# MASTER OF PUBLIC HEALTH

*A cooperative Program of*

JOHNS HOPKINS BLOOMBERG SCHOOL OF PUBLIC HEALTH
&
INDIAN INSTITUTE OF HEALTH MANAGEMENT RESEARCH

# Capstone Project at Jhpiego

## By

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**IIHMR/JHSPH MPH**

**2013-2015**

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# Qualitative assessment of provider`s perspectives on quality in intra partum and immediate post partum care in Public health facilities in Maharashtra, India.


**By**

**Dr Prasad S Bogam**


**Under the guidance of**

**Maj. (Dr.) Vinod Kumar**

## Master of Public Health

**Year 2013-15**


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**TO WHOMSOEVER IT MAY CONCERN**

*This is to certify that Dr Prasad Bogam student of Master of Public Health Program offered by Institute of Health Management Research; Jaipur in cooperation with Johns Hopkins Bloomberg School of Public Health, Baltimore has undergone capstone training at Jhpiego on the topic 'Qualitative assessment of provider`s perspectives on quality in intra partum and immediate post partum care in Public health facilities in Maharashtra, India' from 01st June 2014 to 19th September 2014.*

*The Candidate has successfully carried out the study designated to him during capstone training and his/her approach to the study has been sincere, scientific and analytical.*

*The Capstone is in fulfillment of the course requirements.*

*I wish him all success in all his/her future endeavors.*

**Dean, Academics and Student Affairs**

**IIHMR, Jaipur**

**Capstone Advisor/ Advisors**

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## CERTIFICATE BY SCHOLAR

This is to certify that the Capstone Project titled ***Qualitative assessment of provider's perspectives on quality in intra partum and immediate post partum care in public health facilities in Maharashtra, India*** and submitted by **Dr. Prasad Bogam** Enrollment No.5 under the supervision of **Dr. Vinod Kumar S.V.** for award of **Master of Public Health** carried out during the period from 01/06/2014 to 19/09/2014 embodies my original work and has not formed the basis for the award of any degree, diploma associate ship, fellowship, titles in this or any other Institute or other similar institution of higher learning.

Signature

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## Abstract

Maternal mortality in India has been on constant decline since last two decades but has lagged behind in achieving Millennium Development Goal of reducing MMR to 109 per 100,000 live births till 2015. Focusing on increasing institutional deliveries has not yielded expected results since the quality of public health facilities have been overlooked for long time. Providers are important link between public health system and beneficiaries in providing quality care and it is critical to understand their perspectives on quality considering complex environment of healthcare. The capstone study aims at exploring perspectives of providers on quality in intra partum and immediate post partum care at public health facilities where a quality improvement intervention supported by Jhpiego was implemented.

In depth interviews were recorded with ten providers at five facilities in State of Maharashtra, India where the intervention is currently implemented to ascertain their perspectives on quality, enabling and constraining factors for the providers to provide quality care and their view on quality improvement intervention. The transcripts, field notes from interview were analyzed manually to identify themes and categorize themes under Donabedian systems framework of Quality.

Providers perceive quality with respect to safety of patient and satisfying patient`s expectations. Providers highlighted issues of human resources as important factor in providing quality focusing on number of providers, supportive leadership and performance management. Quality improvement intervention received positive response from providers as it improved their technical competence through training on standards. Providers felt the

training was effective as it was action oriented and most importantly supported by regular follow up, monitoring and consistent feedback and motivation by the trainers. Providers at facility attributed increased awareness of standards among staff as well as increased patient satisfaction to the intervention. All the providers at facility had opinion that intervention can be successfully scaled up at other public health facilities in Maharashtra.

Conclusion: All the respondents attributed the gap in providing quality care to the issue of human resources at facility. Three important themes with respect to human resources were found to be emerging from interview from respondents (i) Number of providers (ii) Leadership support (iii) Performance management. Methods to optimally utilize the existing human resources need to be explored further. When the issue of quality was raised, respondents related the quality to the quality improvement intervention supported by Jhpiego at facility. They felt need for such interventions as there is paucity of such quality improvement initiatives implemented in state. . Although the quality improvement initiative was well received by providers as it improved their competencies through effective training and follow ups, further studies are suggested to evaluate the impact of intervention and strategizing the scaling up of program to other public health facilities based on evidences.

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# Introduction

India contributes for almost a quarter of global maternal mortalities with around 178 mothers dying per 100,000 live births in country[1]. Indian maternal mortality ratio (MMR) is still quite high as compared to its neighboring countries like China where ratio is 37 per 100,000 live births and that of Sri Lanka which with 29 maternal deaths per 100,000 live births[2]. Additionally India contributes around 18% of disability adjusted life years (DALYs) due to maternal morbidities[3]. Within India, the trend in MMR has been on constant decline since last two decades, yet it has not been able to meet its Millennium Development Goal for maternal mortality. India`s goal to achieve MMR of 109 by 2015 is now accepted as failed goal despite of its commendable programmatic efforts and rapid economic progress over past two decades[4] . Similarly neonatal mortality rate in India has been on decline with 31 neonatal deaths per 1000 live births in year 2012 which contributes 70% of the total infant mortality rate and around 55% of under 5 mortality rate in country[5] The Government of India has introduced various initiatives under NRHM since 2005 to address maternal mortality and infant mortality like promotion of institutional deliveries through Janani Suraksha Yojana (JSY), capacity building of health care providers in basic and comprehensive obstetrics care, setting up operational sub centers, primary health care centers, Community health centers and district hospitals for providing 24*7 basic and comprehensive maternal and child services. For new born care, NBCC (New born care corners) are set up at health facilities where deliveries take place to provide essential new born care at birth and SNCU(Special New born Care Units) at districts hospitals and NBSU (New born Stabilization Unit) at first referral units. NRHM introduced more than 900,000 Accredited Social Health Activists (ASHA) to generate demand and provide accessible

