings, "we are not going for inspection of the health facility; we are not going to find their flaws, so your behavior should not reflect this kind of attitude. DQAG members are advised to visit scheduled health facility on time, make observations, write them in the context of the checklist and inform the staff". Some respondents informed that the daily honorarium received by the participants who attended the training was only Rs.300 and for other trainings, it was Rs.800 to 1,000. They opined that this difference has resulted in diminishing their enthusiasm to attend this training. The interviewees were satisfied about content and methods of conducting training. In the state 930 persons from 33 districts (persons from one district did not participate) were trained.

All the districts had given adequate space for office of Quality Assurance (QA) project. Computer, internet facility, stationary and other required material were supplied from NHM funds. In more than 50% districts separate data entry operator for QA project was functional. But retaining them was difficult. Excepting in Kolhapur, initial incumbent was not working in any district when the study was conducted. In most the districts in these six years span (2009-15) two or three data entry operators functioned.

The QA visit process was a continuous and cyclical. It involved planning, conducting visits, filling checklists, de-briefing to the staff members, preparation of action plan and revisit. The targeted visits were minimum 12 per month. In a month visits included minimum two RHs, two PHCs, four sub centers and more facilities as per rotation to accomplish two visits per institution per year. In order to cover these facilities, minimum three to four QA teams were constituted, each having at least two to three members. Each team required to spend about two to three days a month for assessment work. The subcenter visit was planned to coincide with an immunization day while the other visits could vary. The visit schedule for an institute was bi-annual and actual itinerary was envisaged to be prepared monthly or at least two weeks prior. The visit required whole day for thorough assessment as per check-list. Assessment used to start introducing team members, briefing to the health staff about the quality assessment, explaining the purpose and process adopted for assessment. QA team members were expected to spend adequate time with various staff members in order to collect information using the assessment checklist. Staff involved in sections like Out Patient Department (OPD), family planning services, Maternal Child Health services and Reproductive Tract Infection/Sexually Transmitted Infections related services etc. was requested to assist and accompany individual team members for the assessment. At end, there was debriefing meeting with all staff including in-charge of the institution. They discussed about the gaps identified as per the checklist. Guidance was given by the team to meet the gaps and how to improve the score in particular sections. The team helped the staff to find out the root cause of observed problem. Then the team members appealed to each staff to volunteer for completing a task for closing the gap and time required for it and then accordingly action plan was prepared. Mobile numbers were exchanged between the volunteers who were ready to perform the task and the DQAG team. The checklists were filled in two copies, one was handed over to in-charge of health facility and the other was brought to QA cell. It was observed that during interaction, attitude of the group members with the staff was really very supportive. The visiting team in their turn helped to resolve problems at district and higher levels. Generally, after three to four visits, many facilities showed improvement in the grade. Many facilities got A or A+ grade, after five to six visits. Almost all the institutions have displayed progress in grading at a prominent place in the facility. Best performing institutions were getting "A" or "A+" grade certificates which were displayed with proud in the reception area. The displaying practices varied. Table 3 illustrates the overall improvement in the institutional grades as recorded by NRHM [7]. In first visit the

proportion of institutions having A grade was 15.40% which increased to 69.45% (Z=26.76; p<0.0001). The first grading details of 17 institutions were not available and in 39 institutions revisits were not yet done.

Sub District Hospital assessment by DQAG members required six to seven hours; but the members felt that a day was inadequate for thorough assessment. Also, it had been observed that many times DQAG members left the district place by 10-11 AM, reached the health facility by 1-2 pm but by that time the OPD got over. The teams hurriedly finish the visits and return home by 6 pm. It was observed that actual visits were lesser than the planned visits due to cancellation. Actual visits ranged from 0.93% to 90.74% with mean of 53.65%. The district wise details are given in table 4. As per guidelines, available vehicle was to be used otherwise hiring a vehicle was permitted. Almost 50% visits were cancelled due unavailability of vehicle at 11th hour. Clinician's presence in the team was mandatory to visit CHC/SDH. They were required to work for almost whole day. Almost all members opined that the budget for travel expenses was insufficient. The daily allowance for visits was also inadequate.

Focused group discussions

In Bilda village in Aurangabad District 13 and in Satve in Kolhapur District 12 women were present for FGD. The FGDs were conducted for about one and half hour. The women were satisfied with RCH services provided to them. They perceived and appreciated the various efforts particularly undertaken for cleanliness, enhancement of facilities, displaying visits' details and certificate received from DQAG team. Women from Satve village gave marks to the sub center in the range from 70% to 90%. Many women from Bilda village gave more than 90% marks to the sub center. Women from both the villages desired following four facilities/services at sub center to attain ideal status; (1) ultra sound machine, (2) laboratory, (3) adequate medicines and (4) caesarean section facility. Additionally, women from Satve village desired more health educational efforts on gender bias; whereas, women from Bilda village desired incubator/warmer, HIV testing facilities and medications for snake and scorpion bites in the sub center.

