

Study on Gap Analysis and Closure of Clinical Non-
Compliances Identified During NABH Audit Conducted in
2018

By

Jilu Kallada

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

Academic year, 2017-2019



The IIHMR University, Jaipur

1, Prabhu Dayal Marg, Sanganer, Airport
Jaipur 302029, Rajasthan
Ph: 0141 3924700, Fax: 3924738
Website: www.iihmr.edu.in

Study on Gap Analysis and Closure of Clinical Non-
Compliances Identified During NABH Audit Conducted in
2018

By

Jilu Kallada

*Dissertation submitted in partial fulfillment of award of
MBA Hospital and Health Management*

Academic year, 2017-2019

*P.D. Hinduja Hospital and Medical Research Center,
Mumbai*



The IIHMR University, Jaipur

1, Prabhu Dayal Marg, Sanganer, Airport
Jaipur 302029, Rajasthan
Ph: 0141 3924700, Fax: 3924738
Website: www.iihmr.edu.in

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Ms. Jilu Kallada**, student of MBA Hospital and Health Management from The IIHMR University, Jaipur has undergone internship training at **P.D. Hinduja Hospital and Medical Research Centre, Mumbai** from 4th Feb 2019 to 3rd May 2019.

The Candidate has successfully carried out the study designated to her during internship training and her approach to the study has been sincere, scientific and analytical.

The Internship is in fulfillment of the course requirements.

I wish her all success in all his future endeavors.



Dean, Academics and Student Affairs
The IIHMR University, Jaipur



Associate Professor
The IIHMR University, Jaipur

**P. D. HINDUJA NATIONAL HOSPITAL
& MEDICAL RESEARCH CENTRE**

(Established and managed by the National Health & Education Society)



VEER SAVARKAR MARG, MAHIM, MUMBAI - 400 016, INDIA
PHONE : 2445 1515, 2445 2222, 2444 9199 FAX : 2444 9151

03rd May 2019

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Ms. Jilu Kallada** a student of Master in Business Administration –Hospital and Health Management from the Indian Institute of Health Management and Research University, Jaipur did her project in our Hospital from 04th Feb 2019 to 3rd May 2019.

During this period her assignment was as follows:

- Gap Analysis and closure of clinical non-compliances identified during NABH Audit 2018
- Risk assessment for intensive care unit department

I wish her all the success in future endeavours.


Mr. Joy Chakraborty
Chief Operating Officer


Dr. Preeti Goraksha
Senior Manager
Clinical Care Units and
Accreditation & Compliance

THE IIMR UNIVERSITY, JAIPUR

CERTIFICATE BY SCHOLAR

This is to certify that the dissertation titled **“Gap analysis and closure of clinical non-compliances identified during NABH audit conducted in 2018”** and submitted by Ms. Jilu Kallada Enrollment No.0579 under the supervision of **Dr. S.D. Gupta** for award of MBA in Hospital and Health Management carried out during the period from **4th Feb to 3rd May 2019** embodies my original work and has not formed the basis for the award of any degree, diploma associate ship, fellowship, titles in this or any other institute or other similar institution of higher learning.



Signature

ABSTRACT

P.D. Hinduja Hospital and Research Centre was accredited by NABH for the first time in 2009. P. D. Hinduja Hospital is the second hospital in the city to receive the NABH accreditation. The latest audit was done by NABH in June 2018. There were 58 non-compliances identified during the last audit. These non-compliances belonged to different departments like OPD, Casualty, ICU, Laboratory services, Radiology Services, MRD, etc. Out of 58 Non-compliances identified 19 were clinical non-compliances.

This study aims at analyzing current status of the clinical non-compliances identified during NABH audit 2018 and their closure.

This is a descriptive cross-sectional study conducted in P. D. Hinduja Hospital and Research Centre, Mumbai from 4th February to 3rd May 2019. Samples will be selected for each non-compliances using the non-probability sampling techniques of convenient sampling. The samples included are the records of patients coming to P. D. Hinduja Hospital and Research Centre. Primary data will be collected by direct observation, information from employees and information from patients or relatives using semi-structured interview. Secondary data will be collected from hospital records like manuals, policies and procedure guidelines, patient records, HMIS and departmental registers. Current percentage of compliance will be calculated for the identified areas and also the reasons for non-compliance to corrective actions will be identified. Intervention to improve adherence to corrective actions will be identified and implemented. A post implementation audit will be conducted to determine the effectiveness of the interventions implemented. The dependent variable considered in this study are the documentation parameters and adherence to NABH standards. The independent variables considered are diagnosis of patient, prognosis of patient, availability of skilled human resources. Data will be analyzed using MS excel.

