



GAP ANALYSIS OF PRIVATE HOSPITALS IN PILANI, RAJASTHAN ACCORDING TO MANYATA STANDARDS

Introduction

High quality of care is essential for reducing mortality and morbidity and improving the outcome. In India, the private sector contributes to approximately 26% of institutional childbirths with large geographical variations. There is a growing consensus that the quality of services for mother and child can help in the reduction of maternal and new-born mortality. The government has taken many initiatives to improve the quality of maternal and childcare but mainly in the context of public setting and many of the research focuses on the public sector and classify the need to examine and assess the need to improve the quality.

Introduction

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.

Introduction

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 childbirth

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.



“

The aim of the study is to improve quality of maternal services provided by private hospitals in Pilani.

Problem Statement

India contributes to **15 per cent** of the global maternal death toll. About 44,000 Indian women die each year due to complications arising during childbirth. In India, the second largest contributor to Maternal Death is Rajasthan with MMR of 199 per 100000(2014-2015). Chief Reason for Maternal Death is Post-partum Haemorrhage (31%) and with minor causes were Eclampsia, obstructed labor, severe [anaemia](#), [puerperal](#) [sepsis](#) according to one study conducted in Rajasthan which in turn impact the economic growth and DALY of country.

<https://www.downtoearth.org.in/news/health/maternal-and-neonatal-mortality-rates-high-despite-improvement-in-childbirth-practices-59348>

<http://niti.gov.in/content/maternal-mortality-ratio-mmr-100000-live-births>

Rationle

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 -3.

Major emphasis should be on the quality of care provided by nursing staff so that they can assess the complications like PPH, Eclampsia and can help in the reduction of MMR. For the study 4 SCHO were chosen with a delivery load on an average of 15-20 per month and gaps will be assessed accords to manyata standards.

<https://www.un.org/sustainabledevelopment/sustainable-development-goals/>

<https://www.sciencedirect.com/science/article/abs/pii/S1049386709001297>

Research Question

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



Research Objectives

- To analyse 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** - Observational Interventional study.
- **Study Participants** - Labor Room Nursing Staff, OT nursing staff or any other staff who are indulged in LR practices.
- **Sample Size** - 4 Hospitals
- **Sampling** - Non-Probability Sampling

Methodology

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 RNC
- Full time availability of gynaecologist and nursing staff in hospitals.
- Hospitals which are willing to participate in Manyata Certification.
- Hospitals which are conducting both Normal and LSCS Deliveries.

Methodology

Sample Selection Criteria-

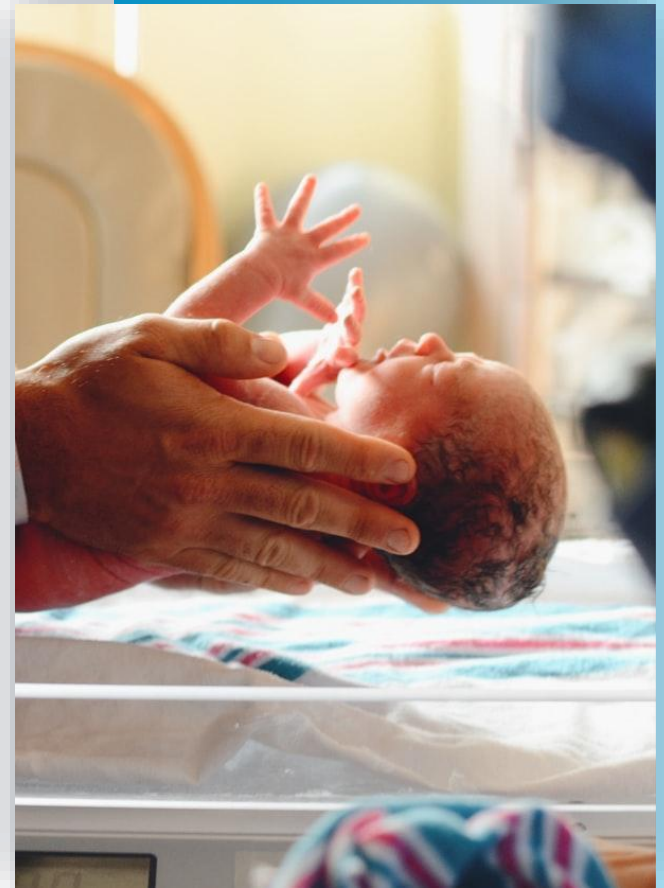
Exclusion Criteria-

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

Instrument for data collection

Manyata Clinical Standards Checklist 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 intra-partum care, 1 standard is on postpartum care and 1 standard is on C-section.

