SUMMER INTERNSHIP

AT

NHM PUNJAB

(MAY 23rd TO 18th JUNE 2022)

"Quality Assessment of Public Health Facilities"

IN

PUNJAB

A REPORT BY

MISHRABA

(PG/21/60)

PGDM (Hospital and Health Management)

INTERNATIONAL INSTITUTE OF HOSPITAL MANAGEMENT RESEARCH (IIHMR), DELHI

CERTIFICATE OF INTERNSHIP

This is to recognize

MISS MISHRABA

for successfully completing the internship
at National Health Mission ,Punjab
Maternal and Child Health Division
(23rd May to 18th June 2022)

Tej Partap Singh Phoolka

Mission Director
National Health Mission
Punjab

FEEDBACK FORM

(Organization Supervisor)

Name of the Student: Mishraba

Summer Internship Institution: NHM Punjab

Area of Summer Internship: Quality assessment of Public health facilities in punjab.

Attendance: 100%.

Objectives met: Expectation have been met successfully.

Deliverables: Good performance in quality assessment and time management.

Strengths: Very focused and Very hardworking She will be an asset to any institute she works in the future.

Suggestions for Improvement:
I Cant think of any!!

Signature of the Officer-in-Charge (Internship)

Date: 17th June 2022
Place: Punjab

FEEDBACK FORM

(IIHMR MENTOR)

Name of the Student: MISHRABA

Summer Internship Institution: NHM PUNJAB

Area of Summer Internship: QUALITY ASSESSMENT OF PUBLIC HEALTH FACILITIES OF PUNJAB.

Attendance: 100%

Objectives met: EXPECTATIONS HAVE BEEN MET SUCCESSFULLY.

Deliverables: Good performance in quality assessments.

Strengths: Hardworking, Sincere.

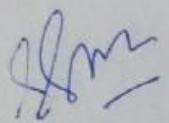
Suggestions for Improvement:

Signature of the Officer-in-Charge (Internship)

Date: 16-08-2022
Place: Delhi

Certificate of Approval

The Summer Internship Project of titled "**QUALITY ASSESSMENT OF PUBLIC HEALTH FACILITIES IN PUNJAB**" at **"National Health Mission, PUNJAB"** is hereby approved as a certified study in management carried out and presented in a manner satisfactorily to warrant its acceptance as a prerequisite for the award of **Post Graduate Diploma in Health and Hospital Management** for which it has been submitted. It is understood that by this approval the undersigned do not necessarily endorse or approve any statement made, opinion expressed, or conclusion drawn therein but approve the report only for the purpose it is submitted.



Dr Sidharth Sekhar Mishra

Assistant Professor

IIHMR, New Delhi

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ABBREVIATIONS

MoHFW	Ministry of health and family welfare
NQAS	National quality assurance standards
LaQshay	Labour room quality assurance standards
OT	Operation theatre
SNCU	Special new-born care units
PDCA	Point do check action
SDG	Sustainable development goals
UHC	Universal health coverage

QUALITY ASESSMENT OF PUBLIC HEALTH FACILITIES IN PUNJAB

INTRODUCTION

BACKGROUND

The aim of the National Urban Health Mission (NUHM), which was introduced in 2013, and the National Rural Health Mission (NRHM), which was introduced in 2005, is to provide high-quality healthcare services that are affordable and accessible to all segments of the population, particularly to the vulnerable and marginalised. Significant funds have been allocated to the NHM for the development of cutting-edge infrastructure, the hiring of skilled manpower, and the improvement of the supply chain to ensure the availability of medications and diagnostics. (1)Without outstanding, safe, and high-quality care, it is impossible to achieve the health results or effect that the National Health Policy envisions.

Quality is described as useful qualities that a good or service should have in order to be fit for use, and it has two components (a) Establishing standards or specifications (b) Complying with requirements reduction of variability in its processes and statistical descriptions There are many different definitions and approaches to quality in the literature. Quality Control, Quality Assurance, and Quality Improvement are some of the most popular methods to quality. Quality improvement is widely thought to encompass the wider picture, but everyone's perception of QI also varies when we conduct literature searches on terms like "quality control," "quality assurance," or "quality improvement." These words are frequently used in place of one another. Although they are distinct facets of quality management, QA, QC, and QI are closely linked concepts. (1)

Table 1 Difference between Quality Improvement, Quality Planning and Quality Assurance

Quality improvement	Quality planning	Quality assurance
• Evolving quality teams, quality circles and champions • Testing and implementing improvement ideas / planned actions through pdca cycle	• Defining policy framework at National and State level • Defining organization framework and quality committee	• Internal, peer and external assessment against defined standards • Periodic reviews and clinical audits • Gap analysis and action plan

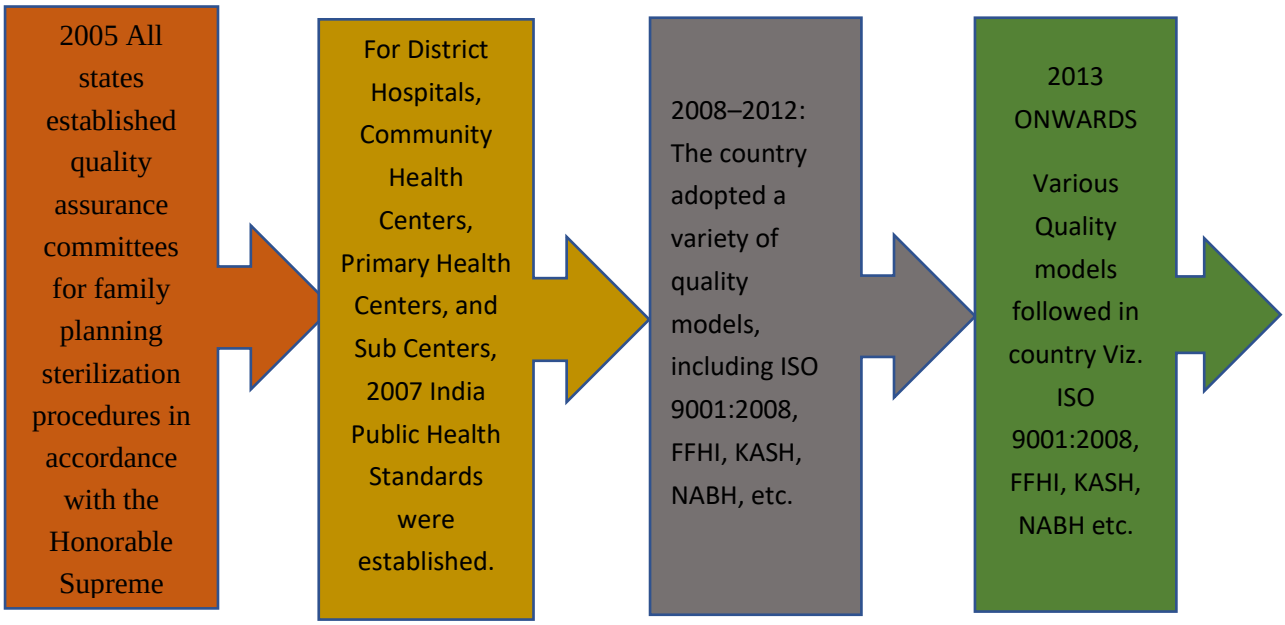
• Use of basic and advance tools through QI trainings and practice • Addressing human side of change	• • Establishing care standards for various levels of facilities • Defining reporting and feedback mechanism	• Scoring and ranking of healthcare facilities • Legal compliances and licensure

Health Care of High Quality has Two components: (a) Technical Quality: This factor affects the outcome or final result of services provided and is typically of greater interest to service providers (doctors, nurses, and paramedical workers). (b) Service Quality: Has an impact on patient experience, including satisfaction, and relates to those areas of facility-based care and services about which patients are frequently more concerned.

The National Quality Framework was introduced in 2013 and is based on the Health System's idea of high-quality healthcare. The institutional structure, care standards, measuring system, capacity building, and resource allocation have all been worked on. The key treatments offered by the programme include checklist-based evaluations of healthcare facilities, gap analysis, prioritisation, and quality improvement using PDCA techniques, such as quality circles and champions, testing and implementing improvement ideas, and ultimately certification. Despite the fact that Quality Improvement is a component of the current systems, there are still a few isolated local improvement projects that continue to exhibit small improvements, particularly at departmental levels. From the standpoint of the health system, these isolated efforts may not ultimately provide the desired result and the best improvement.

Therefore, continuous quality assurance and quality planning are required to channel these discrete improvement initiatives. To give a comprehensive picture of the quality of care, it is essential to include quality techniques like quality assurance, quality improvement, and certification as the country's quality system grows and evolves. The activities for operationalizing quality committees, activities for quality assessment, certification programmes, and regional quality improvement events will all be seamlessly integrated.

JOURNEY TILL NOW



Brief overview of NQAS:

National Quality Assurance Standards were created with the specific needs of public health facilities as well as international best practises in mind. District hospitals, CHCs, PHCs, and Urban PHCs can currently use NQAS. Standards are primarily designed to help providers evaluate their own performance for room for improvement through established benchmarks and to prepare their facilities for certification. The eight "Areas of Concern" are service provision, patient rights, inputs, support services, clinical care, infection control, quality management, and outcome. These are the broad categories under which the national quality assurance standards are organised. These standards are ISQUA recognised and meet the highest requirements in the world for completeness, objectivity, evidence, and development rigour.(1)

Service Provision: It gauges service accessibility. functional services are “Available”, which means users can access them.

Patient Rights: Accessibility to the users, with dignity and confidentiality. Accessibility here refers to physical and financial.

Inputs: Primarily maintains the facility’s structural components.

Support Services: Maintenance of the equipment, calibration, drug storage and inventory control, security, facility management, water supply, power backup, nutritional services, and laundry are all areas of concern. This area of concern also includes administrative procedures like RKS, financial management, legal compliances, personnel deputation, and contract administration.

Infection Control: This area of concern includes biomedical waste management, hand hygiene, antisepsis, personal protection, equipment processing, and infection control procedures.

Clinical Services: Standards under this can be grouped into three categories:

Clinical procedures that guarantee patients receive adequate care. Registration, admission, consultation, clinical evaluation, continuity of care, nursing care, identification of vulnerable and high-risk patients, prescription-writing procedures, safe drug administration, upkeep of clinical records, and hospital release are all included.

Particular therapeutic and clinical procedures, such as intensive care, emergency care, diagnostic services, blood transfusion services, anaesthesia, surgical services, and end-of-life care Services for pregnant women, new-borns, children, adolescents, and families, as well as national health programmes.