health care services to community. Recently in 2011, Janani Shishu Suraksha Karyakram (JSSK) was launched to eliminate out of pocket expense for pregnant woman delivering in public health institution and treatment of sick newborns at public health institutions till 30 days from birth[6] . While JSY focuses on increasing institutional deliveries by integrating cash assistance with delivery and post delivery care at public health institution. Also cash incentives are paid to ASHA to facilitate institutional delivery. The scheme has been successful in increasing institutional deliveries in rural areas, an observational study carried out in state of Madhya Pradesh indicated about 42% increase in institutional deliveries in first two years after launching of scheme[7]. As per CES report 2009, 82% of deliveries were conducted at institutions in state of Maharashtra[8] and other study suggest that state has seen 43% rise since last seven years[9]. However time series and cross sectional analyses investigating cause of maternal mortality decline suggest that there is weak association between increases in institutional deliveries and MMR decline. Srinivas G and Abdul Jaleel (2014) suggested "Mere increase in institutional deliveries will not help in ensuring maternal survival in India, Quality of services provided at health facility, birth preparedness and avoiding accessibility issues are also important"[10]. Also studies from other parts of world especially low and middle income countries suggest that availability and accessibility of institutional deliveries is not sufficient to reduce MMR, the quality of emergency obstetric care should also be focused to avert maternal deaths[11]. The quality provided at institutions is equally important in further reducing the maternal mortalities which predominantly occurs in intra partum and immediate post partum period. Institute of Medicine (IOM) defines Quality as the degree to which health services for individuals and populations increase the likelihood of desired outcomes and are consistent with current professional knowledge .The concept of quality in healthcare is multifaceted and complex.

The perplexity in quality is due to different perspectives of patients, service providers and other parties involved in the course of healthcare service delivery. Patients define quality in terms of their healthcare needs, preferences and values emphasizing on satisfaction with healthcare and results such as functional status, recovery and mortality. While for physicians or a healthcare provider, the quality is primarily driven by medical outcomes emphasizing on technical excellence with which the care is provided[12]. Quality of care is not equal at all the institutions providing maternal care; the major factor can be attributed to provider`s perspective as to how they perceive quality, understand the needs of patients and take action to fulfill those needs and expectations. Quality from provider perspective can be described as services and activities which meet the needs of clients, which are medically safe, professionally ethical and are acceptable and accessible to all. Providers connect patients and health care system and play major role in identifying and meeting the health care needs of community. However, the perspective of providers in healthcare has received remarkable little attention. To improve programs further, it is necessary to see the world through provider`s eyes to gain insights into factors affecting their ability to provide quality care in maternal and neonatal health. This capstone report assesses qualitatively the providers` perspective in intra partum and immediate post partum care.

## Background:

The capstone study was planned with support of Jhpiego. Jhpiego is a not for profit organization affiliated with Johns Hopkins University and one of its project includes

providing technical assistance in improving quality of intra partum and post partum care in Indian state of Maharashtra. The capstone study mainly focuses on the providers at public health facilities which are supported by quality improvement project technically assisted by Jhpiego. The quality improvement intervention is supported by John D and Catherine T. MacArthur Foundation and aims at improving gaps in health services provided during labor and delivery and within 48 hours after birth thereby contributing to improved health outcomes for mothers and their newborns. The project is governed by five main strategic objectives:

- To support targeted improvements in evidence-based clinical practices during the intra partum and immediate postpartum period to promote an overall culture of quality at the facilities
- To strengthen select, targeted midwifery competencies of the providers to enable provision of high-quality and respectful intra partum and postpartum services at the facilities
- To support the development of an enabling environment at the facilities to foster the creation of a holistic system for provision of quality services
- To strengthen the performance measurement and evaluation systems at the facilities to enable them to monitor, report and recognize quality achievements
- To demonstrate the successful implementation of this quality improvement strategy and advocate with the Government of Maharashtra to scale up this strategy to all the healthcare facilities/ hospitals in Maharashtra

Under this program, a set of 40 clinical standards focusing on normal delivery, management of complications in intra partum and post-partum period, post-partum care, infrastructure and human resources are being implemented in these facilities using a participatory approach. A baseline assessment was conducted at all facilities on these areas in the months of Feb-March 2013.

As part of project need-based clinical trainings on selected midwifery skills, including plotting partograph, active management of third stage of labor, essential newborn care, newborn resuscitation, management of postpartum hemorrhage, pre-eclampsia/eclampsia and infection prevention were conducted. Almost 200 providers have been trained on these skills so far. As a part of this process of conducting trainings for strengthening the skills of the providers, skill stations and newborn corners were also established and strengthened at these facilities.

Currently project is implemented in thirteen facilities across 3 districts of Maharashtra (Pune district-4 facilities; Raigad district– 5 facilities and Thane district – 4 facilities). Maharashtra, located in western part of country is the third largest state in India both in area and population. As per Sample Registration System (2009), Maharashtra`s MMR was 104 which was lower than national average whereas infant mortality rate was 25 [13]. The state faces a severe deficit in availability of healthcare providers especially those who manage emergency obstetric care. As per RHS bulletin 2012 published by Government of India, there was 50.4% of shortfall in gynecologist and obstetrician in state and shortfall of 64.6% of positions of total specialists at public health facilities[12]. Most public health facilities have to manage with human resources crisis and hence tend to have compromised quality due to increased work load and inefficient skill mix. Until the gap in human resources is fulfilled,

it is imperative to understand their current idea of quality in maternal care especially intra partum and immediate post partum care and also how quality improvement project supported by Jhpiego has developed their skills and perspectives in providing quality care.

**Aim:** To assess the health care providers` perspectives of quality in intra partum and immediate post partum care in specified health facilities of Maharashtra with ongoing quality improvement intervention for such care.