The primary audit outcome showed that out of 19 clinical non-compliances 3 were closed as there was adherence to the corrective actions mentioned post NABH audit in 2018 and 16 were still open. Corrective and maintenance actions were discussed with the respective departments and implemented. During the study process, 4 other non-compliances were closed by repeated audits and emphasis on respective corrective actions. At the end of study period, the status of 19 clinical non-compliances are 7 -

closed, 3 – in process, 9-open. The 9 open non-compliances are mainly due to non-adherence to the documentation protocols.

ACKNOWLEDGEMENT

Nothing really can be accomplished alone. It's the direction, guidance, involvement, and support of more than few that results into realization.

I sincerely thank **Mr. Joy Chakraborty, Chief Operating Officer** at P.D. Hinduja Hospital and Research Center, Mumbai for giving me the opportunity to be a part of this prestigious institution for my Dissertation Training for a period of three months i.e. February 4th – May 3rd, 2018.

I consider it is a matter of pleasure and privilege to work under the guidance of **Dr. Preeti Goraksha, Senior Manager - Clinical Care Units and Accreditation & Compliance** and thankful for providing me the opportunity to work on my projects. I am grateful for her commendable support, motivation, continuous guidance and help throughout the project.

I am grateful to my college guide, **Dr. S.D. Gupta, Chairman – The IIHMR University Jaipur**, for his encouragement, support, guidance and help which has resulted in completion of my projects.

I am grateful to all the hospital staff for devoting their time and attention despite a busy schedule & permitting me to ask my queries & without whose encouragement, faithful suggestions & full co-operation, this report would have been hardly possible.

Ms. Jilu Kallada

TABLE OF CONTENTS

1. INTRODUCTION	1
2. BACKGROUND	3
3. RATIONALE	6
4. LITERATURE REVIEW.....	6
5. METHODOLOGY	8
5.1 RESEARCH QUESTION	8
5.2 AIM	8
5.3 OBJECTIVES	8
5.4 MATERIALS AND METHODS	9
5.5 OPERATIONAL DEFINITIONS	9
5.6 ETHICAL CONSIDERATION	9
6. RESULTS	10
7. DISCUSSION	30
8. CONCLUSION	31
8.1 RECOMMENDATIONS	32
9. BIBLIOGRAPHY	34

LIST OF GRAPHS

- Graph 2.1 Distribution of non-compliances identified in NABH audit in 2018
- Graph 2.2 Distribution of clinical non-compliances identified in NABH audit in 2018
- Graph 6.1 Clinical non-compliance status as on Feb 2019
- Graph 6.2 Compliance to documentation of two identification marks in MLC register
- Graph 6.3 Comparison of Compliance to follow-up of critical results
- Graph 6.4 Comparison of Compliance to follow-up of critical results among ICU and Wards
- Graph 6.5 Comparison of Compliance to documentation of plan of care in initial assessment sheet among ICU and Wards
- Graph 6.6 Comparison of Compliance to use of Capital letters and doctors signature on medication sheet among ICU and Wards
- Graph 6.7 Comparison of Compliance to documentation of time, date and doctors signature in case sheets among ICU and Wards
- Graph 6.8 Comparison of Compliance to documentation of history of medications in Initial assessment sheet among ICU and Wards
- Graph 8.1 Status of non-compliances as on Feb 2019
- Graph 8.2 Status of non-compliances as on April 2019

LIST OF TABLES

- Table 1.1 Distribution of NABH standards and objective elements among ten chapters
- Table 2.1 List of clinical non-compliances identified during NABH audit in 2018
- Table 6.1 List of clinical non-compliances closed as on Feb 2019, their corrective actions taken and findings of audit conducted in Feb 2019
- Table 6.2 Details of clinical non-compliances closed as on April 2019
- Table 6.3 Details of clinical non-compliances In-process as on April 2019
- Table 6.4 Details of clinical non-compliances Open as on April 2019

LIST OF ABBREVIATIONS

PDHH – P.D. Hinduja Hospital

MLC - Medico-legal Cases

MRD - Medical Records Department

OPD - Outpatient department

IPD - Inpatient Department

OE - Objective Elements

ICU - Intensive care Unit

JMS – Junior Medical Services

DPS – Director of Professional Services

1. INTRODUCTION

NABH accreditation system was established in 2006 as a constituent of Quality Council of India (QCI), set up to establish and operate accreditation programme for healthcare organizations. The board is structured to cater to much desired needs of the consumers and to set benchmarks for progress of health industry. The board while being supported by all stakeholders including industry, consumers, government, has full functional autonomy in its operation. The first edition of standards was released in 2006 and after that the standards has been revised every 3 years. Currently the 4th edition of NABH standards, released in December 2015 is in use.