Tool for data collection- <https://www.fogsi.org/wp-content/uploads/2016/12/FOGSI-CLINICAL-STANDARDS-for-accreditation-to-ensure-SAFE-DELIVERY.pdf>



Instrument for data collection



FOGSI CLINICAL STANDARDS (For Accreditation to ensure safe delivery)

Antenatal Care Standard

Remarks

1

Provider screens for key clinical conditions that may lead to complications during pregnancy

Screens for anemia	Estimates Hb at each scheduled ANC visit	To be verified only among booked cases
Screens for hypertensive disorders of pregnancy	Functional BP instrument and stethoscope at point of use is available	
	Records BP at each ANC visit	
	Performs proteinuria testing during each scheduled ANC visit	
Screens for DM	Uses/ refers for standard 75gm OGTT for screening of GDM at first ANC visit and repeats OGTT test at second ANC visit (24 -28 weeks) if negative in first screening	
Screens for HIV	Screens/ refers for HIV during first ANC visit in all cases, and in fourth ANC visit in high risk cases	
Screens for syphilis	Screens/refers for syphilis in first ANC visit in all cases, and in fourth ANC visit in high risk cases	
Screens for malaria	Screens for malaria (only in endemic areas)	
Establishes blood group and Rh type during first ANC visit	Establishes blood group and Rh type during first ANC visit	



FOGSI CLINICAL STANDARDS (For Accreditation to ensure safe delivery)

At admission:

Remarks

2

Provider prepares for safe care during delivery (to be checked every day)

Ensures sterile/ HLD delivery tray is available	Ensure availability of uterotonic agents - IM/IV oxytocin (preferred), misoprostol	
Ensures functional items for newborn care and resuscitation	Designated new born corner is present	
	Ensures functional items for newborn care and resuscitation	
	Switches radiant warmer 'on' 30 min. before childbirth	

3

Provider assesses all pregnant women at admission

Takes obstetric, medical and surgical history	Takes obstetric, medical and surgical history	
Assesses gestational age correctly	Assesses gestational age through either LMP or Fetal height or USG (previous or present is available)	
Records fetal heart rate	Functional doppler/ fetoscope/ stethoscope at point of use is available	
	Records FHR	
Records mother's BP and temperature	Functional BP instrument and stethoscope and functional thermometer at point of use is available	
	Records BP and temperature	

4

Providers conducts PV examination appropriately

Conducts PV examination as per indication	Conducts PV examination only as indicated (4 hourly or based on clinical indication)	
---	--	--

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** - By 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