Quality Management: Assure quality of services as per standards. Measured through systematic planning, implementation, checking and acting upon the compliances

Outcome: Productivity, efficiency, clinical care, and service quality are common measurements of quality in terms of quantifiable metrics. Every standard in this category has two components: first, the hospital has a method for measuring indicators; second, the hospital's performance in relation to the benchmark.

The Ministry of Health and Family Welfare has made strengthening the quality assurance framework a top priority by putting in place a multi-pronged strategy in terms of healthcare worker availability and retention, improving their knowledge and skill to provide quality care, conducting periodic monitoring and evaluations, ensuring the safe and effective use of medications and devices, integrating quality activities into the operation of the health facilities, and assessing their impact.

Operational Recommendations to Improve the Quality of Public Healthcare Facilities 5 In a vast country like India, where population, literacy, socioeconomic position, and other health variables vary greatly, it might be difficult to ensure quality. MoHFW has used two strategies to ensure the quality of these variations and to keep encouraging healthcare practitioners to enhance quality continuously.

One quick strategy is to establish a culture of quality by emphasising cleanliness, infection control (Kayakalp), care for new mothers (LaQshya), breastfeeding practises, etc. A second gradual strategy focuses on establishing and supporting quality and safety in all vertical programmes, clinical, and administrative activities carried out in public health care institutions, such as NQAS.

The first plan ensures that minimal quality and safety standards for each department or function are met. Additionally, it helps to achieve some quick gains that further boost capability and confidence among healthcare professionals and their end users. The second strategy, on the other hand, is centred on the horizontal integration of all hospital functions, quality and patient safety requirements, public health functions, and hospital functions under a single set of standards and measurement (NQAS), which in turn aids in the accomplishment of more important objectives outlined in universal health coverage (UHCs) and SDGs.

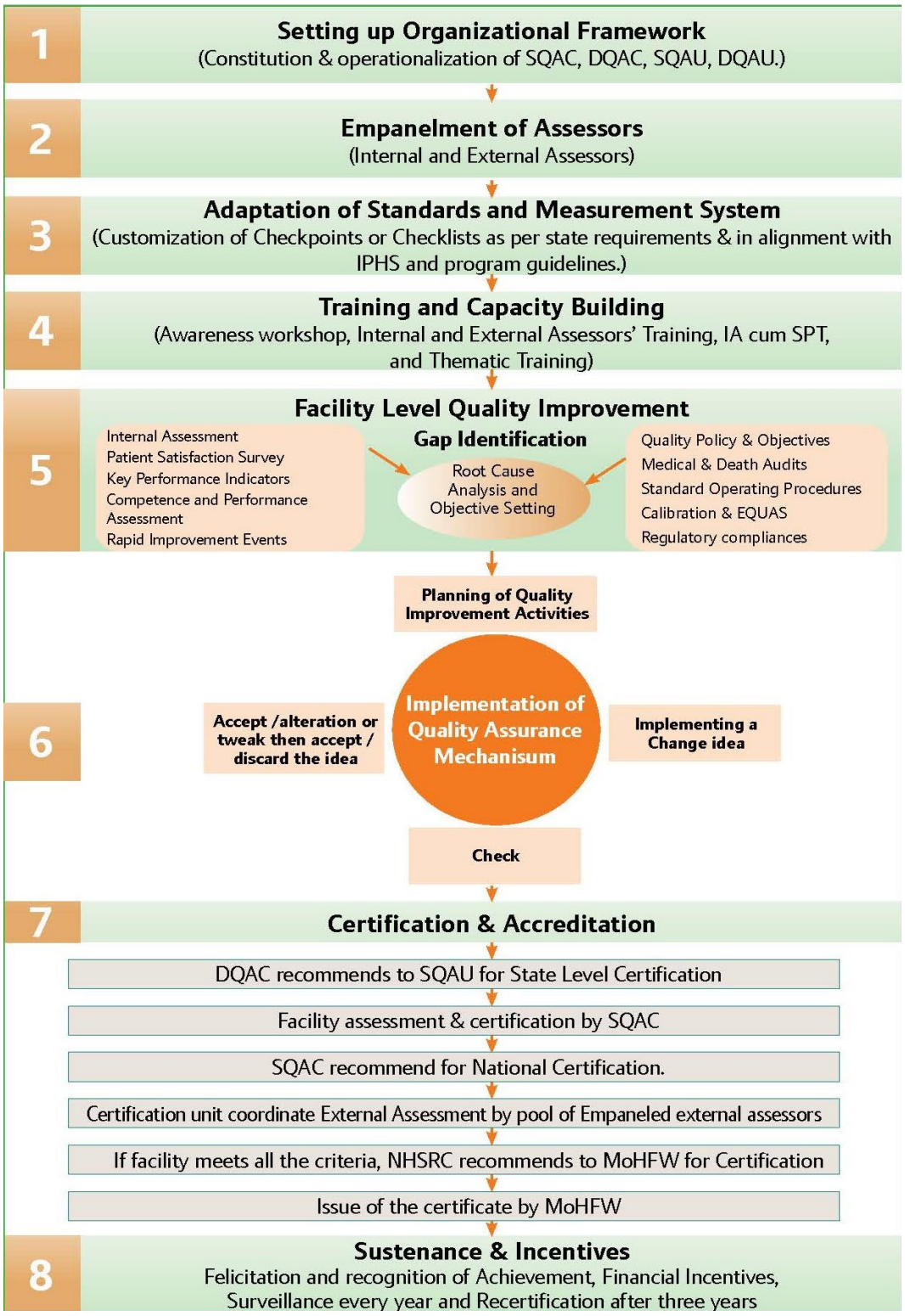


Figure 1 IMPLEMENATION PROCESS OF NQAS

Review of literature

Golandaj JA et al. (2020), National Quality Assurance Standards (NQAS) Accreditation in Public Health Facilities: An Impact Assessment in Karnataka, Maharashtra and Chhattisgarh, performed cross sectional survey to assess the impact of NQAS accreditation on quality of care through healthcare providers. The survey data was collected from 295 healthcare provider of 8 selected public health facilities covering Karnataka, Maharashtra, Chhattisgarh. This paper also explores the impact of hospital accreditation through performance outcome. The main result of the study is NQAS accreditation subscale, the mean score of 4.48 indicates that staff perceived improved team-work and productivity in the hospital as an outcome of NQAS accreditation. According to the study's findings, public hospitals benefit from NQAS accreditation by being competitively similar to private hospitals and by feeling proud and satisfied. Selecting only hospitals with NQAS accreditation certificates was among the limitations that were particularly significant. One could contend that the conclusions drawn from hospitals that undertook the NQAS certification procedure might not apply to institutions that have not received any kind of accreditation.

Ramaswamy R et al. (2016), multi-tiered quality improvement strategy to reduce maternal and neonatal death in complex delivery system in ghana. The study aims to show how Ridge Regional Hospital in Accra, Ghana, implemented a quality improvement programme**. All levels of staff received a three-stage training programme on quality improvement. Six sigma technique training was provided in the first stage, lean principles and PDCA training in the second, and departmental and interdepartmental improvement projects directed by clinical champions and QI leaders, respectively, were begun in the third stage. A 37 percent increase in hand hygiene compliance, a four-fold decrease in the number of mothers who required emergency caesareans with unacceptable waiting periods, and over 93 percent accuracy in identifying the sickest mothers were also seen. The multi-level technique employed for quality improvement initiatives has had some success in this health centre in Ghana.**. Without the participation of all employees at all levels, improvements cannot be made, but certain leaders must also possess the analytical skills necessary to deal with complicated system issues. The many levels support one another. Four other regional hospitals in Ghana are adopting the strategy used at Ridge Regional Hospital. Additionally, a learning network is being developed to discuss system-wide improvement ideas. A multi-tiered strategy is required to involve frontline staff in developing these capacities while also enhancing competence to handle system issues.

Tripathi S et al. (2019), Quality of maternity care provided by private sector healthcare facilities in three states of India: a situational analysis. A structured checklist was used to assess 201 private sector healthcare facilities that offer obstetric care in 24 districts across the states of Maharashtra, Jharkhand and Uttar PradeshIn these private healthcare institutions, over half (47.1%) of the nursing personnel providing maternity care services lacked the necessary training. Facilities met an average of 3.2 clinical criteria (SD 2.4). Significantly more requirements were met by facilities with a monthly delivery load of between 20 and 50 as well as by facilities with more than 70% of needed supplies on hand. A multiple linear regression analysis revealed that both of these elements were significant... The sample may not be entirely typical of private healthcare institutions across the three states since the hospitals included in the analysis actively chose to participate in the Manyata initiative.

Sharma J et al. (2016), Rollout of quality assurance interventions in labor room in two districts of Bihar, India. The objective of this study was to implement quality assurance measures in the labour rooms of select public health facilities in two districts of Bihar. Health institutions with more than 200 deliveries per month were evaluated using a labour room quality assurance checklist created by the Ministry of Health and Family Welfare. Following the identification of the critical gaps affecting service delivery, a strategic priority list for quality improvement was created. Gaya saw an increase in infection control ratings of 20 points (from 40 to 59.9) while Purnea saw a rise of 10 points (from 57.6 to 67.1). In the Gaya sample, the quality management component showed the greatest improvement in scores (from 6.2 to 58.2).Any quality improvement measure must be sustainable. As a result, we took the route of improving the healthcare system. That actually indicated that the improvement was

less than what we had anticipated, but the little improvement that has occurred is likely to last past the intervention time. At the state and district levels, there is a desire to increase the calibre of health service delivery. With perseverance and dedication, it is feasible to achieve consistent progress.

Tripathi V (2015), A literature review of quantitative indicators to measure the quality of labour and delivery care**. The study's objectives include identifying quantitative measures of L&D care quality and evaluating indicator gaps. Using a typical spreadsheet, study variables such as indicator choice and data sources were extracted. The analysis includes 477 studies. The majority of research used expert panels, clinical guidelines, or literature reviews to identify the indicators. Most studies used medical record reviews to measure indicators because there were few indicators that had empirical validation.** To gauge the quality of L&D care, many quantitative markers have been employed, but only a select few have received independent validation. Clinical observation has only sometimes been used to evaluate the quality-of-care delivery. The results point to the necessity, particularly in low-resource nations, for established, effective consensus indicators of the quality of L&D care systems.

A Aggarwal et al. (2019) Quality management in health care: The Pivotal desideratum, The objective of this article is to raise awareness among healthcare workers about achieving total quality through a thorough study of quality management in health care services. The need to guarantee high standards and quality of care in healthcare institutions should be enforced by the appropriate authorities. In order to boost patient satisfaction, the authorities should think about modifying the curricula to ensure training of future experts. HCOs must start a new Quality Movement to attain total quality in healthcare services if they are to gain the needed momentum. It is a requirement, a challenge, and a move in the right direction.

