

Gap Analysis of Private Hospitals in Pilani, Rajasthan According to Manyata Standards

By

Malika Singh

*Dissertation submitted in partial fulfillment of the requirements of the degree
MBA Hospital and Health Management*

Academic year, 2018-2020



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Certificate of completion of Internship/dissertation

The certificate is awarded to

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In recognition of having successfully completed her
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and has successfully completed her Project on

**Gap Analysis of Private Hospitals in Pilani, Rajasthan
According to Manyata Standards**

From 03rd February 2020

Hindustan Latex Family Planning Promotion Trust

She comes across as a committed, sincere & diligent person who has a
strong drive and zeal for learning

We wish her all the best for future endeavors.

Sr. Programme Manager

Pankhuri Rai
Dr. Pankhuri Rai

National Manager-HR & OD

Satish Chandra Uniyal
Mr. Satish Chandra Uniyal

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ABBREVIATIONS

AMTSL:

Active management of third stage of labor

ANM:

Auxiliary Nursing and Midwifery

ANC:

Antenatal Clinic

BMW:

Biomedical waste management

DALY:

Daily Adjusted Life Years

DM:

Diabetes Mellitus

FOGSI:

Federation of Obstetric and Gynaecological Societies of India

GNM:

General Nursing and Midwifery

IEC:

Information, education and communication

JSY:

Janani Suraksha Yojana

LSCS:

Lower Segment Caesarean Section

LR:

Labor Room

MSD:

Merck Sharp and Dohme

MMR:

Maternal Mortality rate

NMR:

Neonatal Mortality rate

NFHS:

National Family Health Survey

OGTT:

Oral Glucose Tolerance Test

PE/E:

Pre-eclampsia/eclampsia

PV:

Per vaginum

RMC:

Respectful mother care

SPSS:

Statistical Package for the Social Sciences

WHO:

World Health Organization

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Introduction-

High quality of care is essential for reducing mortality and morbidity and improving the outcome¹. The gap in the quality can be judged to find a patient-clinician relationship and the variation in terms of safety, effectiveness, efficacy, and patient-centeredness which can be worked upon to improve the quality of care². In India, the private sector contributes to approximately 26% of institutional childbirths with large geographical variations³. But, according to NFHS-4 data, most of the deliveries are taking place in the private facility than in comparison to public facility⁴. Training health professionals with continuous Quality Improvements methods for Maternal and New- Born care can be an initiative to reduce MMR and NMR.

There is a growing consensus that the quality of services for mother and child can help in the reduction of maternal and new-born mortality⁵. The government initiative like Janani Suraksha Yojana (JSY) has increased the institutional deliveries but which in turn increased maternal and neonatal mortality and it is important to focus on the provision of high-quality during child birth⁶. Improving the quality of the delivery system can bring various opportunities to reduce maternal and neonatal mortality.

The government has taken many initiatives to improve the quality of maternal and childcare but mainly in the context of public setting^{7, 8, 9} and many of the research focuses on the public sector and classify the need to examine and assess the need to improve the quality. However, the initiatives for the private sector by the government is limited so it's very important to understand quality in the context of private sectors too, to widen the scope of facilities and contributing in decreasing the morbidity and mortality of both mother and new-born.

Federation of Obstetric and Gynaecological Societies of India (FOGSI) in collaboration with MSD for Mothers and Jhpiego implemented a three-year program (2013- 2016) aimed to increase access to high-impact, evidence-based antenatal, intrapartum and immediate postpartum care to mothers by leveraging the enterprises of private sector providers. FOGSI has developed 16 core clinical standards on antenatal, delivery, and the postpartum period. Manyata is a stamp of quality that ensures the best clinical practices are upheld by well-trained staff providing a better, respectful, and safer experience for mothers during childbirth¹⁰.