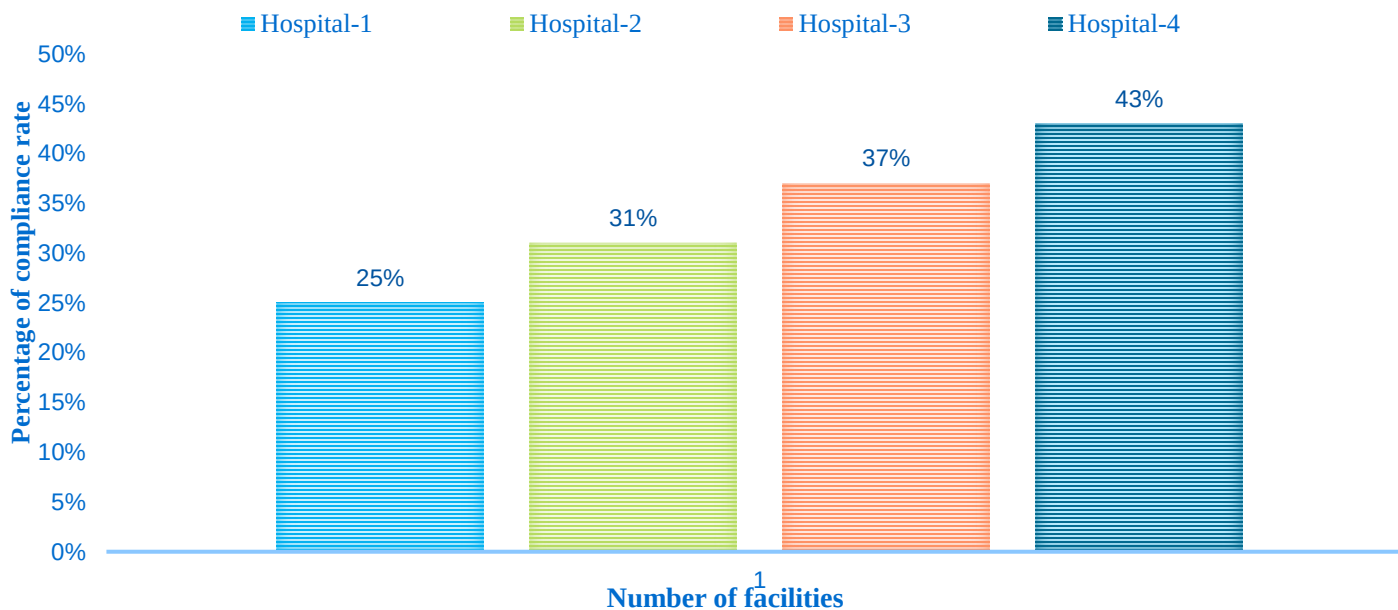
Data Analysis

Full Compliance means when all the criteria in 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

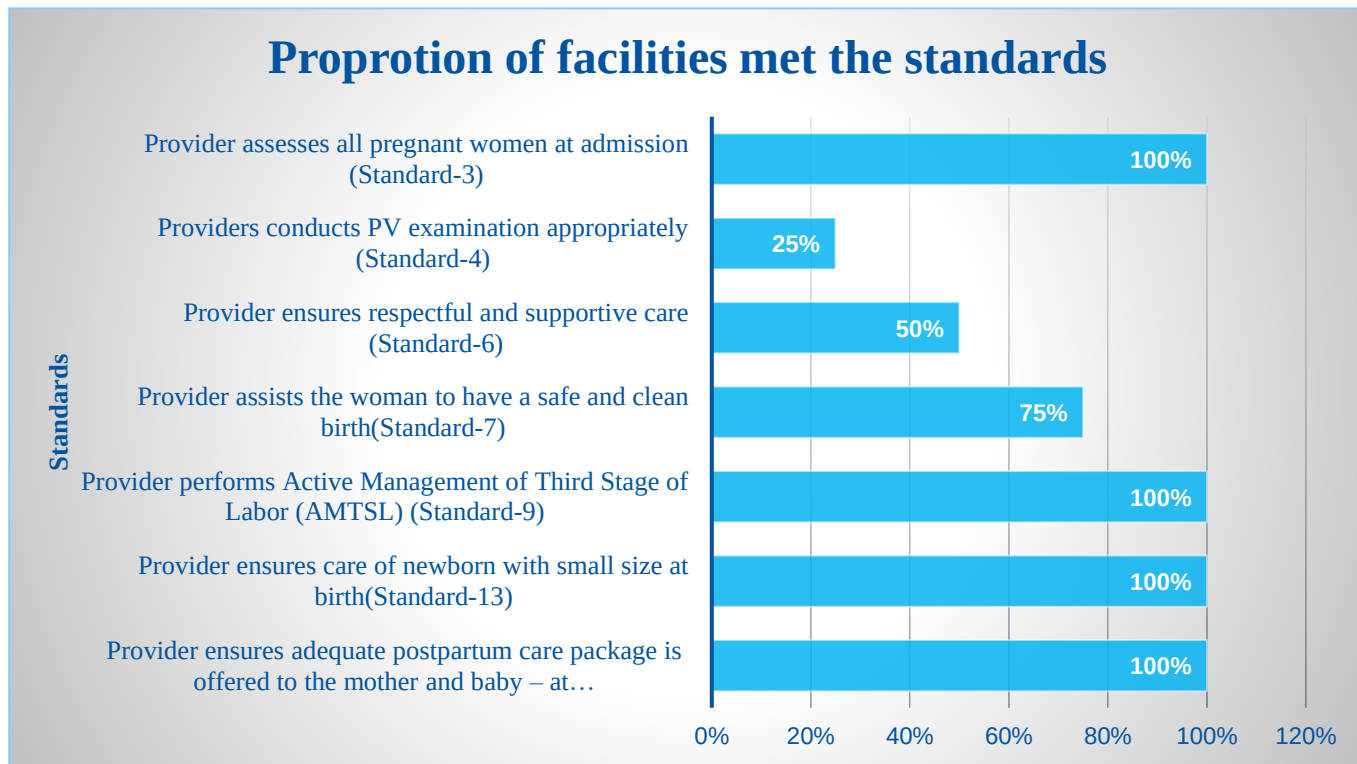
BASELINE ASSESSMENT



Results

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

Results



Gaps Identification

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 new-born corner.
4. Conducts PV examination much often as recommended.
5. No proper infection control practices were ensured while PV examination.
6. Lack of the 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.