4th edition of NABH consists of 10 chapters namely

Chapter 1 - Access, Assessment and Continuity of care (AAC)

Chapter 2 – Care of Patients (COP)

Chapter 3 – Management of Medication (MOM)

Chapter 4 – Patient Rights and Education (PRE)

Chapter 5 – Hospital Infection Control (HIC)

Chapter 6 – Continuous Quality Improvement (CQI)

Chapter 7 – Responsibilities of Management (ROM)

Chapter 8 – Facility Management and Safety (FMS)

Chapter 9 – Human Resource Management (HRM)

Chapter 10 – Information Management System (IMS)

These 10 chapters contain 105 standards and 683 objective elements.

The first hospital to be accredited by NABH is 'Malabar Institute of Medical Sciences (MIMS), Kerala' which is a 650-bed multispecialty hospital and was accredited in 2007 and till date more than 350 hospitals in India has achieved accreditation by NABH. In public hospitals, Gandhinagar General Hospital was the first to get NABH accreditation in 2009.

Table 1.1 Distribution of NABH standards and objective elements among ten chapters

SN	CHAPTERS	STANDARDS	OBJECTIVE ELEMENTS
1	AAC	14	96
2	COP	22	151
3	MOM	13	76
4	PRE	8	54
5	HIC	9	54
6	CQI	9	59
7	ROM	6	39
8	FMS	7	56
9	HRM	10	53
10	IMS	7	45
TOTAL		105	683

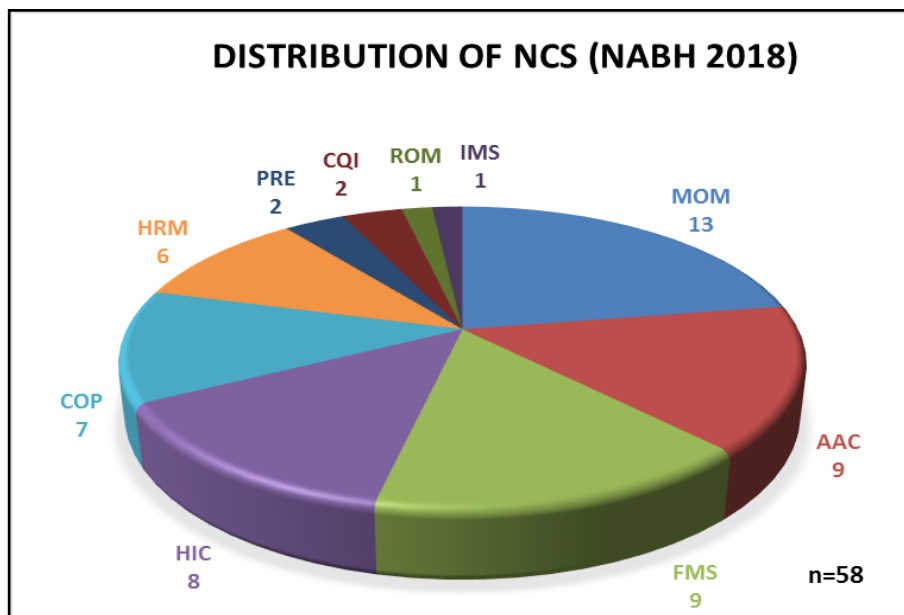
Table 1.1 shows the number of NABH standards in individual chapters and number of objective elements in each chapter

2. BACKGROUND

The process of accreditation though voluntary, is considered an important benchmark of quality and safety for insurers and patients for any healthcare organization. Accreditation follows a rigorous process stretching over a period of six months, during which, almost 683 measurable elements related to the care of patients, management of the hospital, training and education of staff and the continuum of care are tracked and optimized. It involves training, audits (both internal and external) and process optimization.

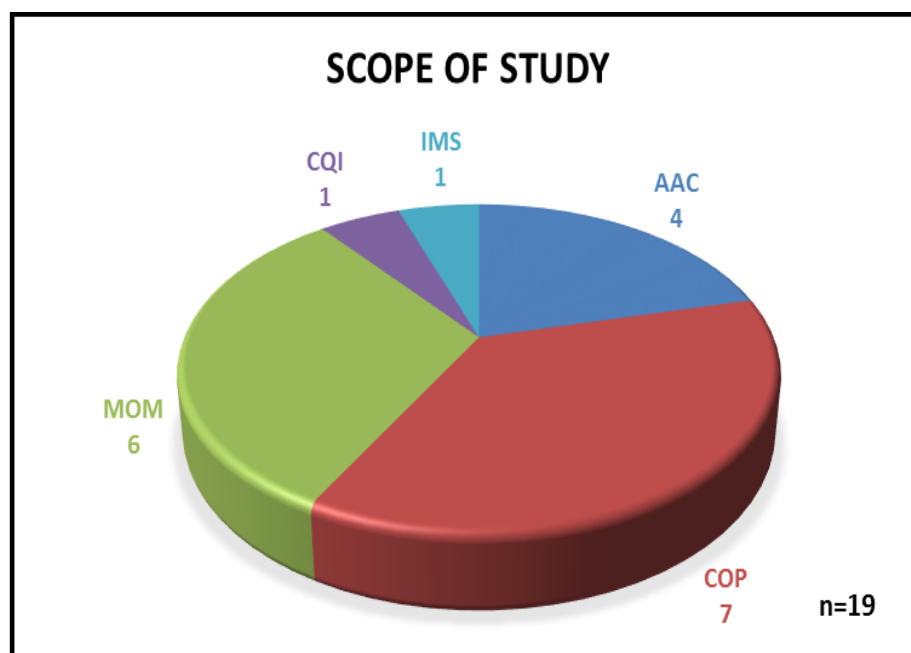
P.D. Hinduja Hospital and Medical Research Centre was accredited by NABH for the first time in 2009. P. D. Hinduja Hospital is the second hospital in the city to receive the NABH accreditation. The latest audit was done by NABH in June 2018. There were 58 non-compliances identified during the last audit. These non-compliances belonged to different departments like OPD, Casualty, ICU, Laboratory services, Radiology Services, MRD, etc. Out of 58 Non-compliances identified 19 were clinical non-compliances.