World Health Organization (WHO) framework for the quality of maternal and new-born health reflects the results of a balanced health care ecosystem. For example, a strong ecosystem provides the structure in which to deliver high-quality care and promote positive patient experiences with care¹¹. Improving provider interaction with other stakeholders will help in balancing the ecosystem¹². Manyata programs also had given an initiative for a health-care provider to interact with professionals. Using peer pressure we can improve health-care providers and by guiding them to obtain all essential physical requirement we can help to improve facility-level outcomes. With the prior strategy, we can directly impact the quality of childbirth. This paper is a prospective assessment of baseline data and post interventional data to yield insights on the impact of intervention done to reduce non-compliance.¹³

Literature Review

G Antonacci, J E Reed, V Sriram, J Barlow wrote “Quality Improvement through Interactive Simulation” in 2018. They have described the concept of quality improvement through interactive stimulations, 17 sessions conducted for 2 years involving 634 attendants having different health backgrounds which were a mixture of theory and case study discussion to give more practical experience. QIIS concept enhances the participant’s knowledge of the reality of QI in complex healthcare.³

Vincent De Brouwere ,Vincent De Brouwere ,René Tonglet Wim, Van Lerberghe wrote “ Strategies for reducing maternal mortality in developing countries: what can we learn from the history of the industrialized West? ” in 2003. They have described 2 phases that can be used to reduce the maternal mortality ratios, firstly is to recognize the magnitude in absolute terms and comparisons with other countries through vital statistics, the manageability of the problem and by the development of effective midwifery technique. Problem identification and prioritization were the preconditions for the professionalization of obstetrics.¹⁴

Adegoke AA, van den Broek N wrote: “Skilled birth attendance-lessons learnt”. This paper gives the concept of skill birth attendance as the increase in the proportion of deliveries by skill birth attendants will help in the reduction of maternal mortality and morbidity in this context skilled birth attendants were the health professionals or people with midwifery skills or traditional professionals. The major problems presented by this paper was the availability of healthcare professional in developing countries and their recruitment, deployment, and retention of staff.¹⁵

EJ Kongnyuy ,JJ Hofman ,N van den Broek wrote “Ensuring effective Essential Obstetric Care in resource poor settings”. The paper describes the concept of Emergency or Essential Obstetric care which was divided into two points of care - BEOC & CEOC basic and comprehensive Essential Obstetric care and various studies indicated the importance of EOC for the reduction of maternal mortality.¹⁶

Florence Morestin, Abel Bicaba, Jean de Dieu Sermé, and Pierre Fournier wrote Evaluating quality of obstetric care in low-resource settings: Building on the literature to design tailor-made evaluation instruments - an illustration in Burkina Faso. This research paper describes the evaluation of a tool which can be used in a low resource setting and developed a tool to guide the choice of tool that can be used.¹⁷

AIM

The study aims to improve the quality of maternal services provided by a private hospital in Pilani.

Problem Statement

India contributes to 15 percent of the global maternal death toll. About 44,000 Indian women die each year due to complications arising during childbirth²⁰. In India, the second largest contributor to Maternal Death is Rajasthan with MMR of 199 per 100000(2014-2015)²¹.

Rationale

Reduction in maternal and child mortality has been a top priority in India, especially considering the commitment on the part of the national government to reach the Sustainable Development Goals -3²². Chief Reason for Maternal Death is Post-partum Haemorrhage (31%) and with minor causes were Eclampsia, obstructed labor, severe anemia, puerperal sepsis according to one study conducted in Rajasthan²³ which in turn impact the economic growth and DALY of country. For the study 4 SCHO were chosen with a delivery load on an average of 15-20 per month.

Research Question-

- What is the compliance rate to Manyata 16 standards in Baseline assessment?
- What interventions can be done to increase the compliance rate?

Objectives-

- To analyze the compliance rate to Manyata 16 standards in the Baseline assessment.
- To suggest an intervention that will improve the quality of the labor room and Maternal OT.
- To do a hypothesis testing of Baseline Assessment and Post Assessment.
- To do a comparative analysis of all the facilities.