S V Kunden et al. (2019) Can quality improvement improve the quality of care? A systematic review of reported effects and methodological rigor in plan-do-study-act projects. The objective of the study was to determine if newly published PDSA-based QI studies exhibit self-reported effects and adhere to the method's fundamental principles. 120 QI projects using PDSA that were published in peer-reviewed publications in 2015 and 2016 were included in this study. Iterative cyclic approach, continuous data collecting, small-scale testing, and application of a theoretical justification are some examples of methodological aspects. nearly all noticed an improvement (98 percent). Only 32 (or 27% of the sample) provided a clear, quantifiable goal and achieved it. In total, 72 projects (or 60%) had enough PDSA cycle data to be included in a thorough study of critical aspects. Only three (4%) of these followed all four fundamental methodological principles. Despite the majority of QI studies that reported gains, the validity of PDSA-based QI is questioned because of significant problems with insufficient adherence to critical methodological components in the individual projects.. This analysis shows that the process for quality improvement still needs to be improved.

S Wells et al.(2018) , Are quality improvement collaboratives effective? A systematic review, The aim of the study is to re-evaluate the empirical evidence for the impact of QICs in the last 20 years. Of the 220 studies meeting QIC criteria, 64 met EPOC study design standards for inclusion. There were 10 cluster randomised controlled trials, 24 controlled before-after studies and 30 interrupted time series studies. Regardless of the site of treatment, improvements were seen for one or more of the key outcome measures in 83 percent of the studies (32/39 (82 percent) hospital-based, 17/20 (85 percent) ambulatory care, 3/4 nursing home, and one ambulance QIC). Eight research indicated the intervention effect's endurance from six months to two years after the collaborative came to an end.

L de la perrelle (2020) Economic evaluations of the costs of quality improvement A systematic review of collaborations in the healthcare sector Studies that discussed the economic assessments or costs of QICs were included. Full economic evaluations were conducted using Evers CHEC-List. The Johanna Briggs Institute's "three by three dominance matrix tool" was used to assess cost-effectiveness statistics in order to inform judgments. For 2018, currencies were translated to US dollars using databases from the OECD

and World Bank.,. By using QICs widely, the health care system may be able to save money on both acute and chronic diseases. However, variations in effectiveness, prices, and technique components across research suggested that care should be used. Consistently identifying costs and outlining the components used in QICs would help decision-makers and potentially lower perceived barriers. There may not have been enough research with contradictory results because of publication bias. Economic analyses including societal perspectives on costs, savings, and the cost-effectiveness of QIC component parts should be part of future study.

J Khurshid et al.(2021) Exploring healthcare staff narratives to understand the role of quality improvement methods in innovative practices during COVID-19, The goal of this study is to examine staff opinions on how knowledge of and proficiency with QI methodologies assisted them in putting innovative ideas into during COVID-19, practise. This qualitative narrative study will collect the experiences of healthcare staff members in implementing rapid change through narrative interviews. The audio from the interviews was recorded, transcribed, and anonymized. There was a four-step theme analysis done. The inquiry revealed the staff members' evolving responses to COVID-19, from their first shock and worry to their eventual grasp of the issue, prompt correction, and acceptance of COVID as a teaching opportunity. The study revealed six motifs that stood out: Individual-centred changes, COVID as a "forcing function" for change, a communal style of working and looking back and forward, COVID anxiety and fear, emotional supports and coping mechanisms, and more.

Summary table

Sl NO	Year of Publication	Journal	Lead Author	Title	Study objective	Methodology Study design/ Site/ Any other relevant info	Sample Size/ Sampling	Study place and population	Main results	Limitations	Study conclusion	references
1	2020	Demography India(IASP)	Javeed A.Golandaj , karabasappa G.Kallihal, jyoti S. Hallad	National Quality Assurance Standards (NQAS) Accreditation in Public Health Facilities: An Impact Assessment in Karnataka, Maharashtra and Chhattisgarh	The purpose of the study is to evaluate how healthcare professionals view NQAS accreditation to have an impact on the standard of care. This essay also examines how hospital certification affects performance results.	Cross-sectional survey design	295 Healthcare staff	Karnataka, Maharashtra , Chhattisgarh. Total 295 public health facilities included	The staff experienced better teamwork and productivity at the hospital of NQAS accreditation, according to the mean score on the subscale for NQAS accreditation, which is 4.48.	The restriction of choosing only hospitals with NQAS certification certificates was one of the most significant ones. One could contend that the conclusions drawn from hospitals that undertook the NQAS certification procedure might not apply to institutions that have not received any kind of accreditation.	The study results shows the advantages of NQAS accreditation such as public hospital are competitively similar to private hospitals and having sense of pride and satisfaction.	National Quality Assurance Standards | National Health Systems Resource Centre | Technical Support Institute with National Health Mission [Internet]. Qi.nhsrcindia.org. 2022 [cited 23 June 2022]. Available from: http://qi.nhsrcindia.org/national-quality-assurance-standards
2	2016	The lancet global health	Rohit Ramaswamy ,Brianne kallam	Multi-tiered quality improvement strategy to reduce maternal and neonatal death in complex delivery system in ghana.	In this study, we aim to show how Ridge Regional Hospital in Accra, Ghana, implemented a quality improvement programme.	Three stage quality improvement training provided to all level staff members. 1st stage -six sigma method training , 2nd stage – lean principles ,PDCA	----	Ridge Regional Hospital Ghana (west Africa)	A 37 percent increase in hand hygiene compliance, a four-fold decrease in the number of mothers who required emergency caesareans with unacceptable waiting periods, and over 93 percent accuracy in identifying the	------	In this referral hospital in Ghana, the multi-level strategy used for quality improvement programmes has had some success. Without the participation of all employees at all levels, improvements cannot be made, but certain leaders must also possess the analytical skills	Ramaswamy R, Kallam B, Srofenyoh E, Owen M. Multi-tiered quality improvement strategy to reduce maternal and neonatal death in complex delivery systems in Ghana. The Lancet Global Health. 2016;4:S24.

						training, 3rd stage – two levels of improvement projects – interdepartmental , led by the QI leaders and departmental, led by the clinical champions were launched.			sickest mothers were also seen.		necessary to deal with complicated system issues. The many levels support one another. Four other regional hospitals in Ghana are adopting the strategy used at Ridge Regional Hospital. Additionally, a learning network is being developed to discuss system-wide improvement ideas. A multi-tiered strategy is required to involve frontline staff in developing these capacities while also enhancing competence to handle system issues.	
3	2019	BMC Health Services Research	Sanjay Tripathi, Ashish Srivastava	Quality of maternity care provided by private sector healthcare facilities in three states of India: a situational analysis.	By examining baseline assessments completed for the Manyata programme, which aims to raise the standard of maternity care in private facilities, this study aims to close that knowledge gap.	201 private healthcare institutions that provide obstetric treatment in 24 districts throughout the states of Maharashtra, Jharkhand, and Uttar Pradesh were evaluated using a systematic criteria.	201 private sector healthcare facilities	Population-private healthcare facilities of state Maharashtra , Jharkhand, Uttar Pradesh	In these private healthcare institutions, over half (47.1%) of the nursing personnel providing maternity care services lacked the necessary training. Facilities met an average of 3.2 clinical criteria (SD 2.4). Significantly more standards were met by facilities with a monthly delivery load of between 20 and 50 as well as by facilities with	Considering that the hospitals included in the analysis deliberately opted to engage in the Manyata program, the sample might not be totally representative of private healthcare institutions across the three states.	In all three states, the general standard of maternity care provided by private healthcare facilities is subpar, particularly in terms of clinical standards pertaining to the management of problems.	Tripathi S, Srivastava A, Memon P, Nair T, Bhamare P, Singh D et al. Quality of maternity care provided by private sector healthcare facilities in three states of India: a situational analysis. BMC Health Services Research [Internet]. 2019;19(1). Available from: https://bmchealthservres.biomedcentral.com/articles/10.1186/s12913-019-4782-x

									more than 70% of needed supplies on hand. A multiple linear regression analysis revealed that both of these factors were significant.			
4	2016	Indian journal of public Health	Jyoti Sharma, Sutapa B Neogi, Preeti Negandhi	Rollout of quality assurance interventions in labor room in two districts of Bihar, India	The objective of this study was to implement quality assurance measures in the labor rooms of select public health facilities in two districts of Bihar.	The labor room quality assurance intervention was implemented in Health facilities having >200 deliveries/month were assessed using labor room quality assurance checklist developed by the Ministry of Health and Family Welfare. The critical gaps affecting service delivery were identified, and a list of priority actions for quality improvement was developed.	2 district of Bihar Gaya, Purnea.	Bihar -gaya and purnea	The infection control scores increased by 20 points in Gaya (from 40 to 59.9) and 10 points in Purnea (from 57.6 to 67.1). The highest gain in scores was observed in quality management component in Gaya (from 6.2 to 58.2).		Any quality improvement measure must be sustainable. As a result, we took the route of improving the healthcare system. That actually indicated that the improvement was less than what we had anticipated, but the little improvement that has occurred is likely to last past the intervention time. At the state and district levels, there is a desire to increase the calibre of health service delivery. With perseverance and dedication, it is feasible to achieve consistent progress.	Sharma J, Neogi S, Negandhi P, Chauhan M, Reddy S, Sethy G. Rollout of quality assurance interventions in labor room in two districts of Bihar, India [Internet]. 2022 [cited 23 June 2022]. Available from: https://pubmed.ncbi.nlm.nih.gov/27976657/
5	2015	International journal of Gynecology and Obstetrics	Vandana Tripathi	A literature review of quantitative indicators to measure the quality of	To identify quantitative indicators of L&D care quality and assess gaps in indicators.	Study characteristics, including indicator selection and data sources,	477 studies were included in the analysis.		Most studies selected indicators by using literature review, clinical guidelines, or expert panels.	The review has some limitations related to exclusion criteria, Another	To gauge the quality of L&D care, many quantitative markers have been employed, but only a select few have	Tripathi V. A literature review of quantitative indicators to measure the quality of labor and delivery care. Int J Gynaecol Obstet. 2016

				labour and delivery care.		were extracted via a standard spreadsheet.			Few indicators were empirically validated; most studies relied on medical record review to measure indicators.	limitation is that the reliance on authors 'terminology had the potential to distort findings regarding the scope of quality indicators	received independent validation. Clinical observation has only sometimes been used to evaluate the quality of care delivery. The results point to the necessity, particularly in low-resource nations, for established, effective consensus indicators of the quality of L&D care systems.	Feb;132(2):139-45. doi: 10.1016/j.ijgo.2015.07.014. Epub 2015 Nov 10. PMID: 26686027
6	2019	Journal of oral biology and craniofacial research	Anubha Aggarwal , Himanshu Aeran ,Manu rathee	Quality management in health care: The Pivotal desideratum	The objective of this article is to raise awareness among healthcare workers about achieving total quality through a thorough study of quality management in health care services.					Particularly in developing nations like India, research on the application of TQM has been limited.	The need to guarantee high standards and quality of care in healthcare institutions should be enforced by the appropriate authorities. In order to boost patient satisfaction, the authorities should think about modifying the curricula to ensure training of future experts. HCOs must start a new Quality Movement to attain total quality in healthcare services if they are to gain the needed momentum. It is a requirement, a challenge, and a move in the right direction	Aggarwal A, Aeran H, Rathee M. Quality management in healthcare: The pivotal desideratum. J Oral Biol Craniofac Res. 2019 Apr-Jun;9(2):180-182. doi: 10.1016/j.jobcr.2018.06.006. Epub 2018 Jun 30. PMID: 31211031; PMCID: PMC6561897.
7	2019	BMC Health services research	SV kundsen	Can quality improvement improve the	This systematic review's objective was to determine if newly published PDSA-	PDSA-based QI projects that were	120 QI projects included.	--	nearly all claimed an improvement (98 percent). Only	This analysis has a few drawbacks.	The legitimacy of PDSA-based QI is called into question	Knudsen S, Laursen H, Johnsen S, Bartels P, Ehlers L, Mainz J.