## Objectives:

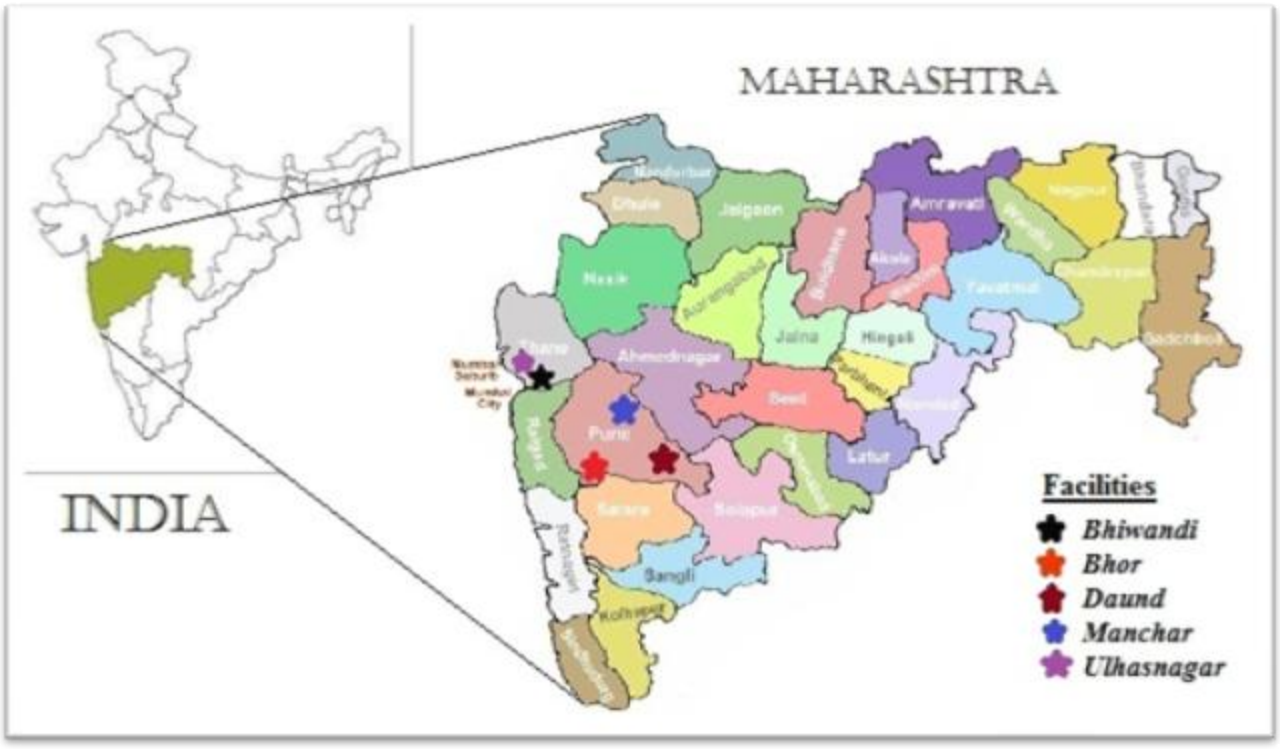
- To understand the perspectives of providers on the quality of care during normal labor, complications during labor and post natal care.
- To explore perceived barriers, motivators, factors enabling or hindering providers in providing quality services in intra partum and post partum care.
- To gain insights into the change in quality of intra partum and post partum care as perceived by providers after implementation of quality improvement intervention at the facility.

# Methodology:

## Design of study:

For the study, primary data was collected by conducting in depth interviews with 10 providers (Obstetricians, Medical Officers and Nurses) who are primarily responsible for providing intra partum and immediate post partum care at the facility. Five out of thirteen facilities supported by Jhpiego were selected on purposive sampling. Two facilities (Bhiwandi and Ulhasnagar) from Thane district and three facilities (Bhor, Daund and Manchar) were selected. Two providers were interviewed at each facility considering availability of providers responsible for providing intra partum and immediate post partum care. The geographical location of facilities is illustrated in below map.

Figure 1: Facilities in Maharashtra




## Ethical considerations:

Components of the study including the interview guide and the informed consent form were shared at the IIHMR IRB meeting held on 16-Jun-2014. The study was duly approved by IIHMR IRB. IRB approval has been attached in appendix. Before each interview, respondents were communicated orally regarding the purpose of study, procedure, benefits /risk and confidentiality in addition to that information sheet was provided to respondents with details of the investigator for future communication . Consent for willingness to participate in interview and audio recording were separately taken before each interview.

During data analysis and presentation of report, the privacy, anonymity and confidentiality of individual were maintained and the names of respondents were not disclosed. Attributing

any particular statement with the name of respondent was avoided. All the collected data was securely maintained with the candidate.

## Data collection & Analysis:

Interviews were conducted by candidate himself using a semi structured interview guide (Appendix 2). Flexibility to ask new or follow up questions was allowed as needed. By using this approach, attempt was made to develop and implement a systematic yet iterative data collection and analysis process. The interview guide included topics that were relevant to quality of intra partum and immediate post partum care and related to the Jhpiego supported project implemented at facility. All interviews were carried out at facility and an attempt was made to ensure privacy during the interviews to avoid distraction or bias. All the interviews were conducted in Marathi as all the respondents felt comfortable in speaking Marathi which is official language of state of Maharashtra. The audio recordings were transcribed and translated into English by candidate himself. The transcripts and the notes taken during the interview were primary data analysis to identify the themes and categories. Data immersion process primarily directed data analysis through referring transcripts, notes and audio recordings. A qualitative analysis of data aimed at identifying the themes/issues in providers perspectives related to quality in intra partum and immediate post partum care. The issues/themes were guided by questions in tool used for semi structured interview. Issues/themes are categorized, compared and described with appropriate support of verbatim statement given by providers.

# Results

Six nurses and four doctors were interviewed out of total 10 respondents. Out of 6 nurses, two were nurse in charge at facilities while four nurses were stationed in labor room and Operation theatre (OT) and primarily provided delivery services. 3 out of 4 doctors had post graduation in Gynecology and Obstetrics. The maximum total experience among provider was 33 years and minimum was 7 years. All providers had attended training provided by Jhpiego.

## General Perspective about quality

### What is Quality?

Quality being a complex subject to define, it is important to perceive the general idea of quality among providers. Respondents attempted to explain the concept of quality by relating it to the objects required for providing quality and the process to ensure quality and the desired outcome of intra partum and immediate post partum care provided to mothers and newborns. It was notable that when the issue of quality was raised, the respondents related it to quality improvement intervention being implemented at the facility and how it has affected their method of providing quality care. Respondents recognized quality as keeping the patient safe and satisfied. Patient`s healthcare needs should be fulfilled and they should provide positive feedback during their discharge. According to most of the respondents, quality could be measured majorly by receiving feedback from patients and checking infection rate at the facility. Accessibility, affordability and optimum utilization of available resources were also attributed to the concept of quality. Also most of respondents related aspects like availability of drugs and instruments, cleanliness of labor room, positive attitude among providers, medical attention to quality..