Methodology-

Study Approach - Quantitative Approach

Research Design - Interventional study (Baseline assessment and Post interventional assessment was carried out in order to identify the impact of given interventions).

Study Participants - Labor Room Nursing Staff, OT nursing staff, or any other staff who is indulged in LR practices.

Sample Size - 4 Hospitals

Sampling - Non-Probability Sampling

Sample Selection Criteria-

- **Inclusion Criteria-**

- ❖ Labor Room Nursing staff who are qualified BSC. Nursing or higher, GNM's and ANM's qualified and trained under RNC²⁴.
- ❖ Full-time availability of gynecologists and nursing staff in hospitals.
- ❖ Hospitals that are willing to participate in Manyata Certification.
- ❖ Hospitals which are conducting both Normal and LSCS Deliveries.

- **Exclusion Criteria-**

- ❖ Nursing staff who are experienced but not qualified with any of the degrees.
- ❖ Hospitals who are not willing to participate in Manyata Certification.
- ❖ Hospitals where there is no fulltime availability of gynecologists and nursing staff.

Instrument for data collection - Manyata Clinical Standards Checklist²⁵ given by WHO and endorsed by FOGSI. The checklist comprises of 16 standards in which 1 standard is on Antenatal care, 13 standards are on intrapartum care, 1 standard is on postpartum care and 1

standard is on C-section. Each standard contains objective elements which further contain verification criteria mainly based on the assessment of healthcare provider knowledge and skill.

Mode of Data Collection-

Primary Data was collected by the assessment of each verification criterion by following methods-

- Observation - By observing the skill of nursing staff through demonstration.
- Provider Interview - By interviewing the nursing staff to assess the knowledge
- Case record - By reviewing records of routine practices.
- Physical Verification - Physically verifying the availability of drugs, medication, and supplies.

Data Analysis-

Compliance and Scoring System - All the objective elements should be scored according to the above four methods and scoring will be given as Non-compliance and Full-Compliance

Score	Level of Compliance
0	Non-compliance
1	Full-Compliance

Full Compliance means when all the criteria in the quantifiable component are met and all means are verified which are available in verification criteria of supporting evidence. If all the services are present/ sufficient/ functional/ performed/ recorded/ displayed/ examined will be scored as 1.

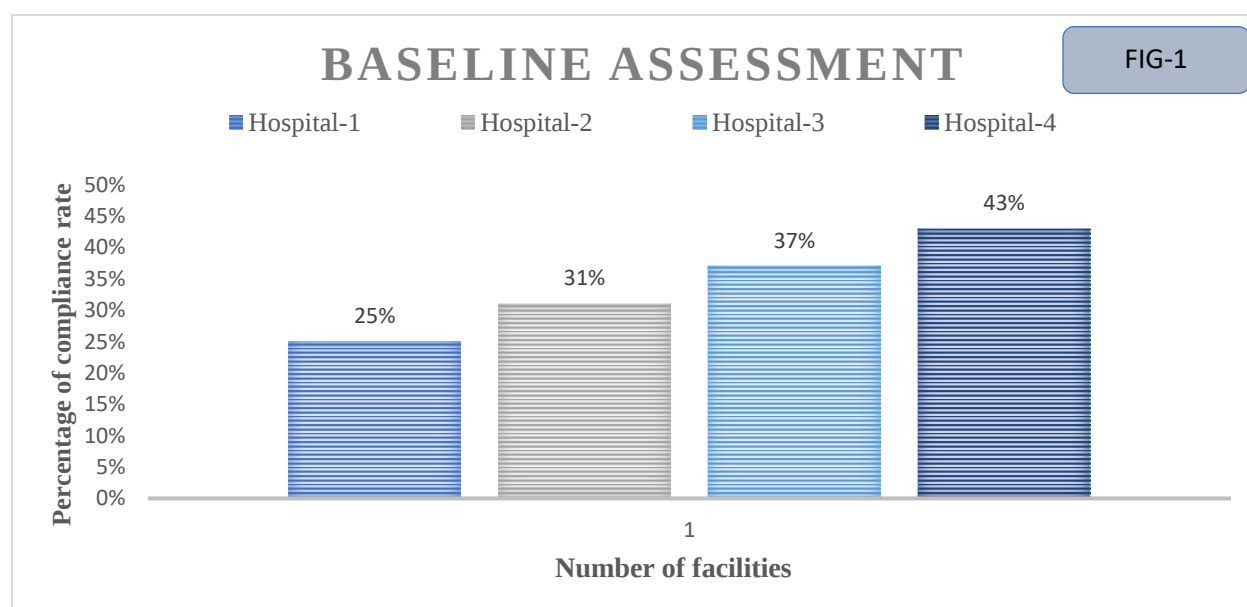
Non-Compliance means when the criteria in quantifiable components are not present and there is no support available as mean of verification or which means when the service is not present completely/ partially will be scored as 0.