Graph 2.1 Distribution of non-compliances identified in NABH audit in 2018



Graph 2.1 shows distribution of non-compliances identified in NABH audit in 2018. Most of the non-compliances were from chapters MOM, AAC, FMS, HIC and COP

Graph 2.2 Distribution of clinical non-compliances identified in NABH audit in 2018



Graph 2.2 shows distribution of clinical non-compliances identified in NABH audit in 2018. The clinical non-compliances were mostly from chapters COP, MOM and AAC.

P.D. Hinduja Hospital have identified NABH champions from each department. These are employees with certain years of experience and are enthusiastic about learning and performing in their roles at work place. Training is conducted by the NABH core committee twice a year for these champions on NABH standards and new updates if any. These champions would train the other employees in their department on topics discussed in the training. The champions are given a data sheet to maintain record of the employees they have trained and content of training. These sheets are signed by the employees trained by NABH champions. P.D. Hinduja covers all employees in NABH standards by this method of training.

Table 2.1 List of clinical non-compliances identified during NABH audit in 2018

SN	STD/OE	OBSERVATIONS
1	AAC 1 c	Obstetrics is not in the scope of services provided by the HCO. Although this has been displayed at the OPD, there is no display at the IVF center.
2	AAC 1 c	The hospital does not have a positive pressure isolation room facility to care for patients with burns, and therefore does not admit such patients. This has not been displayed
3	AAC 4 h	Although the care plan is documented, it does not reflect the desired treatment outcome.
4	COP 2 c	Two identification marks are not recorded, uniformly, in medico-legal cases. This is required as per law.
5	AAC 2 f	There is no system in the OPD to ensure that access to the healthcare services is prioritized according to the clinical needs of the patient.
6	AAC 9 f	Turn-around time for the various imaging modalities and critical results have not been defined in radiology.
7	AAC 9 g	Critical results have been defined for MRI, but no register documenting the information to the patient care area, is maintained.
8	AAC 9 g	Documentary evidence of appropriate follow-up of a critical alert was not seen
9	COP 5 b	Evidence of appropriate training on cardiopulmonary resuscitation was lacking. There was no prompt response to initiate a code blue and start compressions in the code blue drills conducted during the assessment.
10	COP 5 c	There is no real time recording of events during a CPR
11	COP 9 h	Patients' relatives being informed about the progress of the ICU patients, is not evidenced
12	COP 17 a	The period of validity of a restraint order by the doctor has not been defined. The restraint form has the monitoring entries for 4 days, for a single order.
13	MOM 4 f	Phrases like "continue same treatment" and "continue all" were found in some of the doctors drug orders.
14	MOM 4 f, g	Medication orders are being transcribed from the physician's orders sheet to medication chart by the nurse, leading to the possibility of errors
15	MOM 4 g	Doctors' signatures were not evidenced in some case sheets
16	MOM 4 i	Verbal orders were found not countersigned by the doctors in one of the case records (1408565)
17	MOM 4 l	There is no reconciliation of medications when patients are being admitted
18	CQI 3 e	Data collection for monitoring the appropriate use of prophylactic

		antibiotics, does not include whether the antibiotic is used as per antibiotic policy.
19	IMS 5 c	Although there is a system to issue case sheets to doctors from MRD, the return of issued case records to doctors, is not appropriately captured

3. RATIONALE

Accreditation benefits all stake holders. Patients are the biggest beneficiary. Accreditation results in high quality of care and patient safety. The patients get services by credential medical staff. Rights of patients are respected and protected. Patient satisfaction is regularly evaluated. The staff in an accredited health care organisation are satisfied lot as it provides for continuous learning, good working environment, leadership and above all ownership of clinical processes. Accreditation to a health care organisation stimulates continuous improvement. It enables the organisation in demonstrating commitment to quality care. It raises community confidence in the services provided by the health care organisation. It also provides opportunity to healthcare unit to benchmark with the best. Finally, accreditation provides an objective system of empanelment by insurance and other third parties. Accreditation provides access to reliable and certified information on facilities, infrastructure and level of care. Closing these compliances is important as it will help P. D. Hinduja Hospital to benchmark with International quality providing world-class quality services to its patients.