> *"For quality, Patient`s needs and expectations should be fulfilled ....patients cannot afford to travel long distance for healthcare. Also patients cannot afford to do caesarean deliver outside (private facilities) due to huge expenses. So it is nice if people are getting service free and with a good quality"*
>
> - A Nurse on perception of quality

> *Quality is nothing but patient satisfaction..."*
>
> - A Nurse started conversation on quality with above statement

> *"First, mother and child should be safe in intra partum and post partum. Safety of mother and child is very important. For that protocol is needed, that means right from patient gets admitted till she shifts to ward is important. It includes aseptic precaution, attendance..."*
>
> - Gynecologist on quality in intra partum care

### Responsibility of Quality

All respondents stated that team work is integral to concept of quality especially in ensuring quality in intra partum and immediate post partum care. All of them attributed the responsibility of quality from medical superintendent, doctors, matron nurse, staff nurses and class IV employees including *mama*[*], *maushi*[†] and sweepers. The employees at facility responsible for sweeping the floors and cleanliness were considered important for facility due to their role in maintaining cleanliness at facility. However most of them agreed that responsibilities increase with the designation. Most of the respondents perceived that

[*] Mama: Male ward assistant (Class IV)
[†] Maushi: Female ward assistant (Class IV)

leadership has decisive role in ensuring quality at facility. During conversation with staff at facility, it was noticed that staff at the well performing facilities had an optimistic view about their leaders and mentioned that leader has an important role in achievement of desired level of quality at facility. The opposite side of this aspect was also observed at other facility where leadership was perceived among staff as deterring factor for maintaining quality.

> *"Team leader is first responsible person for quality. He is very very important responsible person. Only if he wills then it can happen. If team leader doesn't have willpower, nobody can do it, then he is followed by others working under him".*
>
> - Doctor at facility on importance of leadership

> *"...if here our medical superintendant is not present, the quality at the facility will immediately deteriorate or it can go down".*
>
> - Nurse on leadership affecting quality at facility

> *"...That (leadership) is the reason we are lagging behind. That is primary reason why we are left out. I really wish to perform or couple of staff at facility really wishes it. But we don't get the required support".*
>
> - A respondent at facility considered lack of leadership support responsible for poor performance

### Cost & Quality

Respondents had mixed views while relating cost and quality. Four respondents said that cost is not related to quality. These respondents perceived as cost unrelated to quality as all the supplies are provided by government and there is no expenditure made at facility level. This implied that some respondents were not sensitive to the fact that Government is spending cost required for the supplies and hence the supplies were considered as free. Also one of respondent stressed that necessary materials and support already exist for conducting normal delivery. A skilled provider, clean room and instruments, basic drugs and linen required for normal delivery are present at all rural hospitals. However for caesarean sections and managing complication more resources are needed. Cost efficiency is one of the important aspects of quality. For example, Government provides ample quantity of linen to facilities, one of provider at facility described about how they stitched extra linen into gowns for patients which were used during labor and Kangaroo mother care. Other facilities did not provide gowns to patients. One respondent argued that cost is not required to fill partograph during labor or using available knowledge does not require cost, yet most of the providers don't do it in spite of knowing that it should be done.

The other three respondents viewed cost as expenditure or money spent and reflected that it is important as there is expenditure with purchase of supplies and equipments. They considered funds were required for maintenance of labor room, purchasing extra supplies of drugs and equipments which Government does not provide.

> *"Instead of blaming to cost, you have to use all the available resources. Whatever resources are available, you have to give your 100% efforts to use them".*
>
> - Gynecologist commented on cost with respect to providing quality.

## Inputs for Quality

Inputs/structure is the first component of systems framework of quality in healthcare. It includes the organizational setting, physical infrastructure, human resources, equipments and other materials required to provide quality care. Respondents were asked open questions regarding inputs of factors that contribute to quality. Later they were asked to rate the factors (on the scale of 5) given in table no.2 as per their importance in providing quality. Among all the respondents, human resource was identified as critical component required to ensure quality.

**Table 1 Inputs according to their importance in Quality care**

| Inputs rated as per their importance | Average score (out of 5) |
|---|---|
| Sufficient number of Providers at facility | 4.9 |
| Availability of infection prevention supplies | 4.9 |
| Functional status of instruments | 4.8 |
| Disposal mechanism and equipments for used instruments and medical waste | 4.8 |
| Availability of drug supplies | 4.7 |
| Toilet and Bathroom facilities at labor room and ward | 4.7 |
| Sufficient beds in inpatient maternity wards | 4.7 |
| Technical competence of Providers | 4.5 |
| Behavior of Providers | 4.5 |
| Availability of equipments and instruments | 4.5 |
| 24 hours running water and electricity supply with back up | 4.4 |
| Qualification of providers | 3.55 |
| Appropriate furniture a facility | 3.45 |

## Human Resources

Most of the respondents provided shortage of staff as a leading reason for their inability to meet the expected level of quality in intra partum and immediate post partum. Patients had to be referred to other facilities for complications as specialists were unavailable for 24 hours. Even though some facilities had on call gynecologist or anesthetist, calling them to hospital would result

in delay in timely provision of care. There were issues raised with respect to added workload of existing providers, mentality of providers in public health facilities and lack of system to measure performance and incentivize the good performance. Providers especially nurses indicated towards shortage of staff nurses at facilities leading to overburdened staff consequently resulting in frustration while no incentive was provided to them for their extra work. Responsibilities of nurses at facility are not limited only to maternal and neonatal care but they also look after other patients from other departments in hospital. Nurses complained that they find themselves inadequate to monitor each patient as expected due to number of tasks that a nurse performs during delivery and other minor procedures at facility. The tasks are not limited to following but include admission paper work, maintaining registers for indents, referrals or JSY or JSSK, immunizations, managing relatives and patient demands, monitoring vital parameters of patients in wards etc. For each delivery, nurse has to fill around 10 registers and it takes around 30 min to complete records for single patient for delivery. With technical and clerical tasks convoluted with interpersonal transactions, a nurse at understaffed facility is likely to feel overburdened.