Gaps Identification

10. Do not performs delayed cord clamping and cutting
11. No practice of weighs 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 correct dosage of Inj. MgSO_4 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

Interventions done to improve compliance

- Manyata standards are totally depending on clinical aspects of care and keeping them in consideration training sessions are conducted in every facility of 1-2 hours for providing proper knowledge and for improving their skills. Exclusively for labour room staff and OT nursing staff.
- Mode of conducting trainings were through simulations, demonstration, case scenarios and hand holding of nursing staff. Study material was provided to each staff which was bilingual so to make learning easy.

Interventions done to improve compliance

Trainings were divided into 3 categories- Clinical Training, Infection Control Training and Behavioural Training. Topics covered in all the three are as follows-

Clinical Training-

- ☐ ANC (Covering clinical conditions, Patient History (medical, surgical and obstetric), Gestational age).
- ☐ PA Examination
- ☐ PV examination (Practice & Findings)
- ☐ Partograph (Interpretation)
- ☐ Readiness for normal delivery.
- ☐ New-born Care
- ☐ AMTSL (Active Management of third stage labor)
- ☐ Complication (Pre-eclampsia, Eclampsia, PPH)
- ☐ New-born Resuscitation
- ☐ KMC (Kangaroo Mother care)
- ☐ Post-partum care package

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

Behavioural Training- Respectful Maternity Care.

Other activities done regardless of training-

- Items are made available in the LR which comprises of BMW bins, Uterotonics, Temperature monitors.
- For readiness boxes are made which comprises of medicine, Eclampsia, PPH and New-born resuscitation box.
- Normal delivery tray is prepared which should be sterilized by autoclave.
- Replacements of boilers with autoclave.

- Proper IEC material has been placed in the labour (hand washing, AMTLS, PPH, Eclampsia, pre-eclampsia, New-born resuscitation, BMW, Breast Feeding and Contraceptives methods)
- Curtains between delivery tables/bed in term of privacy of pregnant womens.
- Registers for data collection like Autoclave Register, ANC Register, Fumigation Register and Modification in their LR register.
- Shifting of Furniture's 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 Analysis

To evaluate the impact of intervention hypothesis testing was done

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 intervention on facilities.

Alternative Hypothesis $\mu_1 < \mu_2$

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

Significance Level $\alpha = 0.05$

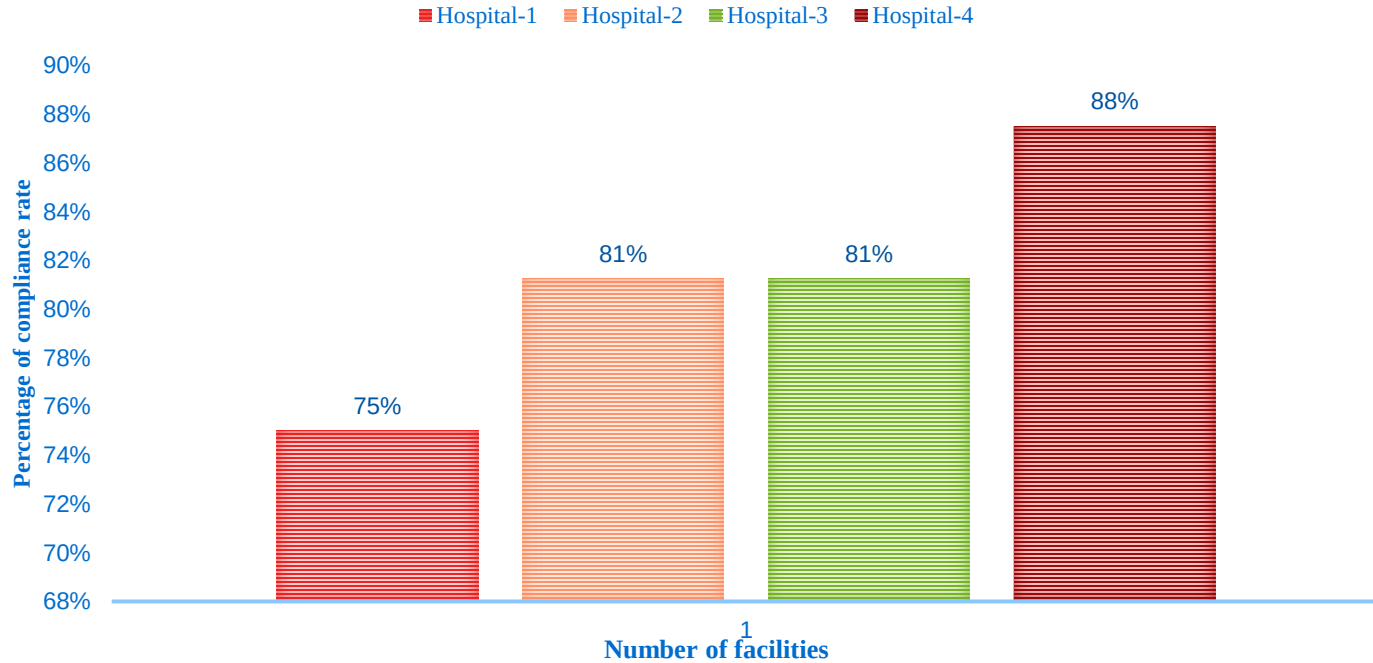
Descriptive Statistics					
	N	Mean	Std. Deviation	Minimum	Maximum
Pre test	64	.3438	.47871	.00	1.00
Post test	64	.7812	.41667	.00	1.00