Results

Baseline Assessment

The baseline assessment was done of all the four facilities and was scored as the given criteria of compliance and Non-compliance.

The findings were as follows: -



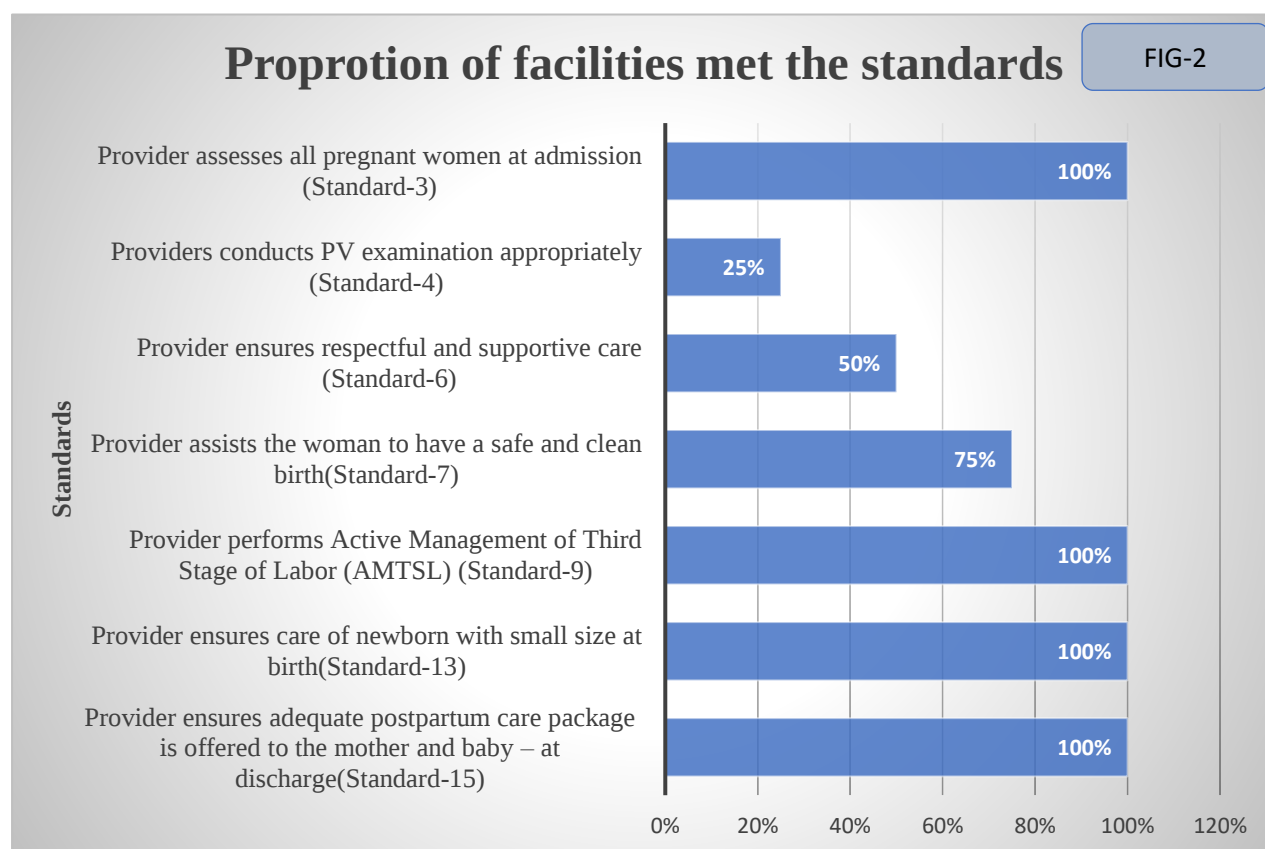
Interpretation - According to Figure-1 Hospital-4 has the highest compliance rate of 43% and Hospital-1 is at the lowest compliance rate with 25% and the other two hospitals the compliance rate ranges from 30% to 40%. This represents that all four hospitals have a poor quality of maternal services.