*"We need staff. We conduct around 500 deliveries a month but we have only five staff (nurses). Also we have to manage their day offs in week. If we have five more staff, then we can provide better quality. Sometimes it happens that 4 deliveries are done on table and 2—3 deliveries are done on floor simultaneously. We should have at least two staff at a time to handle. We do not have sweepers, maushis do everything."*

- Respondent on shortage of human resources at facility

*—To provide quality, human resource is needed. Staff is needed.. A gynecologist and anesthetist are needed for 24 hours. We should not refer our patients to other facilities only because we don`t have providers. There should be a substitute available, if any of staff or doctor is on leave, however in instruments we can make some adjustments"*

- *Respondent on importance of availability of human resources*

> *"It`s only duty, duty and only duty. Our frustration level increase when doctors do not cooperate with us. We interact with patients far more than doctor and cater to patient`s demand yet doctors get all the credit. We provide care from start till end, yet no one appreciates us or even realizes our stress"*
>
> - A nurse on their frustration during work and lack of motivation

It was found during interview that quality was more dependent on will power of providers and their leaders than a standard system which can regulate performance of providers by motivating high performing providers either by monetary or social incentives and also disincentives to non performing providers.

> *—Even if I have more experience and work more; but the other providers get same salary as I do. Then there is no difference, and I need some constant energy to work. So something should be given to the provider to recognize his/her performance. (Pause) Even if they (higher authorities) don't give its fine but they should not depress them at least by creating challenges in our work. It is fine if we are not motivated but at least don`t depress us."*
>
> - A respondent on poor performance management at facility

### Availability of Supplies, Instruments & Maintenance

Most of respondents also stressed on availability of supplies & instruments during interview as an important factor in providing quality at facility. Though most of respondents agreed that the basic supplies of drugs and infection prevention materials are adequate at the facility, by and large ~~an inequity in distribution exist~~inequities in distribution exist among facilities. The supplies are not based on needs of facility but evenly distributed among number of facilities. One provider perceived that higher

authorities have responsibility to distribute equipments and supplies; it becomes easier for them (authorities) to distribute it evenly as they don't have to do customized calculations based on needs of each facility. Also when facility requested instruments, it was unlikely that requested items were supplied on time. Supply of pitocin drug was inadequate in some facilities and hence the drugs had to be purchased from funds available at facility or prescribed to patients to be purchased outside of facility. Some providers mentioned about availability of funds at facility and also funds generated from donation box. Such funds are used in purchasing emergency drugs or instruments which are not been supplied from government. However reluctance was observed in using local funds due to set formalities and more paper work involved.

> *—Instruments supplied by government should be good. For example, if episiotomy scissor is not good (not sharpened properly), it will be painful for patient and you will also have problems while performing episiotomy. It is uncomfortable for both, so instruments are important*
>
> - *A nurse on quality of instruments*

> "*Distributions of instruments are delayed to the facilities by higher authorities. It is loss of providers and they will definitely get frustrated. There you cannot improve quality. We can buy only few instruments from our own funds, but we cannot purchase all the instruments ourselves*"
>
> - Gynecologist on distribution on instruments affecting quality

## Process of Quality care

Process refers to set of activities performed to achieve objectives or outcomes. Perspective of providers was specifically elicited for activities or steps they follow to ensure quality in intra partum of normal labor and complication and also immediate post partum extending

till post natal care. Activities were extensively explored during the interview ranging from maintaining aseptic precautions to administering emergency drugs to providing psychological support. All the respondents cited advantages of administering intramuscular Pitocin in doses of 10 units instead of methergine to prevent post partum hemorrhage which has significantly improved quality by preventing complications. Most of respondents stressed on importance of protocol and agreed that compliance with protocol can help the providers to avoid errors or complications. However, some respondents believed that the many experienced staff were complacent about their experience and were hence reluctant to follow the protocol. For example, an experienced nurse with many years of experience will have some reluctance in filling partograph as they have done thousands of deliveries without partograph and have developed an intuition to detect the danger signals. Such reluctance sometimes also influenced the young nurses to not fill the partograph as their seniors avoided it. Respondents mentioned that woman in labor should be attended at priority than other patients at facility by nurses and medical officer. Per vaginal examination should be performed by medical officer or gynecologist present at facility and her vital signs like pulse, Blood pressure, temperature should be frequently monitored. Fetal heart sounds should also be monitored at regular intervals to check the status of baby. All the respondents remarked that preparedness is very important for delivery, everything should be present before patient arrives; respondents cited few examples of preparedness including clean labor rooms and table, delivery trays with sterile instruments, emergency drugs, gloves, sterile towels to clean baby, functional equipments like warmers etc. All the respondents mentioned about aseptic precautions as an essential part of process during intra partum and immediate post partum period.

### Aseptic Precaution

Importance of aseptic precaution in maintaining quality during delivery and immediately after delivery was remarkably highlighted by all the respondents. General cleanliness of facility, autoclaving of towels, gloves, instruments used during labor, fumigation of labor room or Operation Theatre, using disinfectants to clean floor, using autoclaved towel to clean baby, hand washing while handling baby were points mentioned by respondents in relation to the aseptic precautions. All the respondents stated the benefit of using hypochlorite solution for disinfection purposes which was part of quality improvement intervention at facility. However, most of the respondents were of the opinion that that the expected level of aseptic precaution could not be taken due to shortage of staff. Some respondents strikingly mentioned responsibility of in charge of facility to ensure aseptic conditions in labor room.

> "*For quality, we should maintain the barrier of infections including cleanliness of gloves and gowns, autoclaving instruments. And emergency tray should be ready. That`s it. It is important…If you go to the other facilities, you will find a typical smell in labor room. You can just go in our labor room and, you will not have the odor of typical labor room, here you will feel fresh. It is because of their intervention (quality improvement intervention)… We have achieved all this because of intervention points. Before that our sepsis rate at facility was high now it is almost negligible.* ".
>
> - A Gynecologist on aseptic precautions in quality in delivery

### Interpersonal Care:

As quality is mainly about satisfying client`s needs and expectations, providers have a major role to play in ensuring that woman who arrived at institution for delivery feels satisfied with the care from the provider's apart from sound clinical service. Often public health facilities in India are accused of being indifferent and ignorant to client`s perspective of satisfaction which essentially directs providers towards quality. Several facets of interpersonal care were brought out by respondents like psychological support to patient during labor, ensuring privacy for patients during labor and in post natal period and cordial behavior with patient during her stay at institution. In rural settings, mostly patients are accompanied by their mothers, mothers in lawor sisters in law during labor, most of the respondents said that they allow lady relatives during normal labor. Also *Maushi* (nursemaid) at hospital accompanies the patient if patient do not have relatives accompanying her. Providers at two facilities also specifically mentioned about *Hirkani kaksh*[‡] to provide privacy from relatives present in ward especially men. Also the quality improvement intervention had introduced providers with Kangaroo Mother Care which most of the providers appreciated as it had improved doctor patient relationship as well. A nurse at facility and a Gynecologist at other facility communicated with a same idea of having videos displayed on TV screens in waiting room to the patients explaining them about diet, hygiene and personal care. Positive attitude, willpower and motivation from leadership were some of the pre requisites mentioned by respondents at 3 facilities. Also

[‡] Hirkani kaksha: A private space in maternity ward to feed baby

most of respondents told that patients have been writing good remarks in patient response book and are satisfied.