Also the non-compliances identified in last audit will be assessed first for compliance during the next NABH surveillance audit in Dec 2019.

4. LITERATURE REVIEW

“Quality Management Systems and Accreditation are versatile tools to ensure equity in healthcare services and the meeting the increasing aspirations of people. Gap Analysis is a tool that helps an organization to compare its actual performance with expected/laid down standards. Gap analysis refers to a study where hospital compare the present policy, procedure, SOP’s, infrastructure with defined laid down standards of accreditation body, National Accreditation Board for Hospitals (NABH). It reveals the areas of improvement in the existing service system.”

“Time bound action plan catering for financial implications is required. Improvements in the structure, process & outcome should be meticulously planned and holistically addressed. Structural upgrades involving outsourcing contract to experts for structural changes in a time bound manner is strongly recommended. Process changes involving proper updated Standard Operating Procedures are a must and needs to be followed in letter and spirit. The hospital can have root cause analysis to assess the reason through specialist committees. Realistic, formal and on the job training and assessment should be encouraged to derive maximum benefits. Outcome should reflect the resulting impact of the changes introduced. The hospital can start a reporting system for finding out open and honest reporting. The actions to be taken for compliance with accreditation standards by the hospital are likely to impact the delivery of public health services positively, ensuring quality services, efficient outcomes with economy, risk management with patients, staff and visitors safety, and above all equity in healthcare services for the patients. The research will help the similar healthcare establishments in their efforts for improvement and accreditation. It will assist in evaluation and suggest for essential improvements in hospital manual. Assessment of the existing service delivery standards of any 75 bedded Tertiary Neuro Care Hospital along with gap analysis will get facilitated. The study will guide a 75 bedded Tertiary Neuro Care Hospital in charting the further course of action which will lead to compliance with accreditation standards of the NABH and institutionalization of a quality management system, leading further to a continuous quality improvement plan. Also, it will act as a relevant Template for assisting 75 bedded tertiary care hospital in its accreditation efforts.”

“NABH accreditation is not a one-time event, and the accreditation is not permanent. Instead, it is an ongoing process. The onus of continuously maintaining standards and continuously monitoring policies and practices falls on the hospital. Once a hospital gets accredited, the accreditation is valid for a defined period and is subject to change based on subsequent surveillance. NABH conducts a regular surveillance of the accredited organization (the first such is usually planned during the 2nd year). The accreditation will have to be renewed once the defined period of accreditation is completed.”

“The departments / areas were assessed based on the customized checklist for each one of them, the total number of checkpoints also vary for each of them. Based on the total

number of checkpoints the compliance of the departments / areas can be denoted in percentage. e.g. for one area if the total number of checkpoints is 70, and out of these 70, the observation was ‘Y’ (yes) for 58 of them, then the department/ area is 83% compliant.”

“The existing policies and procedures were found to be compliant with NABH.IMS and NABH.PRE standards. The analysis of medical records showed maximum compliance in Nurse’s records, Doctor’s order forms, Anaesthesia reports of Breast and Head & Neck Cancer and Radiotherapy Charts in Cervical Cancer. Overall documentation was found to be satisfactory as per the standards set by NABH. The study results revealed that the attention to compulsorily document patient clinical data in the respective forms of the medical records will enhance the completeness and accuracy of medical documentation of the hospital.”

5. METHODOLOGY

5.1 RESEARCH QUESTION

What is the current status of the clinical non-compliances identified during NABH audit conducted in 2018?

5.2 AIM

To review and close the clinical Non-compliances identified during NABH Audit conducted in 2018

5.3 OBJECTIVES

The study was conducted from 4th February to 3rd May 2019 (3 months). Data were collected by direct observation, information from employees and information from patients or relatives using semi-structured interview, patient records, HMIS and departmental registers. Data is collected through a structured data sheet.