Facility Score (Number of Standard met)	Number of facilities
0-4	1
5-8	3
9-12	0
13-16	0

Table-1

Interpretation- According to Table-1 majorly the number of standards met by facilities ranges from 5-8 which is very less and it will not qualify the Manyata standards so all the four facilities

required improvement to qualify Manyata and to improve the quality of delivering the maternal services.



Interpretation- According to Fig-2 Standard 3, 9, 13, 15 are met by all the four-hospital, Standard-7 met by 3 hospitals, Standard-6 met by 2 hospitals, Standard-4 met by only one hospital and the rest Standards 1, 2, 5, 8, 10, 11, 12, 14, 16 are not met by any of the facility.

Checkpoints which scored 0 by all the facilities/ Major Gaps during Baseline Assessment (Manyata Checklist)²⁵

1. No proper screening of DM along with there was no awareness of Glucose tolerance test which is a valid test and recommended by WHO.
2. No sterile/ HLD delivery tray is available
3. Lack of proper and functional items at the new-born corner.
4. Conducts a PV examination much often as recommended.
5. No proper infection control practices were ensured while PV examination.
6. Lack of proper knowledge on the use of partograph
7. Respectful Maternity Care practices are not followed at the time of delivery
8. No explanation about danger signs and important care activities to the birth companion.

9. No delivery was taking place on the mother's abdomen.
10. Do not perform delayed cord clamping and cutting
11. No practice of weighing the baby and administering Vitamin K to the baby is followed.
12. Lacks the proper management and signs of shock
13. Not awareness about PPH and Eclampsia and its management
14. Lacks the knowledge of the correct dosage of Inj. MgSO₄ for prevention and management of convulsions
15. Activities to be performed during New-born Resuscitation are not known.
16. Instruments and re-usable items are not adequately and appropriately processed after each use
17. Biomedical waste is not segregated and disposed of as per the guidelines
18. No classification as per Robson's criteria and reviews indications and complications of C-section at regular intervals

Following activities are done to full-fill the gaps in all the facilities

- ✚ After going through all the gaps it has been noticed that the major problem lies in the knowledge and awareness of staff, the compliance rate will increase if the staff is trained on every aspect of maternal and new-born care. Many standards are depending on clinical aspects of care and keeping them into consideration training sessions are conducted in every facility of 1-2 hours for providing proper knowledge and for improving their skills. Exclusively for labor room staff and OT nursing staff.

The mode of conducting training was through simulations, demonstration, case scenarios, and handholding of nursing staff. The study material was provided to every staff which was bilingual so to make learning easy.

Training topic covered during the session: -

Clinical Training-

- 1- ANC (Covering clinical conditions, Patient History (medical, surgical, and obstetric), Gestational age).
- 2- PA Examination
- 3- PV examination (Practice & Findings)

- 4- Partograph (Interpretation)
- 5- Readiness for normal delivery.
- 6- New-born Care
- 7- AMTSL (Active Management of third stage labor)
- 8- Complication (Pre-eclampsia, Eclampsia, PPH)
- 9- New-born Resuscitation
- 10- KMC (Kangaroo Mother care)
- 11- Post-partum care package

Infection Control Training- Use of PPE, handwashing, BMW management, Sterilization of equipment, Preparation of bleaching solution and its use, etc.