				quality of care? A systematic review of reported effects and methodological rigor in plan-do-study-act projects	based QI studies exhibit self-reported effects and adhere to the method's fundamental principles.	published in peer-reviewed publications in 2015 and 2016 were included in the systemic literature. Iterative cyclic approach, continuous data collecting, small-scale testing, and application of a theoretical justification are some examples of methodological aspects.			32 (or 27% of the sample) provided a clear, quantifiable goal and achieved it. In total, 72 projects (or 60%) had enough PDSA cycle data to be included in a thorough study of critical aspects. Only three (4%) of these followed all four fundamental methodological principles.	Only a subset of the worldwide QI investigations were considered because we only considered PDSA initiatives that were published in peer-reviewed publications.	despite the fact that the majority of the QI studies reported improvements due to pervasive issues with insufficient adherence to important methodological aspects in the individual projects. This analysis shows that the process for quality improvement still needs to be improved.	Can quality improvement improve the quality of care? A systematic review of reported effects and methodological rigor in plan-do-study-act projects. BMC Health Services Research [Internet]. 2019;19(1). Available from: https://bmchealthservres.biomedcentral.com/articles/10.1186/s12913-019-4482-6
8	2018	BMJ Quality and safety	Susan wells ,Orly Tamir	Are quality improvement collaboratives effective? A systematic review	The study's goal is to reassess the empirical data on the effects of QICs during the past 20 years.	Studies that fulfilled both the Cochrane Effective Practice and Organisation of Care (EPOC) minimal study design characteristics and the criteria for a QIC intervention were included in the review.	Of the 220 studies meeting QIC criteria, 64 met EPOC study design standards for inclusion. There were 10 cluster randomised controlled trials, 24 controlled before-after studies		Regardless of the site of treatment, improvements were seen for one or more of the key outcome measures in 83 percent of the studies (32/39 (82 percent) hospital-based, 17/20 (85 percent) ambulatory care, 3/4 nursing home, and one ambulance QIC). Eight studies found that the intervention impact persisted for up to two years after the collaborative was over.	QICs are prone to a variety of biases. In the past, attrition bias has been a significant problem in QICs. The potential of publication bias, which is the tendency for research with negative results to be published less frequently than those with favourable or statistically significant findings, is a second drawback.	As a strategy for shared learning and improvement in healthcare, QICs have gained widespread use. Overall, the QICs examined in this analysis indicated appreciable gains in the patient outcomes and targeted clinical procedures. These reports are positive, but they should generally be read with caution because publication bias is likely and less than a third of them met established quality and reporting criteria.	Wells S, Tamir O, Gray J, Naidoo D, Bekhit M, Goldmann D. Are quality improvement collaboratives effective? A systematic review [Internet]. 2022 [cited 23 June 2022]. Available from: https://pubmed.ncbi.nlm.nih.gov/29055899/

							and 30 interrupted time series studies.					
9	2020	L de la perrelle	BMC Health service research	Costs and economic evaluations of Quality Improvement Collaboratives in healthcare: a systematic review	In order to inform methods for implementing clinical guideline recommendations in healthcare, the objective of this systematic review was to locate and describe research that provide information on the costs and cost-effectiveness of QICs.	Studies that discussed the economic evaluations or costs of QICs were included. Full economic analyses were conducted using Evers CHEC-List. The Johanna Briggs Institute's "three by three dominance matrix tool" was used to assess cost-effectiveness statistics in order to inform judgments. For 2018, currencies were translated to US dollars using databases from the OECD and World Bank.			Despite their use in healthcare, few research have examined the costs or economic evaluations of QICs. There were eight studies included, including acute and long-term care, community addiction treatment, and managing chronic diseases. Five were deemed to be of good quality and supported the creation of QICs as efficient means of implementation.	The review's primary limitations are that we only looked at studies that were published in English and that we did not check trial records. The small number of studies found could be due to publication bias or it could mean no economic analyses of QICs have been done.	By using QICs widely, the health care system may be able to save money on both acute and chronic diseases. However, variations in effectiveness, prices, and technique components across research suggested that care should be used. Consistently identifying costs and outlining the components used in QICs would help decision-makers and potentially lower perceived barriers. There may not have been enough research with contradictory results because of publication bias. Economic analyses including societal perspectives on costs, savings, and the cost-effectiveness of QIC component parts should be part of future study.	de la Perrelle L, Radisic G, Cations M, Kaambwa B, Barbery G, Laver K. Costs and economic evaluations of Quality Improvement Collaboratives in healthcare: a systematic review [Internet]. 2022 [cited 23 June 2022]. Available from: https://bmchealthservres.biomedcentral.com/articles/10.1186/s12913-020-4981-5
10	2021	BMC Health services research	Zuneera khurshid ,Eilish Mc Auliffe	Exploring healthcare staff narratives to understand the role of quality improvement methods in	The goal of this study is to examine staff opinions on how knowledge of and proficiency with QI methodologies assisted them in putting innovative	This qualitative narrative study will gather the experiences of healthcare	Twenty staff members participated in the interviews.		The investigation showed the staff members' transformational path from the first shock and anxiety brought on by	Although the study only included a limited sample of narratives from one national health	Even though most quick changes made during COVID-19 were not the result of a systematic and explicit application of quality	Khurshid Z, McAuliffe E, De Brún A. Exploring healthcare staff narratives to understand the role of quality improvement

				innovative practices during COVID-19	ideas into practise during COVID-19.	staff members in implementing rapid change through narrative interviews. The audio from the interviews was recorded, transcribed, and anonymized. There was a four-step theme analysis done.			COVID-19 to understanding the problem, making quick improvements, and accepting COVID as a learning opportunity. The study revealed six motifs that stood out: Individual-centered changes, COVID as a "forcing function" for change, a communal style of working and looking back and forward, COVID anxiety and fear, emotional supports and coping mechanisms, and more.	system, gathering narratives from other healthcare systems may be useful to compare results. It may be useful to further analyse the data from other angles, such as organisational development, leadership, and communication, even if this study uses a QI lens to interpret the findings. The compiled narratives are an excellent resource for knowledge as well.	improvement, QI principles, such as making tiny adjustments, testing those changes, learning, and improving were nonetheless obvious in all of the tales and actions performed. Many staff were able to identify the applicability of QI principles in reflection. In order to create an adaptive healthcare system that is receptive to quality improvement, COVID-19 removed several conventional barriers to change that had been impeding the development of effective solutions.	methods in innovative practices during COVID-19 [Internet]. 2022 [cited 23 June 2022]. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8613456/

OBJECTIVES OF THE STUDY

- To carry out a critical gap analysis of the public health facilities of Punjab based on the National Quality Assurance Standards (NQAS) framework.
- To recommend actions based on gap analysis of each facility.

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METHODOLOGY

There was primary data collection by the assessors through on-site visit to the facility. The data was collected based on the comprehensive checklist released under NQAS framework. The facilities were secondary care level public healthcare facilities i.e. district hospitals which have either undergone assessment under NQAS or are preparing go in future. Each facility had different level of services offered so all the departmental checklist was not applicable to each facility. However, the Labour room & Maternity OT (which come under LaQshya) were available and assessed in each of the facility.

STUDY DESIGN: Mixed method cross- sectional study

STUDY SETTINGS:

- DR BR AMBEDKAR INSTITUTE OD MEDICAL SCIENCES, MOHALI
- SUB DISTRICT HOPITAL RAJPURA
- MATA KUSHILYA CIVIL HOSPITAL, PATIALA
- CIVIL HOSPITAL, SANGRUR

Figure 2: Districts of Assessment, Mohali, Patiala, Sangrur

DURATION OF STUDY: 25 days (23 May to 18 June)

Table 2 TEAM PLAN

TEAMS	LOCATION	PRE-ASSESSMENT DAYS	POST ASSESSMENT DAYS
Team 1	Dr BR Ambedkar State Institute of Medical Sciences /Civil Hospital, Mohali	20 days	5 days
Team 2	Civil Hospital, Patiala	20 days	5 days
Team 3	Sub-district Hospital, Rajpura	20 days	5 days
Team 4	Civil Hospital, Sangrur	20 days	5 days

STUDY VARIABLES:

Exposure variables – No exposure variable as it was not an interventional study

Outcome variable – A list of priority activities for infection control, biological waste management, infrastructure and equipment availability and maintenance was prepared based on the first evaluation, which also revealed the major gaps influencing service delivery. Interventions were organised to close and fill these important gaps.

ELIGIBILITY CRITERIA

Exclusion criteria – Facilities which are not interested for baseline assessment of NQAS

Inclusion criteria- Facilities who want to apply for NQAS assessment or want to improve their services and quality of care**.**

METHOD OF DATA COLLECTION

The Assessors filled out the sheets according to full, partial, or non-compliance after individually evaluating the many areas of concern on the checklist for their particular

departments or domains. During the assessment process, information would be gathered from a variety of sources, such as

TABLE 3: METHODS OF DATA COLLLECTION

1	Record review	Stock registers, human resources, admission registers, referral registers, immunization records etc. to check for implementation of services
2	Interview of Providers	Staff and personal interview to assess knowledge
3	Observation	Facility readiness in terms of IEC, drugs, storage/ stocks., cold chain equipment as well demonstration of skills during provision of actual care
4	Interviews with the patients and attendant	To check patient satisfaction and quality of care provided as well problems faced by the patients

Verification criteria for provider knowledge were evaluated through interviews, those for provider skills were evaluated through observations, those for facility routine practises were evaluated through record reviews, and those for drug and equipment availability were evaluated through physical verification.