The major objectives of the study were:

- To identify the gap in clinical non-compliances identified during last NABH audit in June 2018
- To identify the reasons for the non-compliances in the identified areas
- To identify possible solutions for improving the compliance of the identified areas

- To implement the solutions identified to improve the compliance in these areas

5.4 MATERIALS AND METHOHDSD

This is a descriptive cross-sectional study conducted in P. D. Hinduja Hospital and Research Centre, Mumbai from 4th February to 3rd May 2019. Samples will be selected for each non-compliances using the non-probability sampling techniques of convenient sampling. The samples included are the records of patients coming to P. D. Hinduja Hospital and Research Centre. Primary data will be collected by direct observation, information from employees and information from patients or relatives using semi-structured interview. Secondary data will be collected from hospital records like manuals, policies and procedure guidelines, patient records, HMIS and departmental registers. Current percentage of compliance will be calculated for the identified areas and also the reasons for non-compliance to corrective actions will be identified. Intervention to improve adherence to corrective actions will be identified and implemented. A post implementation audit will be conducted to determine the effectiveness of the interventions implemented. The dependent variable considered in this study are the documentation parameters and adherence to NABH standards. The independent variables considered are diagnosis of patient, prognosis of patient, availability of skilled human resources. Data will be analyzed using MS excel.

5.5 OPERATIONAL DEFINITIONS

Accreditation - Accreditation is independent recognition that an organization meets the requirements of governing industry standards

Non-compliance - Non-compliance is the failure or refusal to comply with something (such as a rule or regulation)

Gap Analysis - Gap analysis involves the comparison of actual performance with potential or desired performance

Closure - During the follow-up audit, the auditor checks the corrective action that has been implemented for each non-compliance found during the original audit.

5.6 ETHICAL CONSIDERATION

- All the ethical issues have been considered while collecting data for this study.
- Permission from hospital authorities to carry out the study.
- Confidentiality of the data will be maintained.

6. RESULTS

19 Clinical non-compliances were assessed for their adherence to NABH standards. The primary audit showed that out of 19 non-compliances, 3 were closed as they were adhering to NABH standards and showed 100% compliance to the corrective actions.

16 open non-compliances were studied in details for the corrective actions to be followed, adherence to corrective actions. Discussions were held with departmental representatives and strategies to achieve adherence to corrective actions were planned. These strategies were implemented and post implementation audit was conducted to measure the effectiveness of the corrective actions taken.

Graph 6.1 Clinical non-compliance status as on Feb 2019

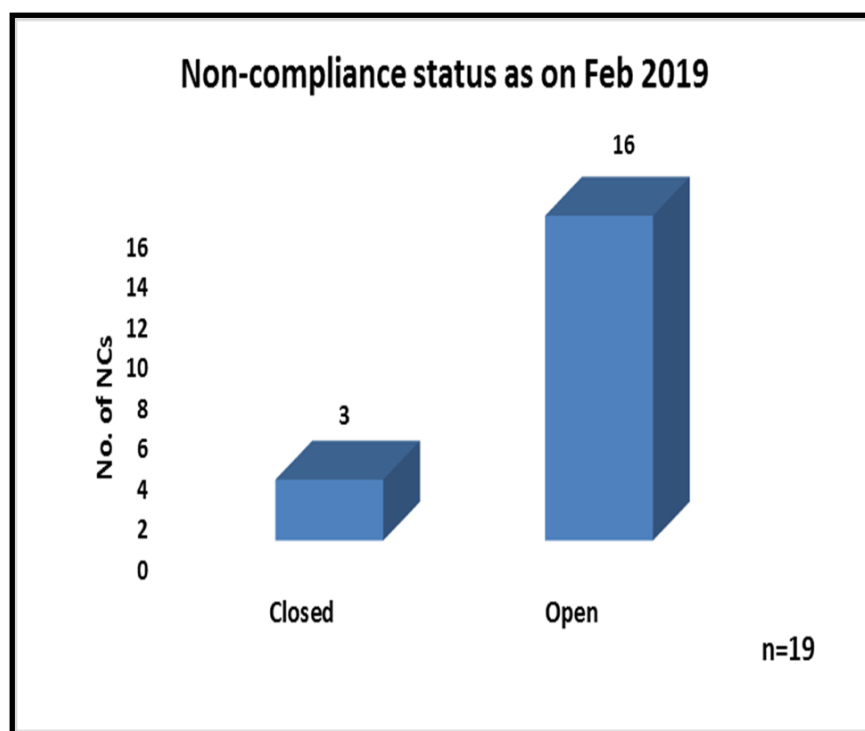


Table 6.1 List of clinical non-compliances closed as on Feb 2019, their corrective actions taken and findings of audit conducted in Feb 2019

SN	STANDARD/ OE	ASSESSOR'S OBSERVATION	CORRECTIVE ACTION TAKEN	OBSERVATION
1	COP 17 a	The period of validity of a restraint order by the doctor has not been defined.	Restraint policy updated for doctors - review after 24 hours	Each of 72 orders for restraints audited had restrain form and consent by relatives
2	COP 9 b, c	Discharge criteria for ICU, based on physiological parameters, have not been defined, and consequently the staff are not aware	Protocol for discharge from ICU has been updated to include physiological based parameters /criteria. ICU doctors have been updated regarding the same	Protocol for discharge from ICU present in the ICU manual with physiological criteria for discharge
3	CQI 3 e	Data collection for monitoring the appropriate use of prophylactic antibiotics, does not include whether the antibiotic is used as per antibiotic policy.	The compliance of the prophylactic administration of prophylactic antibiotic within specific time would be done on a monthly basis by the OT manager. The appropriateness of the antibiotic is captured and presented on a yearly basis by the infection control team	OT Manager maintains monthly record of compliance to administration of prophylactic antibiotic within specific time and appropriateness of the antibiotic is captured by HIC team annually