Behavioral Training- Respectful Maternity Care.

- ✚ Items are made available in the LR which comprises BMW bins, Uterotonics, Temperature monitors.
- ✚ For readiness, boxes are made which comprises of medicine, Eclampsia, PPH, and New-born resuscitation box.
- ✚ A normal delivery tray is prepared which should be sterilized by autoclave.
- ✚ Replacements of boilers with an autoclave.
- ✚ Proper IEC material has been placed in the labor (handwashing, AMTSL, PPH, Eclampsia, pre-eclampsia, New-born resuscitation, BMW, Breast Feeding and Contraceptives methods)
- ✚ Curtains between delivery tables/bed in terms of privacy of pregnant women.
- ✚ Registers for data collection like Autoclave Register, ANC Register, Fumigation Register, and Modification in their LR register.
- ✚ Shifting of Furniture and Bed.
- ✚ Ensure the availability of all the necessary equipment's through inspection and audits.
- ✚ Bleaching solution preparation and its replacement after 24 hrs.
- ✚ Replacement of old IPD Files with new IPD files covering the major aspects like nursing initial assessment, Labour case sheet, Baby notes, PAC form, consents, etc which were lacking in their old files.

Post Intervention Assessment

Hypothesis Testing

Null Hypothesis $\mu_1 = \mu_2$

There is no difference between the means of pre-assessment and the post-assessment implies no impact of an intervention on facilities.

Alternative Hypothesis $\mu_1 < \mu_2$

There is a difference between the means as a mean of post-assessment is greater than pre-assessment implies there is an impact of the intervention on facilities.

Significance Level $\alpha = 0.05$

Table-2

Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Pre test	64	.3438	.47871	.00	1.00
Post test	64	.7812	.41667	.00	1.00

Test Statistics^a

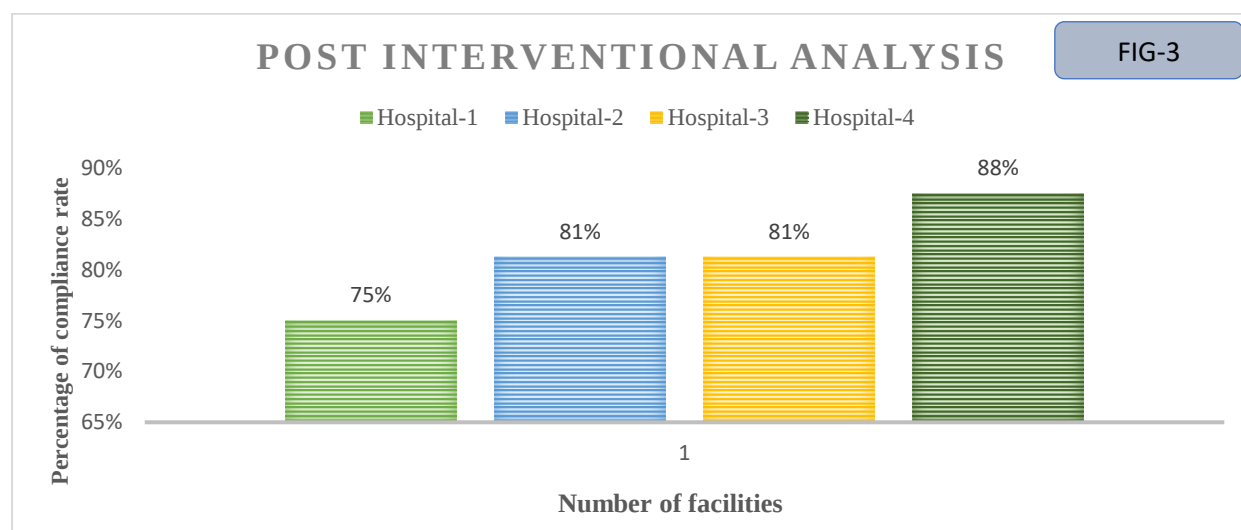
	Post-test - Pre test
Z	-5.292 ^b
Asymp. Sig. (2-tailed)	.000