> "*We should provide psychological support to the patient. Such support helps a lot. Patient feels good and cooperated if nurse is supporting her*".
>
> - A nurse on interpersonal care in normal labor

Though all respondents agreed to the importance of interpersonal care, they attributed the inadequate interpersonal care due to extra workload from understaffed facility. Also respondents stated instances of altercations at facility mainly due to attitude of relatives of patient. Uncooperative attitude of relatives of patient or patients themselves were one of the barriers for providing that most of respondents iterated several times.

### Patients/Relatives influence on Providers ability to deliver quality care

On this aspect, majority of respondents agreed that patients and her relatives have strong influence provider`s ability to deliver quality care. All 8 providers stated about education level of patient having an impact on quality as less educated mother may not follow instructions well or may be uncooperative. Also the patients who have never attended ANC clinics and do not have any medical records, providers felt it challenging if such patient arrive at facility and the time is wasted in performing basic investigations where patient is already in labor. Most of the providers had a consensus that patients from Muslim communities had reservations when providers counseled for family planning to patients after delivery. All providers rejected social or economic status affecting quality provided to her except three providers; two of them told that patients from lower economic class tend to

adjust at public health facility and counseling or educating them is easier. While patients from higher economic class are more demanding and treat providers as their servants, they are never satisfied and have attitude that they only should be served all the time at facility. The other provider had a view that patients from lower economic class have poor nutrition level and cannot afford nutritious food as suggested after delivery. Hence this affects her fast recovery.

Relatives of patient are also sometimes a reason for frustration for providers. Providers also pointed towards the reluctance of relatives when the patient developed complications and hence was suggested to refer to other facilities. A provider described an incident where patient had complications and was referred to tertiary hospital; however relatives hesitated to take her to hospital even though the transport was provided by facility. Later patient lost her life as she did not receive required care.

> *"Patient behavior sometimes impact. If patient is rude the provider has no interest in providing proper care to that patient. He (provider) is a human being and he needs a proper treatment. If provider is not properly treated by patient or relative then the willpower required to provide quality care lack in such cases."*
>
> - *A doctor on patient behavior affecting providers ability to provide quality of care*

> *—...we don`t have good response for PPIUCD as they (patient form specific communities) don`t want to go for family planning. They don`t agree for family planning methods and they insist of having many children. In such case woman is multipara and usually suffers from anemia resulting in increased chance of PPH. There are many problems such as edema. Also during delivery, she does not have strength to deliver child. We face problems because of this"* – A nurse on cultural beliefs affecting maternal health at a facility

*—Now, we need cooperation from patient. I will give an example; there was a maternal death at facility last year. The woman was sugarcane field worker (migrant worker) from other district. She delivered in a hut in other village. The very second day she moved to factory here in village. Her group was migrating on the same day she delivered baby. When she came at here (facility), she had high temperature after three days. There were no reports of any ANC visits and there were no clinical reports. We don`t know who performed the home delivery. We had no information whether she had taken TT. When she arrived at facility, she had a foul smelling. She was already in septicemia. She arrived at 7:30 pm here with high grade fever. She was unconscious so she could not speak and was not able to give any history. Her relatives were also unable tell history of her gravida. Seems she was third or fourth para. We decided to refer her to district hospital but her relatives were too much drunk. She was accompanied by a woman and a man. Even the woman relative was drunk. And they were not ready to take her anywhere. Finally patient landed into respiratory distress in morning 8 am and she died at 8:30 am. So the death occurred where we had no much of role. Now that death is accounted as maternal death at this facility.*

- A nurse in Pune district narrated an incidence illustrating how cooperation of patient/relatives affect the care in post partum care

Though there were instances of communication problems between provider and patient due to different language, however all the providers rejected it as a major concern since communication can be managed.

Only two respondents of total respondents had a view that only providers are responsible for providing quality and patients do not affect it.

## Quality Improvement Intervention

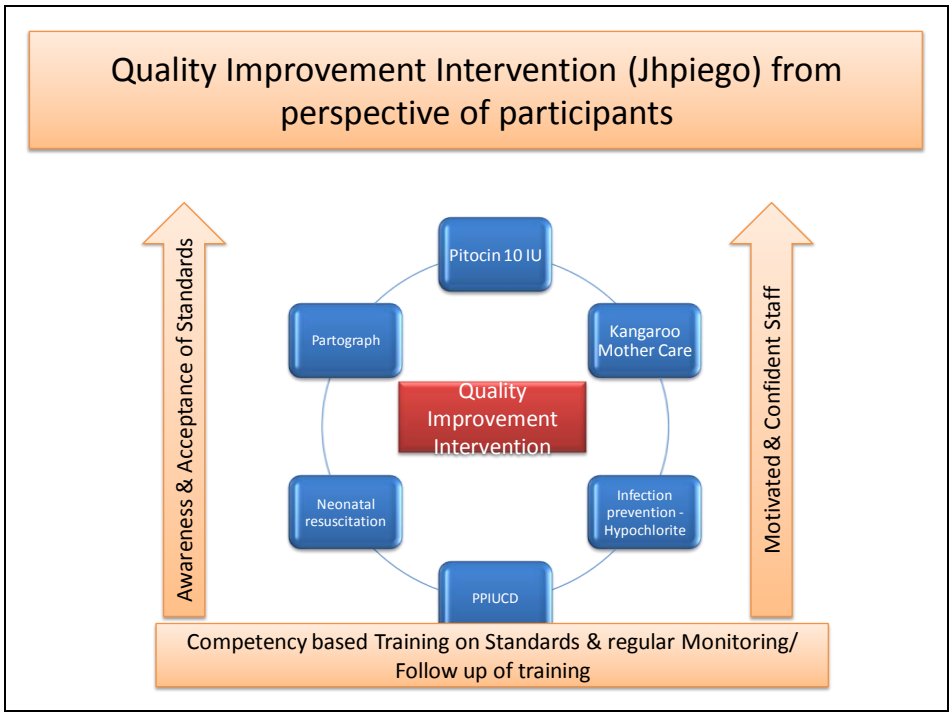
All respondents were asked about intervention points and how do they perceive intervention implemented at the facility. All the respondents described about intervention which focused on training on Partograph, PPIUCD, Breast call, Kangaroo Mother Care, Infection Prevention Practices, handling emergencies, neonatal resuscitation and administration of intramuscular Pitocin 10 IU. Administration of Pitocin received a special