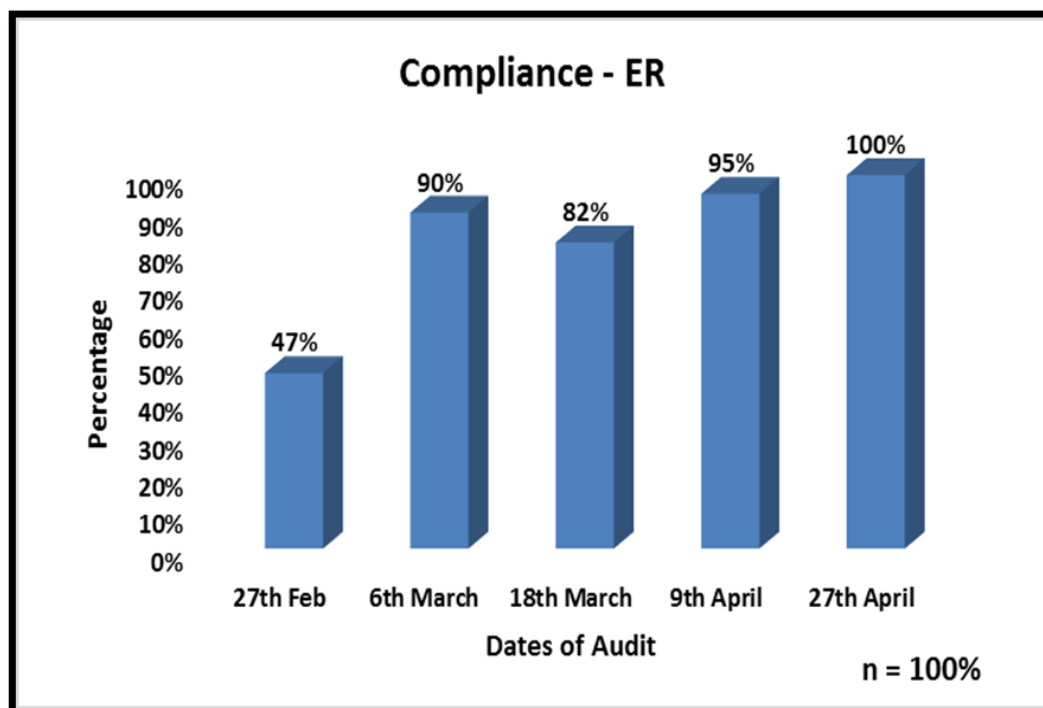
Table 6.2 Details of clinical non-compliances closed as on April 2019

SN	STANDARD / OE	ASSESSOR'S OBSERVATION	CORRECTIVE ACTION TAKEN	OBSERVATION	CURRENT STATUS	RECOMMENDATIONS
1	COP 2 c	Two identification marks are not recorded, uniformly, in medico-legal cases. This is required as per law	The protocol for two identification marks in the medico-legal record is already in place. However, since non-compliance was done - a refresher training for the protocol re-enforcement was done on 8/6/18 and 12/6/18 for the emergency doctors - also to ensure practice compliance hereafter; the associate consultant - emergency shall be responsible to counter-check every patient's data entry done in the MLC register on daily basis. Suitable amendment to this effect done in the A&E department manual.	Doctors are aware about the protocol. 47% compliance (27th Feb) to documentation of two identification marks/ thumb impressions. On 6th March, 90% Compliance found. About 82% compliance as on 18th march. 95% Compliance as on 9th April. (N=100%)	Closed. 100% Compliance	• Addition of printed headings for thumb impressions in MLC register. • Checking MLC register for completion by Asst. Consultant-ER • Counter checking of MLC register for completion by Mr. Ravi Kenkre on daily basis. • Periodic Audits by quality department for adherence to protocol.