DISCUSSION

World Health Organization advocates the health system to make continuous improvements in the health services to become more effective, efficient, accessible, equitable, acceptable/ patient-centered and safe. Quality assessment studies are usually carried out, interviewing the clients [6], or studying the outcome data [7]. Quality can also be assessed from client's perspective [3 8]. In fact all three aspects structure, process as well outcome are frequently used to assess healthcare quality. Both process and outcome indicators have some strength and weaknesses. As improvement in quality was already documented; authors did not attempt to measure quality but primarily collected information on the implementation of the project. The number of institutions covered in the project in three phases was about 10% of the total institutions in the state. In this project two aspects of Donabedian model, infrastructure and processes were included and outcome was not considered. But in high income countries contrarily importance may be given to health outcomes [9]. Similar quality assurance project was implemented in Rajasthan where successive assessment revealed improvement of grades both in CHCs and PHCs, very similar to our findings [10]. Another similar project in Gujarat used input and process for evaluating quality [11]. Repeated assessments using standard tools ought to improve quality and had shown improvement in four maternity hospitals in Uzbekistan and nearby countries [12, 13]. Almost all tools used in various studies have their origin in the tool developed by WHO. The initial process of preparing the checklist was similar to Gujarat model [14].

There are many accreditation systems like IPHS, NABH, Indian Standards Institution, International Organization for Standards, European Foundation for Quality Management, Joint Commission International etc. Most popular accreditation system in India is NABH and JCI globally. WHO has developed standards for improving quality exclusively in maternal and newborn care [1]. Mostly private hospitals located in cities opt for accreditation. Almost all the mentioned systems carryout external assessment against standards/objective elements and then based upon observations, institutions are accredited for some years. Even WHO quality improvement document does not mention any thing about operationalization the system [1]. These systems have strong emphasis on documentation and there is no long-term hand holding. Extensive literature is available on institutional improvement in quality of services. The results from table 3 show that the system adopted in this project was achieving significant quality improvement. In this project, in-house multidisciplinary trained team in each district was made functional for assessing and improving quality. Constitution of District Quality Assurance Group was a special feature in this QA project. The group is a syndicate, consisting technical experts as well as administrators. The key idea was employing only one person per district that to on contractual basis as a frontrunner. Mostly the person was from the system but not from the

institution. The second distinctive strategic aspect has been hand holding; unlike other accreditation systems where visits are episodic and providing solutions is not expected. The whole team worked at all levels to resolve the observed gaps which were almost similar recorded by the system [15]. The visit was always a methodical approach which included initial briefing of the team and explaining the purpose of the exercise then debriefing with all staff including in-charge. These were important steps to seek their cooperation while collecting the information and also to evolve appropriate solutions. After probing with respondents for reasons of cancellation of visits, it was clearly concluded that availability of vehicle and clinicians' busy schedule were main hurdles for visits.

In order to rollout QA interventions at the district level, concurrence and continuous support from the state is essential and critical. This is because several programmatic inputs and decisions and those having financial implications may have to be decided at the state level. Also, the technical expertise from all the streams is ought to enhance the quality assessment process. Hence, the design of this project was prepared in such a way that the existing system should take the primary responsibility of this intervention. It was felt desirable that the nodal officer or designated person who functions as member secretory to DQAG was drawn from the district level officers' cadre in the health system. Although the assessment by DQAG is an internal mechanism, but still it is independent. Assessment is done by the people working in the system in the same district, but they are not from that institution. The total assessment procedure was made fully objective. The overall principle that improving the quality of services is the institutional responsibility was always valued. The DQAG members were just the facilitators in the whole process. Mostly it was observed that initially QA received less priority than other projects. After implementing the project for few years, the Chief Executive Officers were taking monthly reviewing QA project, particularly human resources, supply and infrastructure aspects but subsequently the frequency reduced to three to four times in a year.

After the project has been satisfactorily implemented, policies have been changed and Government is encouraging NABH accreditation across the country. There are numerous difficulties and hence the progress is very slow. From 2015 to 2019, only 62 Primary Health Centers and from 2012 to 2019 now only two CHCs have been NABH accredited [16]. Health ministry Government of India in 2013 initiated its own system almost similar to this project with some modifications to implement it across the country (). Exclusive initiatives for quality improvement in labor room have also been developed and are named as 'Laqshya', meaning target. Community Based Monitoring (CBM) is yet another project implemented through non-government organizations for improving quality of services. It seems existence of diverse system and frequent modifications in policy have paralyzed the initiatives. Proactive steps to encourage this proven and cost-effective approach need encouragement. It is also felt that convergence between pleural attempts is certainly needed.

CONCLUSIONS

The process of expansion adopted in this project demonstrates its applicability in any large geographical areas and particularly resource-crunch areas. The involvement of in-house multidisciplinary team is effective and self-sustaining. The effect of repeated assessment visits was more than four times increase in 'A' grade institutions. Apart from documentary evidence of improvement in quality, women also acknowledged the improvements after initiation of the project.

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Ethics approval

Approval from institute ethics committee of Prognosis Management & Research Consultants Pvt. Ltd. Pune was sought before starting the study (No. PMRCPL/Ethics/SHSRC/QA/1-3/2015).

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