DATA MANAGEMENT

Data collection – Data was collected on hardcopy, department wise and then entered on NQAS checklist on NHRSC website. This checklist rates the quality of various departments based on eight criteria: service delivery, patient rights, inputs, support services, clinical services, infection control, quality management, and outcome. Data for each of these criteria was gathered using the various methods listed in the checklist, including staff interviews, record reviews, client interviews, and observation. Data on a few crucial variables/checkpoints were gathered for each of the eight factors given in the checklist, and each variable was scored. A score of 2 indicated complete compliance, 1 indicated moderate compliance, and 0 indicated noncompliance with the variable. For scoring, each checkpoint received the same amount of weight. Since there were eight parameters, the ultimate score given to each department ranged from a maximum of 100 for each parameter, since there were eight parameters, the final score assigned to a particular department was from a maximum of 800. On summation of the scores of all eight parameters, each facility was

graded as being either fully complaint (100%), partially compliant (50%–99%), or noncompliant (Scores were given between 0-2 for 8 major areas of concern,74 standards, and nearly 808 checkpoints).

DATA VALIDATION: Data collected was cross checked by the supervisor assigned.

Scores are automatically calculated department wise and as well as area of concern wise (8 areas of concern)- checklist are attached in **Annexure 4**

Department wise critical gaps were identified and written under their respective standard in separate excel sheets – excel sheets are attached in Annexure 5

Certification criteria:

Certification of District Hospital

I. Criterion 1 - Aggregate score of the health facility ≥ 70%

II. Criterion 2 – Score of each department of the health facility ≥ 70%

III. Criterion 3 – Segregated score in each Area of Concern (Service Provision, Patient's Right, Inputs, Support Services, Clinical Services, Infection Control, Quality Management, Outcome Indicator) ≥ 70%

IV. Criterion 4 – Score of Standard A2, Standard B5 and Standard D10 is >70% in each applicable department.

- Standard A2 States "The facility provides RMNCHA services".
- Standard B5 states that "the facility ensures that there are no financial barriers to access, and that there is financial protection given from the cost of hospital services".
- Standard D10 states "the facility is compliant with all statutory and regulatory requirement imposed by local, state or central government."

V. Criterion 5 - Individual Standard wise score ≥ 50%

VI. Criterion 6 – Patient Satisfaction Score of 70% in the preceding Quarter or more

(Satisfied & Highly Satisfied on Mera-Aspataal) or Score of 3.5 on Likert Scale

Criteria for Certification (LaQshya) - To ensure respectful maternity care and to reduce unnecessary maternal and new-born mortality, morbidity, and stillbirths related to the care provided during delivery in labour rooms and maternity operating rooms. In 2019, the Indian

government launched the LaQshya programme. The Central Quality Supervisory Committee (CQSC) of MoHFW has already approved the requirements for NQAS certification. The LaQshya Certification will be based on the same standards. In order to emphasise respectful maternal care and intrapartum clinical protocols, only key standards have been altered**.** Following are criteria for LaQshya certification of Labour and OT –

- Criterion 1 - Overall Score of the department (LR/OT) shall be ≥70%
- Criterion 2- Score of each Area of Concern of department (LR/OT) shall be ≥70%
- Criterion 3- Individual scores of three core Standards (B3, E18 and E19) shall be ≥70%
- Criterion 4- Individual Score in each Applicable Quality Standard > 50%
- Criterion 5 – Client Satisfaction of the department shall be more ≥70%

TABLE 4 SHOWS ALL CERTIFIED FACILITIES OF PUNJAB

Table 4 CERTIFIED FACILITIES OF PUNJAB

PUNJAB				
Sr No.	**Facility Name**	**No. of department assessed**	**Certified**	**Validity Date**
857	UPHC Bara, Fatehgarh Sahib	All 12 department	Certified	12-08-22
858	Civil Hospital Jagraon, Ludhiana	15th department (Excluding SNCU, NRC, ICU)	Certified	12-08-22
859	UPHC Ranjit Avenue, Amritsar, Punjab	All 12 Departments	Certified	19-01-23
860	Civil Hospital Mansa	16 departments (excluding NRC & ICU)	Certified	19-01-23
861	CH Nawanshahr	14 departments excluding ICU, NRC, Blood Bank, SNCU	Certified	26-09-20
862	A.P. Jain Civil Hospital, Rajpura	14 departments excluding SNCU, ICU, NRC & Paeds ward	Certified	03-10-20
863	DH Faridkot	13 departments (A&E, OPD, LR, Mtty Ward, IPD, Paeds ward, OT, PPU, Lab, Radiology, Pharmacy, Auxiliary Services, General Administration)	Certified	08-03-21

864	PHC Ballauana, Bathinda	All 6 departments	Certified	11-02-23
865	SDH Dasuya (Hoshiarpur)	15 departments (excluding ICU, SNCU, NRC)	Certified	19-09-21
866	Civil Hospital Mukerian	Fifteen department (Excluding SNCU, ICU & NRC)	Certified	15-09-22
867	Civil Hospital-Pathankot	16 excluding NRC & ICU	Certified	08-06-20
868	Jalliawallah Bagh Marty's Memorial Hospital (JBMM) Civil Hospital Amritsar	16 departments excluding NRC & ICU	Certified	26-03-20
869	CHC Goniana (Bathinda)	All 12 departments	Certified	04-02-22
870	UPHC Bishan Nagar (Patiala)	All 12 departments	Certified	21-02-22

Reference: http://qi.nhsrcindia.org/national-level-certification

RESULTS

LAQSHYA PRE ASSESSMENT

Data was collected using labour room and maternity OT checklist in all 4 districts of Punjab- Mohali, Rajpura, Patiala, Sangrur. During baseline assessment scores were given between 0-2. On entering data on soft copy of checklist, following scores were recorded.

Table 3 shows pre-assessment scores of both the departments (labour room and maternity OT) and Figure 3 shows graphical representation of the same

Maternity OT is not functional at civil hospital of Sangrur

TABLE 5: PRE-ASESSMENT OF LAQSHYA

Facility Name	Labour Room	OT
Mohali	**79%**	**82%**
Patiala	**83%**	**89%**
Rajpura	**96%**	**88%**
Sangrur	**84%**	**-----**

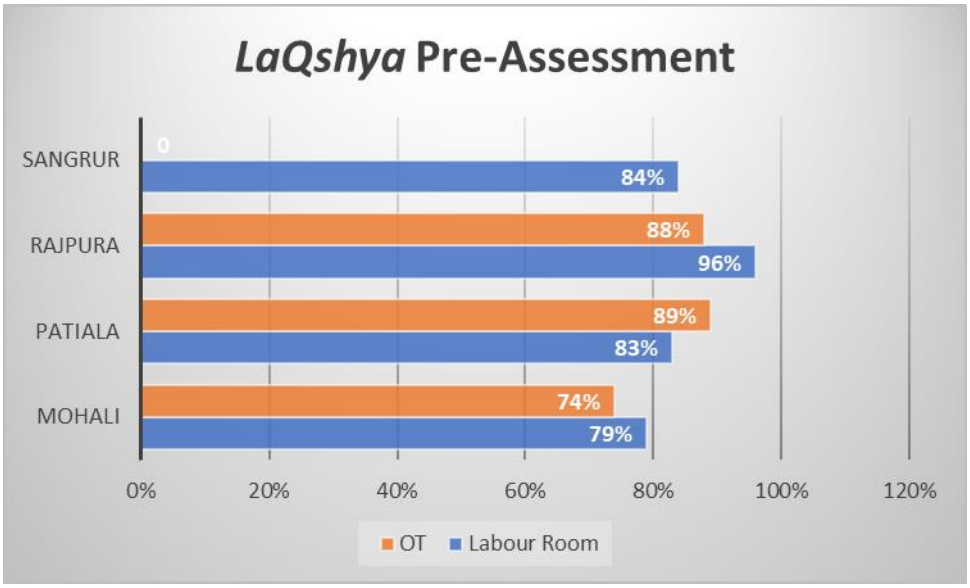

FIGURE 3. PRE-ASSESSMENT SCORES

LAQSHYA POST- ASSESSMENT

After critical gap analysis certain interventions were given to improve quality of care. post interventions, scores were recorded in Table 4 and graphical representation of the same in figure 4

Maternity OT is not functional at civil hospital of Sangrur

TABLE 6: POST -ASESSMENT SCORES OF LAQSHYA

Facility Name	Labour Room	OT
Mohali	**74%**	**79%**
Patiala	**85%**	**91%**
Rajpura	**95%**	**91%**
Sangrur	**92%**	**----**

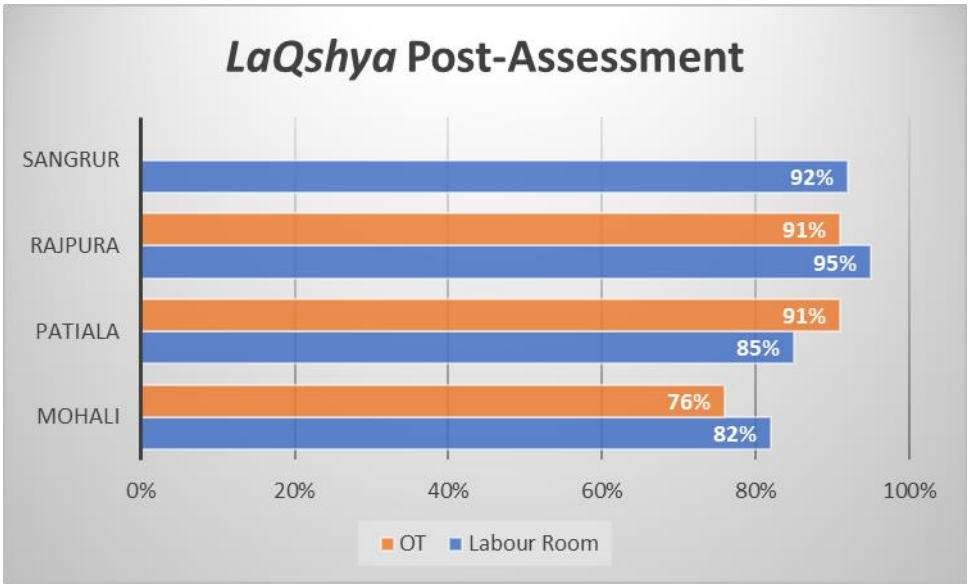

FIGURE 4: POST ASSESSMENT SCORES

NQAS ASSESSMENT

NQAS assessment was done at 2 facilities following under same district (civil hospital Patiala and sub district hospital Rajpura)

Table 6 shows comparison of scores of pre-assessments at Patiala and Rajpura. Rajpura is 2 times NQAS certified facility.