admiration from all the respondents as it had remarkably reduced post partum hemorrhage at facilities and helped providers to avoid further complications. The most recurrent interventions mentioned by respondents are depicted in boxes on circle in below figure. They also underscored that the rate of infection had decreased after intervention due to use of hypochlorite solution to disinfect floor and instruments.

Respondents emphasized that the training provided by Jhpiego as part of intervention was practical and action oriented training and the most important factor to incorporate standards in their practice was regular follow up during the intervention. The trainers regularly visit facility once in 30-45 days and train the new and old providers on standards. They also monitor facility and interview patient sometimes to triangulate if standards have been followed. Some providers admitted that earlier they had resistance to some intervention points such as Kangaroo mother care (KMC) but with trainers visiting facility regularly and motivating them to follow initiative, they started doing it and soon observed that KMC was improving doctor patient relationship, giving a sense of freedom to mothers during Kangaroo Mother care hour and also helping neonates to gain weight.

Interventions such as filling partograph, KMC, PPIUCD counseling, giving breast call is now a part of their routine. All the providers indicated a positive change in overall quality after intervention especially due to improvement in awareness of standards.

Figure 2 Quality Improvement Intervention from Perspective of Respondents




Respondents were asked to rate the pre defined practices on scale of 5 with regards to their implementation at facility before and after intervention. The average difference in ratings is illustrated in table no.3. All the practices had positive change after intervention where providers perceived maximum positive change in filling of partograph after intervention and rated 4.3 points out of 5, nine of ten providers stated that they did not use partograph before the quality improvement initiative was implemented

Table 2: Change in practices post intervention on scale of 5

| Practices | Post Intervention change on scale of 5 (Average) |
|---|---|
| Plotting of Partograph | 4.3 |
| Management of neonatal asphyxia | 2 |
| Infection prevention practices | 1.8 |
| Management of pre edampsia/edampsia | 1.6 |
| Management of post partum hemorrhage | 1.55 |

Providers commended the trainers for their dedication, consistency and fervor for their work; they told that such consistency and continuity should be incorporated in training provided by government.

Nurses told that they liked the intervention as they were more aware of standards and could effectively intervene in cases such as neonatal resuscitations which earlier they had to rely on pediatricians or doctors. They said their confidence has increased during their work and they could affirm their colleagues referring to standards. Some nurses highlighted that training on manikins provided at facility through intervention were beneficial in training new nurses Also the seminars arranged through intervention were admired as It made providers aware of the status of other facilities and created healthy competitiveness among facilities which motivated providers to achieve results. Most respondents agreed that such events do not occur in government organization but should be promoted to motivate providers at public health facilities.

*" the first thing is 10 unit pitocin, then the breast feeding which has helped us and the patients. We learnt through training. Government does not provide such training. In Jhpiego, they come here and give training themselves. They come here often and ask us how is it going? Are you following as per our standards? They come here anytime. (Laughs) Sometimes we have fear that Jhpiego madam can come at anytime, but they do it very nicely and properly"* – A nurse on strengths on quality improvement intervention.

*—People from Jhpiego come here almost every month. Every time they train us on baby resuscitation, normal delivery, PPH management. Also we have models; they train us on those models. All staffs are called when they come and staff is given training again"*

- A nurse on quality improvement intervention

> *—I think as these are NGOS, they have worked with dedication and fervor. People from government (pauses) could not have taken training in this manner, this is what I think. And especially it was followed up. Government would have just trained us and left us. They would have said you do it on your own. But Jhpiego has followed it, they came here every month for a year. They observed our work and asked monthly reports from us. We sent them report every month and they have also evaluated our work.*
>
> - A nurse at facility on training and its follow up in quality improvement intervention

> *—We were not taking any efforts against PPIUCD. During the seminar we felt ashamed when we saw we were doing nothing for it as compared to other facilities. Also we were not doing much for Kangaroo Mother Care, we felt bad when we saw zero in our graph. So we came back next day and started working for it. That seminar helped us. Because of seminar, we also came to know about conditions of other facilities where the intervention is done. They gave prize to performing facilities; we thought we should also get those prizes. We asked ourselves why we shouldn't receive them."*
>
> - A nurse on improvements after intervention

When asked about sustainability plan of this intervention, all ten providers said that they will train new staff to and the quality will be maintained. A gynecologist added that a team in Government should be present to measure quality.

## Discussion

All the providers unequivocally perceived quality around safety of mother and baby and satisfying their needs. Providers perceived aseptic precautions as an important indicator for quality in intra partum and immediate post partum care. All respondents indicated manpower was the central factor affecting quality care at facility since they mentioned

human resources a major reason for not achieving expected level of quality. Aseptic precaution are important during intra partum and immediate post partum care, Also most of respondents concurred that insufficient manpower prevented them from taking necessary aseptic precautions especially in labor room. Three important themes with respect to human resources were found to be emerging from interview from respondents (i) Number of providers (ii) Leadership (iii) Performance management. Overburdened staff and doctors delivered intra partum and immediate post partum services due to deficit number of staff at facility. Nurses expressed their concern of being overburdened by technical and clerical tasks and the frustration is aggravated by lack of established system at facility level to recognize, appreciate or incentivize the work which affects the motivation of provider. Deficit in required number of Obstetricians is more than 50%. As per RHS bulletin 2012. Also a study in 2012 indicated that positions of EmOC specialist were vacant in 83% of all the facilities in Maharashtra[14]. Though there is a provision under NRHM to contract in EmOC specialist from private sector, however contracting in of specialist did not improve the service outputs significantly except in facilities with determined leadership. Leadership is also vital factor affecting quality and can have either enabling or constraining effect on quality at facility. Providers who believed they were achieving maximum level of expected outcomes felt that leadership at facility were supportive and motivated providers to perform and supports them in achieving quality. All the respondents commonly expressed that quality cannot be achieved without support from leadership. Availability of medical supplies and instruments were attributed as very important by providers, however they criticized the irregularities and inequitable distribution of supplies from the Public health system.