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.	

The results were analysed by Non-parametric Pair test, and the significance level is <0.05 which means that there is significant difference in the mean of pre-assessment and post assessment the means assessed prior to intervention .3438 which had increased to .7813 after intervention so the null hypothesis is rejected .Statistically significant difference in the mean scores (0.4375) is seen between pre and post intervention assessment. The above interventions have significantly improved the quality of maternal services according to Manyata standards at all the facilities.

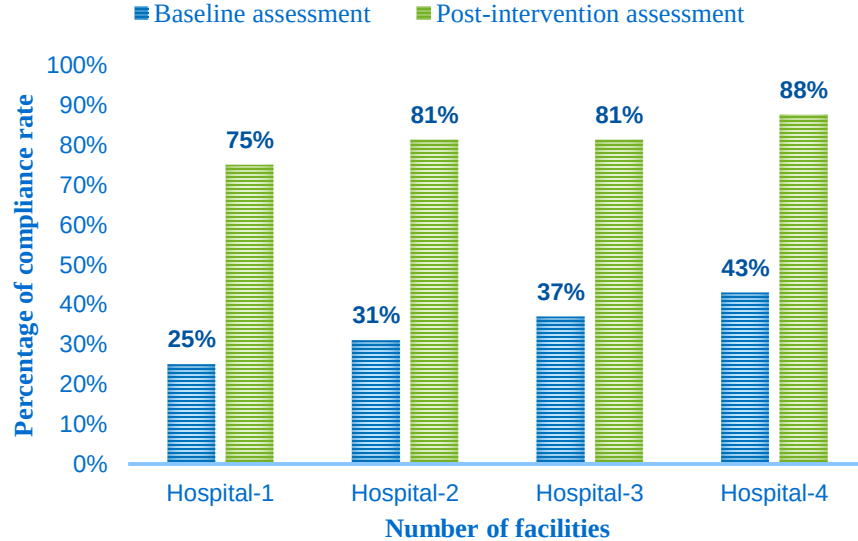
Post Intervention Analysis

POST INTERVENTIONAL ANALYSIS



Comparative Analysis

COMPARISON OF BOTH THE ASSESSMENT



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

Limitation of study

- Facilities included in this are willing to participate in manyata programme so the sample may not be truly representative of private hospital in Pilani.
- Lack of staff in online training session due to COVID-19 travelling restriction.

Suggestions

- 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 labor room.
- Checklist of labor room cleaning should be maintained and checked on regular basis.
- Quarterly training should be given to staff by the gynaecologist.
- Monthly Robson's criteria should be maintained by gynaecologist.
- Infection control practices should be maintained after shift or staff change.

Conclusion

Quality can be measured objectively through Manyata programme about maternity care services in private hospital of Pilani. Mainly the attention is given to public hospital for quality improvement and assumed that private hospitals are better in quality, but it is clearly 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 the healthcare professionals and facility.