Mortuary and blood bank department is not functional at Patiala.

TABLE 7: COMPARISON OF PRE-ASESSMENT SCORES OF CERTIFIED AND NON-CERTIFIED FACILITY

DEPARTMENT	PATIALA		RAJPURA	
	PRE	POST	PRE	POST
OPD	85	88	84	84
General OT	79	80	91	94
PP Unit	91	94	94	96
IPD	79	85	88	96
Radiology	78	82	86	87
Emergency	89	92	95	96
Mortuary	NA	NA	90	94
Blood Bank	NA	NA	96	97
Pharmacy	57	62	82	90
Admin	75	78	84	85
Auxiliary	88	88	89	94
SNCU	86	90	NA	NA
Laboratory	81	83	86	95
Paediatrics	80	80	85	90

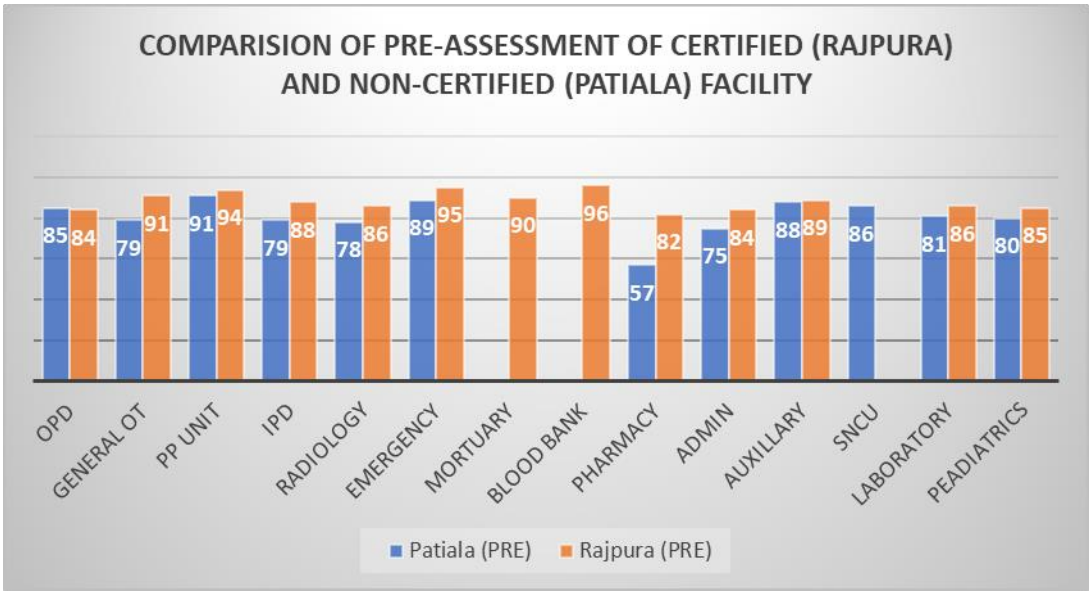

FIGURE 5: COMAPRISON BETWEEN CERTIFIED AND NON-CERTIFIED FACILITY

TABLE 8: AREAS OF CONCERN WISE SCORE OF ALL FACILITIES

PRE-ASSESSMENT SCORE				
Area of Concern	RAJPURA	PATIALA	MOHALI	SANGRUR
Service provision	83%	87%	95%	100%
Patient Rights	91%	84%	85%	90%
Inputs	89%	83%	79%	86%
Support Services	90%	80%	69%	92%
Clinical Service	95%	93%	91%	89%
Infection Control	97%	90%	93%	64%
Quality Management	89%	65%	37%	66%
Outcome	96%	83%	93%	66%

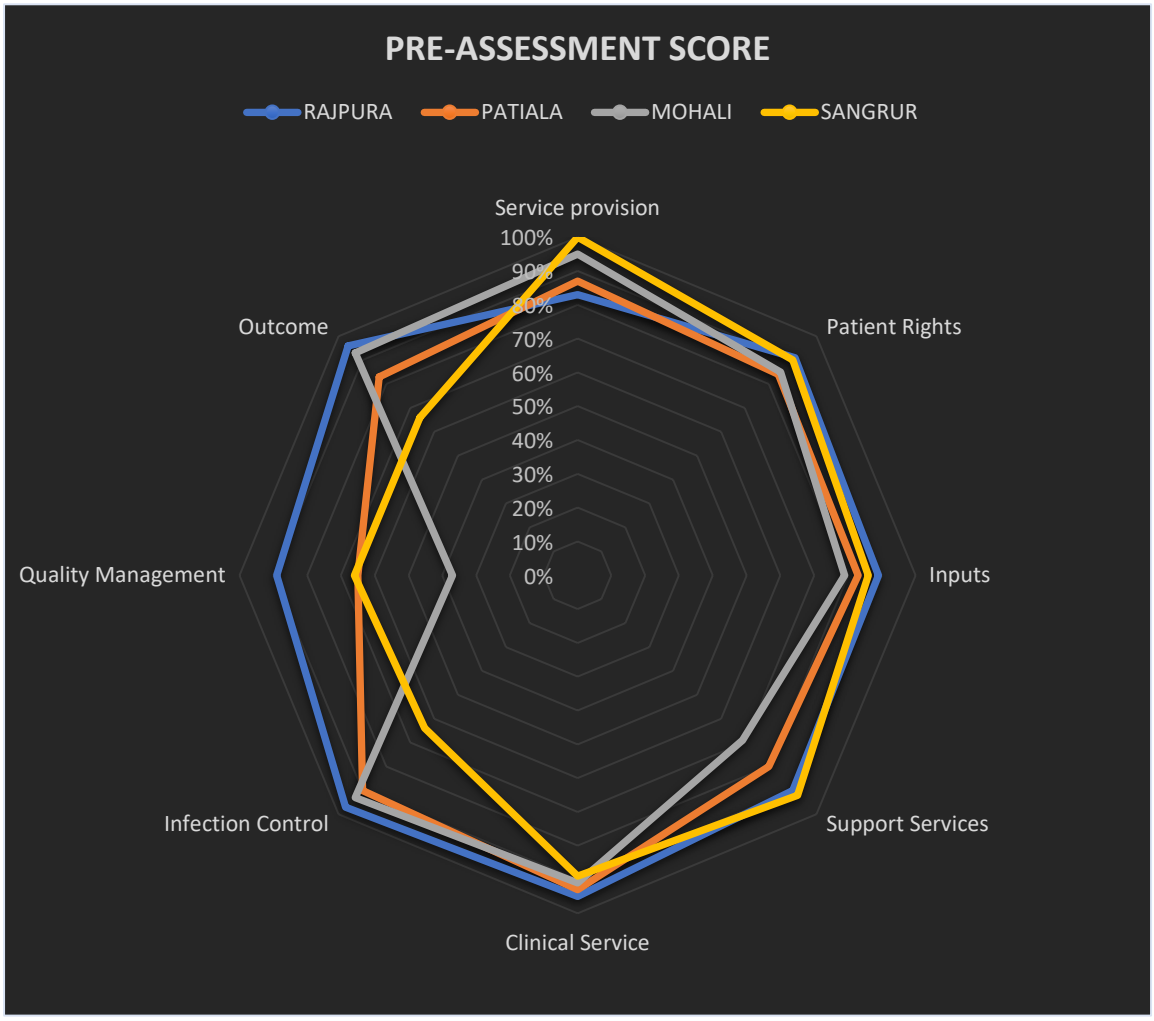

TABLE 9: AREAS OF CONCERN WISE SCORES (POST ASESSMENT)

POST-ASSESSMENT SCORE				
Area of Concern	RAJPURA	PATIALA	MOHALI	SANGRUR
Service provision	86%	88%	95%	100%
Patient Rights	93%	85%	85%	90%
Inputs	90%	87%	77%	94%
Support Services	93%	82%	73%	95%
Clinical Service	90%	93%	89%	93%
Infection Control	97%	92%	93%	80%
Quality Management	94%	70%	47%	89%
Outcome	98%	85%	95%	100%

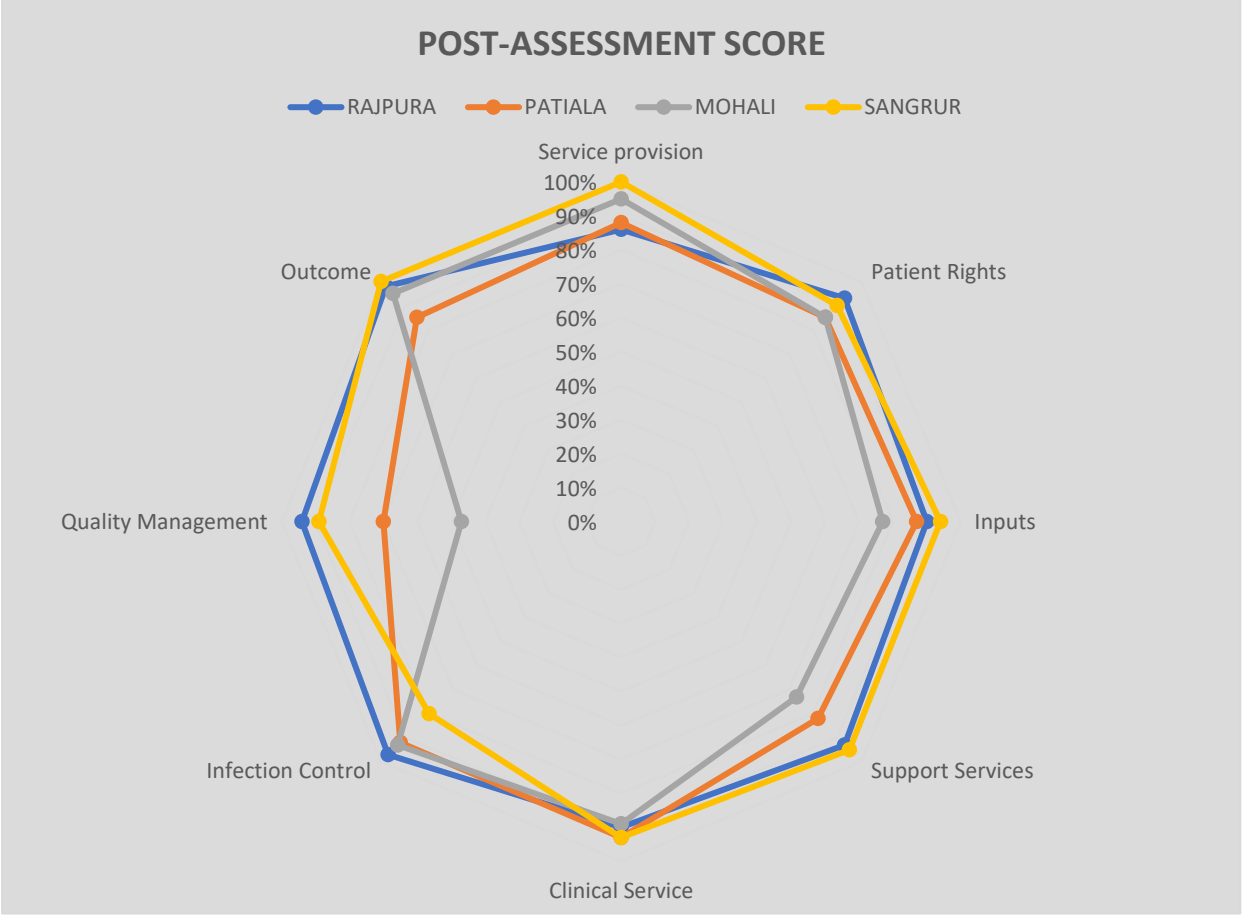

FIGURE 6: GRAPHICAL REPRESENTATION OF MAJOR AREA OF CONCERN (POST ASESSMENT)