Also most of providers believed that will power and positive attitude is important to provide quality care. Will power and Positive attitude are essential for providers however they are too subjective. Some providers were unsure whether quality can be maintained at facility if gynecologists or superintendents having positive attitude are transferred or leave the facility. There is no system functioning in public health system to regulate the performance of providers with a reward or punish mechanism to encourage the providers to perform. The NRHM Common Review Mission report 2013 on Maharashtra also observed inadequate performance monitoring of the staff and facilities, even though HMIS and staff performance monitoring software are in place[15]. Effective measurement of performance is required in public health system to accredit the high performing providers to reward them and prompt healthy competitiveness among providers to perform. Providers are compensated alike irrespective of their performance; they do not receive incentive for exemplary performance in daily routine. It is imperative to motivate providers by recognizing their performance to utilize available human resources optimally. Providers also added that the incentive may not be always monetary but a facility level appreciation or recognition for achieving targets at facility level can motivate provider to continue his/her performance.

Only two out of ten providers regarded quality as complete responsibility of providers with no role of patients, other eight providers elicited the factors of patients or their relatives which can affect their ability to provide quality.

Maharashtra faces shortfall of staff especially in Obstetricians and specialists including anesthetists, hence nurses and medical officers perform tasks at peripheral facilities

however their technical competence to provide services should be improved by providing competency based training followed by regular monitoring and feedbacks. The NRHM Common Review Mission report 2013 also suggested establishing a mechanism to monitor quality of training and post training follow up. This recommendation has been addressed fairly by the model adapted by quality improvement intervention in Maharashtra. It was notable that respondents related the concept of quality to the quality improvement intervention supported by Jhpiego at facility when the issue of quality was raised during interview. They felt need for such interventions as there is paucity of such quality improvement initiatives implemented in state. From provider`s perspective, the current quality improvement intervention in Maharashtra has been successful and has been able to increase awareness of standards and improve their technical competence by effective training and consistent follow up. All the providers felt positive about scaling the intervention at other facilities and expressed their opinion that adjoining facilities should be trained on standards as many patients were referred in complications or later stages of labor which could be avoided if the providers at other facilities are trained. They also conveyed their willingness to provide training to providers at adjoining PHCs.

## Limitations

Clients perspectives are vital to quality however the objectives of the capstone was limited to perspectives of providers at public health facilities considering the scope of capstone and characteristic of quality improvement intervention which primarily focuses on training and follow up of provider to provide quality intra partum and immediate post partum care.

## Conclusions:

The issue of human resources deficit in providing intra partum and immediate post partum care was repeatedly mentioned during interviews by all the respondents. The deficit calls for optimal utilization of existing human resources capacity at facilities to minimize the gap in providing quality of care. They pointed towards lack of effective system to measure and monitor the performance of providers at public health facilities. Providers suggested that supportive leadership and regular performance linked incentives or recognizing mechanism should be established to motivate providers to deliver quality care in public health facilities. An initiative such as monthly appreciation of performing staff on notice board at facility level will help in boosting morale among staff. The availability of medical supplies and instruments was considered important in providing quality care in intra partum and immediate post partum care, however irregular or insufficient supply was attributed to lack of responsiveness and equity in distribution mechanism in current system.

When the issue of quality was raised, respondents related the quality to the quality improvement intervention supported by Jhpiego at facility. They felt need for such interventions as there is paucity of such quality improvement initiatives implemented in state.The intervention was well received by providers as it improved their competencies through effective training and follow ups. The intervention focused on action oriented training of staff nurses and doctors with regular monitoring and refresher trainings hence helping them in leveraging their skills and applying them in daily routine. Providers appreciated the improvement in level of quality of maternal care after intervention especially due to administration of Pitocin 10 IU, use of hypochlorite solution for disinfecting labor rooms which has reduced infection rate at facility and use of partograph

at facility to monitor progress of labor. Each facility was provided with models/mannequins to practice procedure to handle emergencies which increased the confidence among staff nurses to handle neonatal asphyxia in immediate post partum period. Hence the model of quality improvement intervention should be further evaluated for strategizing the scaling up of intervention to other facilities in Maharashtra and to assess sustainability of the program.

# Appendix

1. Background in Providers

Table 2: Provider Background

| Provider | Educational qualification | Total experience (years) | Experience at facility (years) | Role | Responsibilities (As told by providers) |
|---|---|---|---|---|---|
| 1 | GNM | 11 | 7 | Nurse | Manage OT, labor room & NICU as in charge nurse. |
| 2 | GNM | 33 | 8 | Nurse | Nurse In charge |
| 3 | GNM | 22 | 10 | Nurse In charge | Supervision of nurses; Delivery & OT services |
| 4 | GNM | 16 | 5 | Nurse | Ward duty; OT & labor assistance |
| 5 | MBBS + Training in anesthesia | 20 | 5 | Medical Officer | OPD, MCH care including ANC, deliveries, Family planning |
| 6 | GNM | 25 | 25 | Nurse in charge | Conducting high risk deliveries; Supervision of nurses |
| 7 | MBBS + DGO | 7 | 7 | Gynecologist | Complication management; Performing C section; Rounds in PNC ward |
| 8 | GNM | 10 | 7 | Nurse | Monitoring vital signs; Managing relatives; Attending patients; Counseling; Waste management |
| 9 | MBBS + DGO | 12 | 7 | Gynecologist | Conducting ANC clinics, high risk deliveries, C section and providing PNC care |
| 10 | MBBS + DGO | 7 | 2 | Gynecologist | ANC clinics, managing complication. Conducting C sections. Providing PNC care |

2. IRB Approval

IRB_PB_MPH.PDF

3. Interview Guide

Interview guide v1.0.docx

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