a. Wilcoxon Signed Ranks Test

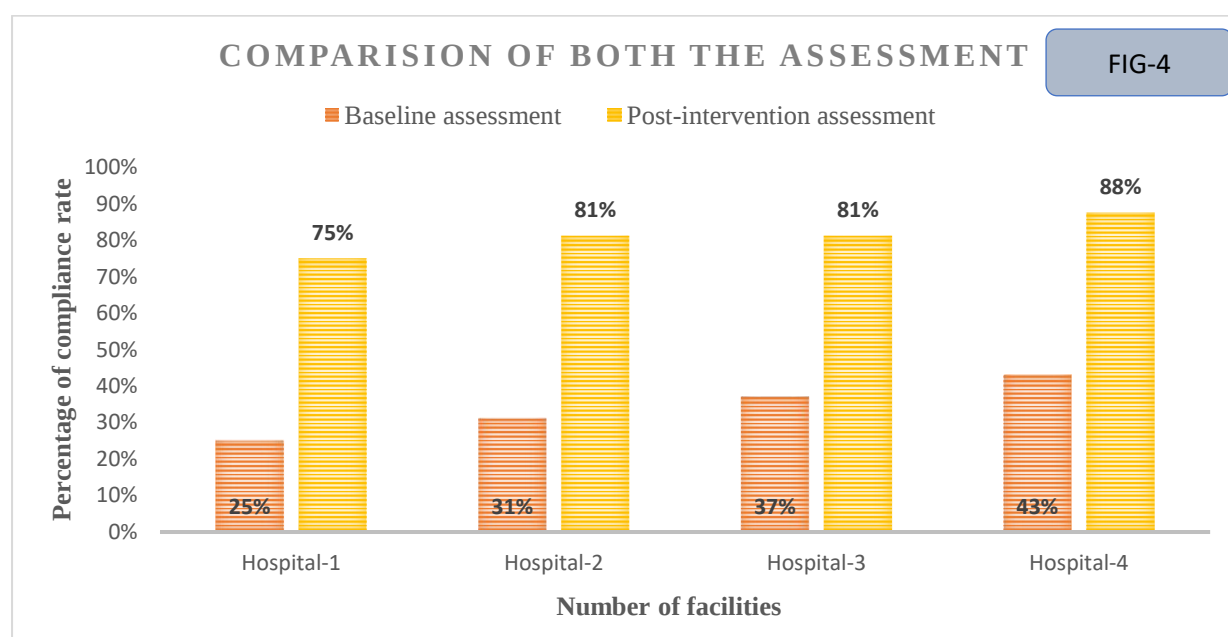
b. Based on negative ranks.

Table-2 The results were analyzed by the Non-parametric Pair test, and the significance level is <0.05 which means that there is a significant difference in the mean of pre-assessment and post-assessment the means assessed before intervention .3438 which had increased to .7813 after intervention so the null hypothesis is rejected. A statistically significant difference in the mean scores (0.4375) is seen between pre and post-intervention assessments. The above

interventions have significantly improved the quality of maternal services according to Manyata standards at all the facilities.



Interpretation- According to Fig-3, the compliance rate of facilities had increased from 25%, 31%, 37%, and 43% to 75%, 81%, 81%, and 88% which shown a drastic impact of intervention done at the facilities.



Facility (Number of Standard met)	Score	Number of facilities (Baseline assessment)	Number of facilities (Final internal assessment)

Table-3

0-4	1	0
5-8	3	0
9-12	0	1
13-16	0	3

Figure-4 and Table-3 - Comparative analysis of both the assessment which shows the significant difference in the increase of compliance rate and along with this the facility score has also increased from 0-4(1) and 5-8 (3) to 9-12(1) and 13-16(3).