TABLE 10: FACILITIES UNDER LAQSHAY INTERVENTION

LaQshay				
CRITERIA	MOHALI	RAJPURA	PATIALA	SANGRUR
I (Overall Score of the department (LR/OT) shall be ≥70%)	Y	Y	Y	----------
II (Score of each Area of Concern of department (LR/OT) shall be ≥70%)	N	Y	N	----------
III (Individual scores of three core Standards (B3, E18 and E19) shall be ≥70%)	Y	Y	Y	----------
IV (Individual Score in each Applicable Quality Standard > 50%)	N	Y	N	----------
V (Client Satisfaction of the department shall be more ≥70%)	N	Y	N	----------

TABLE 11: FACILTIES UNDER NQAS INTERVENTION

NQAS		
CRITERIA	**RAJPURA**	**PATIALA**
I Aggregate score of the health facility ≥ 70%	**Y**	**Y**
II Score of each department of the health facility ≥ 70%	**Y**	**Y**
III [Segregated score in each Area of Concern (Service Provision, Patient's Right, Inputs, Support Services, Clinical Services, Infection Control, Quality Management, Outcome Indicator) ≥ 70%]	**Y**	**N**
IV [Score of Standard A2, Standard B5 and Standard D10 is >70% in each applicable department]	**Y**	**N**
V Individual Standard wise score ≥ 50%	**Y**	**Y**
VI [Patient Satisfaction Score of 70% in the preceding Quarter or more (Satisfied & Highly Satisfied on Mera-Aspataal) or Score of 3.5 on Likert Scale]	**Y**	**N**

PRE-ASSESSMENT

TABLE 12: QUALITATIVE GAPS INDETIFIED

Ancillary area is not present as per requirement	Unavailability of OT assistant
Not aware about 7 quality objectives	Unavailability of security staff
No post mortem technician is available	SMART objectives is not framed
No technician in emergency ward	Telephone and intercom services are not available
No security staff is available in mortuary	Radiologist not present
Surgeon is not available	All kind of ultrasound services are not available
Work instructions and other signages are not available due to construction	Unavailability of power backup
Hospital had not provided security system to manage overcrowding in emergency	Blood bank has no facility for blood components AMC services are not provided
Trained paramedical staff for ambulance not available	Action plan is not prepared
Unavailability of functional skin and VD clinic	No action plan prepared
Important numbers like ambulance are not displayed	X ray system has not identified radiographer who has taken x ray
Unavailability of enquiry desk with dedicated staff	Paediatric blood collection bags are not available
Unavailability of complaint box	7 basic quality tools
Unavailability of ECG technician	Unavailability of dietician
No surgeon available	Unavailability of data entry operator
Unavailability of OT assistant	Unavailability of MRD technician
Unavailability of security staff	Stray animals in the facility
SMART objectives are not framed	MDR doesn't have system of ICD coding
Telephone and intercom services are not available	Security staff is not available
Radiologist not present	There are no signage or information in the native languages.
All kind of ultrasound services are not available	MDR doesn't have system of ICD coding
Unavailability of power backup	Security staff is not available
Blood bank has not facility for blood components AMC services are not provided	There are no signage or information in the native languages.
Action plan is not prepared	No demarcated are for keeping inflammables
No action plan prepared	No demarcated are for keeping near expiry drugs
X ray system has not identified radiographer who has taken x ray	Pharmacy doesn't have license for storing spirit
Paediatric blood collection bags are not available	Pharmacists are not aware of hospital antibiotic policy

7 basic quality tools	Employees are unaware of how long cold storage equipment has been in storage.
Unavailability of dietician	24*7 diagnostic tests not available.
Unavailability of data entry operator	On a single bed , two women are receiving care.
Unavailability of MRD technician	No dedicated nursing station and duty rooms.
Stray animals in the facility	No follow up of referral cases
Security staff is not available	Lack of puncture-proof, leak-proof, and functioning needle cutters
Signages and information are not available in local languages	There are no standard treatment protocols.
No demarcated are for keeping inflammables	Unavailability of housekeeping staff and security guards.
No demarcated are for keeping near expiry drugs	The facility's capacity to provide maternal HDU/ICU services.
Pharmacy doesn't have license for storing spirit	Demarcated sterile zone
Pharmacists are not aware of hospital antibiotic policy	AMC services are not provided
Staffs are not aware of hold over time of cold storage equipment	Unavailability of housekeeping staff and security guards.
24*7 diagnostic tests not available.	The facility's capacity to provide maternal HDU/ICU services.
Two women are treated on common bed /delivery table.	Demarcated sterile zone
No dedicated nursing station and duty rooms.	Availability of functional telephone and intercom services.
No follow up of referral cases	No security arrangement at OT
Unavailability of functional needle cutters and puncture proof, leak proof, team.	Unavailability of disinfectant as per requirement
No standard treatment protocols.	
Unavailability of housekeeping staff and security guards.	Unavailability of OT technician
The facility's capacity to provide maternal HDU/ICU services.	Unavailability of psychiatry ward
Demarcated sterile zone	Unavailability of ophthalmic ward
Availability of functional telephone and intercom services.	There are no posted visitor policies or hours of operation.
No security arrangement at OT	Unavailability of screens / Curtains
Unavailability of gum boots.	TV for entertainment and health promotion not available
Unavailability of disinfectant as per requirement	Unavailability of separate Doctor's Duty room and nurses' room.
Unavailability of OT technician	Unavailability of functional telephone and Intercom Services
Unavailability of psychiatry ward	There are no posted visitor policies or hours of operation.

Unavailability of ophthalmic ward	Unavailability of separate Doctor's Duty room and nurses' room
There are no posted visitor policies or hours of operation.	Unavailability of functional telephone and Intercom Services
Unavailability of screens / Curtains	Unavailability of hot water
TV for entertainment and health promotion not available	Unavailability of Breast-feeding corner
Unavailability of separate Doctor's Duty room and nurses' room.	Curtains have not been provided at windows
Unavailability of functional telephone and Intercom Services	Unavailability of RMNCH counsellor
Unavailability Security staff	Unavailability Security staff
Unavailability of dresser in surgical ward	
Visiting hours and visitor policy are not displayed	Unavailability of isolation room
Unavailability of separate Doctor's Duty room and nurses' room	Unavailability of free diet to patient
Unavailability of functional telephone and Intercom Services	7 Basic quality tools
Unavailability of hot water	Unavailability of play room
Unavailability of Breast-feeding corner	Visiting hours are not fixed and maintained
Curtains have not been provided at windows	Expiry date is not mention in fire extinguisher
Unavailability of RMNCH counsellor	Don't know about basic quality improvement method
Unavailability Security staff	7 quality objectives and action plan is not prepared
TV for entertainment and health promotion not available	Education material for counselling are not available in counselling room
Unavailability of isolation room	Don't know about basic quality improvement method
Unavailability of free diet to patient	7 quality objectives and action plan is not prepared
Visiting hours are not fixed and maintained	Education material for counselling are not available in counselling room
Unavailability of play room	Unavailability of functional telecom and intercom services
Expiry date is not mention in fire extinguisher	TV for entertainment and health promotion not available

POST-ASSESSMENT

TABLE 13: GAPS CORRECTED (POST ASESSMENT)

7 quality objectives	Smart quality signage
Provided new sops	
Helped in making poster for display hours and policy	Helped in maintaining duty roster
Helped in labelling the empty and filled cylinders	Explain them about to make poster for educational counselling
Explain about 7 quality objectives and help in plotting the chart and graph	Explain them about the 7 quality objectives and how to make action plan
Helped in making poster for ambulance services	Counselled them about to mention expiry date in fire extinguisher
Helped in labelling filled and empty cylinder	Helped in making complaint box
Explain taught and helped in making 7 quality objectives	Helped in making action plan
Helped in maintaining their duty roster	No stray animals in the facility
Counselled them about to provide their signature after who has taken x ray	Security staff available at night
Signages and information are available in local languages	Two women are not treated on common bed /delivery table.
Demarcated are for keeping inflammables	follow up of referral cases
Demarcated are for keeping near expiry drugs	Availability of functional needle cutters and puncture proof, leak proof, team.
Pharmacists are aware of hospital antibiotic policy	Visiting hours and visitor policy are not displayed
Staffs are aware of hold over time of cold storage equipment	Tv for entertainment and health promotion available
Two women are not treated on common bed /delivery table.	Demarcated sterile zone
follow up of referral cases	Security arrangement for nigh
Availability of functional needle cutters and puncture proof, leak proof, team.	Availability of gum boots.
	Disinfectant are available as per requirement
Visiting hours and visitor policy are not displayed	Visiting hours and visitor policy are not displayed
Tv for entertainment and health promotion available	Unavailability of functional telephone and intercom services
	hot water available
	breast feeding corner available
	Security staff available at night

DISCUSSION

In this study, three separate districts and four institutions were evaluated. These were public facilities that are virtually entirely supported by government. They were chosen based on two criteria: whether they wanted to pursue certification for the first time or whether they failed their previous assessment and wanted to try again. Facilities are subject to a different level of assessment. While all four facilities have undertaken LaQshay evaluations, all departments at Patiala and Rajpura have received full NQAS evaluations.