Discussion

The quality of care for mothers in the period of intrapartum, post-partum at private healthcare facilities was poor. Through baseline assessment 3-7 standards were met by all four facilities out of 16 FOGSI endorsed clinical standards.

The baseline assessment had shown that standards related to the assessment of all pregnant women at admission, performing AMTSL, ensuring the care of new-born with small size at birth and ensuring adequate postpartum care for the mother and baby after discharge are met by every facility. Standards related to PV examination, RMC and safe & clean birth are met by most of the facility. While the standards like usage of partograph, management of complication, delayed cord clamping and other clinical parameters were unmet by any of the facilities. The standards like usage of partograph were unmet because of lack of understanding the skill of recording as a similar finding was seen in a research paper that 53% of the midwifery staff were unable to initiate the recording on partograph due to lack of knowledge²⁶. The nursing staff is also lacking information on how to manage the complications. The finding was also similar to an analysis by Rao et al which described which estimated that 58.4% of nurses and midwives serving in the private healthcare facilities of India were under qualified²⁷.

After examination, the baseline the major intervention for healthcare workers is capacity building through training on clinical aspects, and the minor interventions were related to making physical requirements available to the facility. Many studies had proved that training can be an important tool that can be opted to improve the knowledge and skill of healthcare workers^{28, 29}. The minor interventions are made to improve the facility in terms of physical requirements, shifting of furniture, etc. to increase the compliance rate.

This study was aimed to evaluate whether the training of staff and facilities can improve the compliance rate through pre and post-intervention assessment. The findings revealed the statistically significant difference in the mean score of facilities. Also, every facility has scored a compliance rate of 75% or more compared to baseline assessment.

Limitation of the study

- Facilities included in this are willing to participate in manyata programme so the sample may not be truly representative of the private hospital in Pilani.
- The study findings cannot be generalizable as the study sample was limited.
- Lack of staff in online training sessions due to COVID-19 traveling restriction.

Suggestion-

- The daily checklist should be maintained in-order to check the supplies and things in the boxes.
- Time to time internal audit should be done in the Labor room.
- Sustain total quality management in the labor room.
- Checklist of Labor room cleaning should be maintained and checked regularly.
- Quarterly training should be given to staff by the gynecologist.
- Monthly Robson's criteria should be maintained by a gynecologist.
- Infection control practices should be maintained after a shift or staff change.

Conclusion

Quality can be measured objectively through Manyata program about maternity care services in the private hospital of Pilani. Mainly the attention is given to the public hospital for quality improvement and assumed that private hospitals are better in quality, but it is seen from the above data that improvement is required for all either it is a public facility or a private facility. Continuous quality improvement can bring a drastic change in healthcare professionals and facilities.

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Annexure

Chapters	Standards
Antenatal Care Standard Remarks	1. Provider screens for key clinical conditions that may lead to complications during pregnancy.
At admission:	2. Provider prepares for safe care during delivery (to be checked every day) 3. Provider assesses all pregnant women at admission 4. Providers conducts PV examination appropriately 5. Provider monitors the progress of labor appropriately 6. Provider ensures respectful and supportive care 7. Provider assists the woman to have a safe and clean birth 8. Provider conducts a rapid initial assessment and performs immediate new-born care (if baby cried immediately) 9. Provider performs Active Management of Third Stage of Labor (AMTSL) 10. Provider identifies and manages Post-Partum Hemorrhage (PPH) 11. Provider identifies and manages severe Pre-eclampsia/Eclampsia (PE/E) 12. Provider performs newborn resuscitation if baby does not cry immediately after birth 13. Provider ensures care of newborn with small size at birth
Beyond delivery:	14. The facility adheres to universal infection prevention protocol.
Postpartum Care Standard:	14. Provider ensures adequate postpartum care package is offered to the mother and baby – at discharge
C-section Standard:	15. Provider reviews clinical practices related to C-section at regular intervals

Entire Process of Data Collection