During LaQshay pre - assessment, scores were recorded and gaps were identified. Highest scores were recorded at labour room of Rajpura (Table 4). Major gaps identified were – lack of knowledge about (AMTSL)- active management of third stage of labour, no follow of referral cases, non-availability of 24*7 diagnostic services, needle cutters not functional, no standard treatment protocols followed etc, labour room registers were not filled properly, furniture and fixtures were broken etc (Table 9)

Interventions in the form of trainings were given- staff nurses were taught about PPH (post-partum haemorrhage), Dakshata and SBA trainings were initiated, staff was made competent to fill all columns of labour room and how to make partograph. (images attached in annexure)

Scores were again recorded following the intervention (Table 5). Scores of the labour room and maternity (OT) improved after evaluation, while at the labour room in Rajpura, scores dropped from 96 to 95 percent because several signages had been taken down and the facility was undergoing construction at the time of the intervention.

NQAS ASESSMENT

Facilities (sub district hospital Rajpura and civil hospital Patiala) underwent NQAS examination. Scores from the pre-assessment were compared between the two

facilities. In comparison to Patiala civil hospital, Rajpura sub district hospital performed better across the board Therefore, based on these findings, it is evident that NQAS accreditation is crucial for offering patients high-quality care and services. However, it can argue that some other factors other than NQAS accreditation may be the reason for facility to perform well like better funding and administration. But it Is to noted that both facilities are funded by government and come under same administration (civil surgeon)

Some of the major gaps identified at both the facilities were shortage of manpower, disposal of biomedical waste ,problems related to infection control, shortage of essential drugs, many of the laboratory equipment's used for basin tests were non-functional, shortage of oxygen cylinders , , no mopping system, fire extinguishers were expired and no proper training regarding operating of fire extinguishers were given , staff lacked knowledge regarding 7 quality tools, SMART objectives, PDCA cycle .

(See table 12 for detailed description of all gaps)

Further when areas of concern (8 areas of concern in NQAS checklist) wise scoring was calculated, Rajpura performed best in outcome, quality management, infection control, inputs, clinical services while Sangrur was ahead of Rajpura in service provision and patient rights. in support services both facilities were equivalent. outcome and infection control are major areas of concern in Sangrur (figure 6)

POST ASESSMENT

The intervention was planned with the cooperation of administration staff. Doctors, nurses, paramedical staff participated in meetings to explore the problems and the best solutions within the district- and facility-specific limitations. The goal was to instil a sense of responsibility and ownership for running the facility. The administration staff produced official letters and the appropriate approvals were obtained to help implement the intervention actions

In the post assessment quality management became major area of concern at Mohali while Rajpura performed best in infection control and quality management (figure 7)

Infection control procedures, support services, and clinical services that don't heavily rely on things like infrastructural problems and human resources that typically take a while to modify have all seen improvements as a result of post-assessment reflections.

It was still extremely difficult to follow sterilising process for infection control and maintain clean practises, especially during rush hour. Long-term service quality has been linked to a gap that has been implicated as the lack of workers. A fundamental obstacle in any quality improvement project is the uneven distribution of the professional health care staff, as well as the inadequate quality of post-training follow-ups and supervision. This was partially addressed by routine employee engagement to maintain high levels of motivation, as well as by routine monitoring visits. This may have been effective in the short term, but it does little to address the problems associated with a staffing shortage, particularly in labour rooms where having a qualified worker is crucial.

Criteria for LaQshay and NQAS accreditation

There are requirements that must be met for every facility to receive LaQshya and NQAS accreditation. There are five criteria included in the guidelines for LaQshay accreditation. As a result, all facilities met criteria number 1 with the exception of Sangrur because that facility's maternity OT is not operational. Only Rajpura met requirement of criteria no 2. All three facilities met the third requirement, which calls for maintaining patient dignity, ensuring privacy, and having defined procedures for intranatal and postoperative care. Only

RAJPURA facility met criteria No. 4 and No. 5, hence it is safe to conclude that customer satisfaction was low in MOHALI and PATIALA. (table 7)

To receive NQAS accreditation, seven requirements must be completed.

While the Rajpura facility satisfies all seven requirements, the civil hospital Patiala fails to meet requirements three, four, and six. (table 8)

RECOMMENDATIONS

“Measurement is the first step in quality regardless of the strategy or methodology because: "If you can't measure something, you can't understand it, and if you can't understand it, you can't control it, and if you can't control it, you can't improve it.”(1)

Measurement gives findings objectivity. Measurement aids in analysing the current condition and identifying any gaps or potential improvement areas. Gap refers to the distinction between "What is" and "What should be or ought to be."

Unfortunately, the majority of implementers believe that the best tools for improvement are "Measuring Quality." Instead of using these exercises as a tool for assessment and gap analysis, people start to see them as a way to improve. Because of this, people stop at Step 1 (Measuring Quality) and continue doing the same exercises repeatedly without seeing any noticeable and beneficial outcomes.

For instance, when we ask “do you do patient satisfaction surveys at your facility”? They'll reply "Yes" right away. They will present you with a pile of completed survey forms when you ask for records. However, when will you ask them what they plan to do after the survey? "We again conduct patient satisfaction surveys," is the most typical response. The pattern continues.

Now the question arises where is the improvement, to bring about improvement, we have to change because it is said if u always do what u have always done, you will always get what you have always got. "The organised creation of beneficial change" is what improvement is. It is a planned creation that includes all interested parties in order to bring about real, beneficial changes for everyone.

All parties benefit when improvements are made, creating a "Win-Win" scenario.

The goal of improvement is to perform at previously unheard-of levels. Quality in healthcare is defined by Bat Alden - Davidoff as "the continual efforts of everyone to implement the changes that would improve patient outcomes (health), better system performance (care), and better professional growth," including healthcare staff, patients, and their families (learning).

Improvement can be made by lowering the quantity and number of resources needed to finish a task or objective. For instance, a process can be made better by reducing the quantity of people needed, the amount of money needed, the amount of time needed, the amount of raw materials needed, and the amount of equipment needed to complete the process.

By minimizing the errors, we can improve.

By exceeding the demands of clients outside of the company. through enhancing process safety.

By enhancing the process's satisfaction for the performer.

NQAS's strategy of quality improvement adheres to the straightforward principle of "Making CHANGES that will lead to PROGRESS."

The Plan-Do-Check-Act (PDCA) or Deming's Cycle is the standard methodology for quality improvement. These include, but are not limited to:

1. Teamwork
2. Leadership
3. Motivation
4. Rewards and accolades.
5. Quality methods.
6. Quality tools
7. Root cause investigation. Brainstorming, Why-Why Analysis, and Cause and Effect Diagrams are a few of the tools employed.
8. Prioritization. PICK Chart and Pareto's Analysis are a couple of the tools employed.
9. Action planning. the creation of a time-bound action plan detailing the gaps found, the steps to be taken, who is responsible, when they are to be taken, and the mechanisms for monitoring and feedback.
10. Evaluation and oversight of the QI process Gap Filling.

CONCLUSION

Any quality improvement measure must be sustainable. As a result, we took the route of improving the healthcare system. That actually indicated that the improvement was less than what we had anticipated, but the little improvement that has occurred is likely to last past the intervention time. At the state and district levels, there is a desire to increase the calibre of health service delivery. With perseverance and dedication, it is feasible to achieve consistent progress.

REFERENCES

1. Operational Guidelines for Improving Quality 2021.pdf [Internet]. [cited 2022 Jun 25]. Available from: http://qi.nhsrcindia.org/sites/default/files/Operational%20Guidelines%20for%20Improving%20Quality%202021.pdf click to open this

2 National Quality Assurance Standards | National Health Systems Resource Centre | Technical Support Institute with National Health Mission [Internet]. Qi.nhsrcindia.org. 2022 [cited 23 June 2022]. Available from: http://qi.nhsrcindia.org/national-quality-assurance-standards

3 Ramaswamy R, Kallam B, Srofenyoh E, Owen M. Multi-tiered quality improvement strategy to reduce maternal and neonatal death in complex delivery systems in Ghana. The Lancet Global Health. 2016;4:S24. https://www.researchgate.net/publication/300080656_Multi-tiered_quality_improvement_strategy_to_reduce_maternal_and_neonatal_death_in_complex_delivery_systems_in_Ghana

4 Tripathi S, Srivastava A, Memon P, Nair T, Bhamare P, Singh D et al. Quality of maternity care provided by private sector healthcare facilities in three states of India: a situational analysis. BMC Health Services Research [Internet]. 2019;19(1). Available from: https://bmchealthservres.biomedcentral.com/articles/10.1186/s12913-019-4782-x

5 Sharma J, Neogi S, Negandhi P, Chauhan M, Reddy S, Sethy G. Rollout of quality assurance interventions in labor room in two districts of Bihar, India [Internet]. 2022 [cited 23 June 2022]. Available from: https://pubmed.ncbi.nlm.nih.gov/27976657/

6 Tripathi V. A literature review of quantitative indicators to measure the quality of labor and delivery care. Int J Gynaecol Obstet. 2016 Feb;132(2):139-45. doi: 10.1016/j.ijgo.2015.07.014. Epub 2015 Nov 10. PMID: 26686027. https://pubmed.ncbi.nlm.nih.gov/26686027/

7 Aggarwal A, Aeran H, Rathee M. Quality management in healthcare: The pivotal desideratum. J Oral Biol Craniofac Res. 2019 Apr-Jun;9(2):180-182. doi: 10.1016/j.jobcr.2018.06.006. Epub 2018 Jun 30. PMID: 31211031; PMCID: PMC6561897. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6561897/

8 Knudsen S, Laursen H, Johnsen S, Bartels P, Ehlers L, Mainz J. Can quality improvement improve the quality of care? A systematic review of reported effects and methodological rigor in plan-do-study-act projects. BMC Health Services Research

[Internet]. 2019;19(1). Available from: https://bmchealthservres.biomedcentral.com/articles/10.1186/s12913-019-4482-6

9 Wells S, Tamir O, Gray J, Naidoo D, Bekhit M, Goldmann D. Are quality improvement collaboratives effective? A systematic review [Internet]. 2022 [cited 23 June 2022]. Available from: https://pubmed.ncbi.nlm.nih.gov/29055899/

10 de la Perrelle L, Radisic G, Cations M, Kaambwa B, Barbery G, Laver K. Costs and economic evaluations of Quality Improvement Collaboratives in healthcare: a systematic review [Internet]. 2022 [cited 23 June 2022]. Available from: https://bmchealthservres.biomedcentral.com/articles/10.1186/s12913-020-4981-5

11 Khurshid Z, McAuliffe E, De Brún A. Exploring healthcare staff narratives to understand the role of quality improvement methods in innovative practices during COVID-19 [Internet]. 2022 [cited 23 June 2022]. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8613456/