SN	STANDARD / OE	ASSESSOR'S OBSERVATION	CORRECTIVE ACTION TAKEN	OBSERVATION	CURRENT STATUS	RECOMMENDATIONS
2	AAC 9 f, g	Critical results have been defined for MRI, but no register documenting the information to the patient care area is maintained.	Standardized 'critical result reporting register' maintained for all sections including MRI. Circular stating the importance of critical reporting acknowledged by all doctors	MRI - Critical Register present but not filled since May 2018. JMS are responsible for filling the register. Could not find other department's registers.	Closed. Critical register maintained since month of Feb 2019 in USG, CT and MRI departments.	• Use of software to capture the information by integrating CARE, PACS and use of tablet to inform the respective doctor.
3	COP 5 b	Evidence of appropriate training on cardiopulmonary resuscitation was lacking. There was no prompt response to initiate a code blue and start compressions in the code blue drills conducted during the assessment.	CPR training by dedicated CPR training team at least twice a month. All doctors and nurses will undergo refresher course annually, HR L&D team shall coordinate and ensure all relevant staff are covered.	CPR Training did not happen in last two months due to POSH training (Feb & March). Nurses are aware of CPR code activation process.	Closed. Resumed CPR training every fortnight since 22 nd March.	• Refresher trainings annually • Uploading CPR training video on intranet • Periodic Mock drills

SN	STANDARD / OE	ASSESSOR'S OBSERVATION	CORRECTIVE ACTION TAKEN	OBSERVATION	CURRENT STATUS	RECOMMENDATIONS
4	IMS 5 c	Although there is a system to issue case sheets to doctors from MRD, the return of issued case records to doctors, is not appropriately captured. As per a report generated, more than 2000 case records have not been returned since January, 2018. Some of them have been found on physical verification in the storage area.	All the unreturned files were cleared as per the attached report for the period since jan'2018 to 1st june'2018. There are 31 cases still pending which are related to deficiency completion, indoor cases and court cases. Initiated a methodology to send a note to the respective consultants with the list of unreturned files after 2 days of patient's consultation.	There is no documentation of protocol for tracing the missing files. The missing files are traced when the patient comes for next consultation or gets admitted in PDHH. Reminders are sent to Consultants every 15 days to return the files to MRD.	Closed. Protocol for tracing missing files updated in MRD Manual	Periodic audit for compliance to the given protocol

Graph 6.2 Compliance to documentation of two identification marks in MLC register



Graph 6.2 shows percentage compliance to documentation of two identification marks in MLC register in Casualty department. The corrective action taken for this non-compliance is to take both thumb impressions in MLC register in case there are no evident identification marks for the patient. Also the Associate Consultant was made responsible for checking the compliance to this rule in Casualty department. The first audit showed 47% compliance to documentation of two identification marks or two thumb impressions. Discussions were held with the representative from casualty department and strategies were formed to improve adherence to the documentation of identification marks. The strategies were implemented like departmental meeting with the JMS who is responsible to document the data, regular checking by casualty manager for compliance to documentation and marking the area where the thumb impressions need to be taken in the MLC register in case of lack of identification marks. A repeat audit was done post implementation of interventions which showed 90% compliance to documentation of two identification marks or two thumb impressions. Subsequent audits showed improvement in compliance to the same. The last audit showed 100% compliance to documentation of two identification marks or two thumb impressions in casualty department. Thus then non-compliance was closed.

Table 6.3 Details of clinical non-compliances In-process as on April 2019

SN	STANDARD / OE	ASSESSOR'S OBSERVATION	CORRECTIVE ACTION TAKEN	OBSERVATION	CURRENT STATUS	RECOMMENDATIONS
1	AAC 1 c	Obstetrics is not in the scope of services provided by the HCO. Although this has been displayed at the OPD, there is no display at the IVF centre	This was closed during assessment. the following posters were displayed - 'WE DO NOT HAVE OBSTETRIC/ MATERNITY SERVICES' PUT UP IN IVF CENTRE'	Mentioned signage is not displayed in IVF Centre	Submitted bilingual content for the signage to marketing department after consultation with respective department	One time closure
2	AAC 1 c	The hospital does not have a positive pressure isolation room facility to care for patients with burns, and therefore does not admit such patients. This has not been displayed	'WE DO NOT ADMIT BURN PATIENTS' put up in casualty	Mentioned signage in English language present at entrance of Casualty	Submitted bilingual content for the signage to marketing department after consultation with respective department	One time closure

SN	STANDARD / OE	ASSESSOR'S OBSERVATION	CORRECTIVE ACTION TAKEN	OBSERVATION	CURRENT STATUS	RECOMMENDATIONS
3	AAC 9 f, g	Turnaround time for the various imaging modalities and critical results have not been defined in radiology	The following posters were displayed in imaging - DISPATCH TIME FOR IMAGING REPORTS	Turnaround time for imaging tests are defined. Temporary A4 size print-out for the same is displayed near X-ray department.	Submitted content for the signage to marketing department after consulting the respective department	One time closure

Table 6.3 shows the list of non-compliances that are in process and soon will attain the closure status. Discussions were held with department heads and the content of signages, number of signages, location of display of signages were decided. Marketing team was approached for printing and display of signages. These are one time closures and need not have a strategy plan to maintain the compliance.

Table 6.4 Details of clinical non-compliances Open as on April 2019

SN	STANDARD / OE	ASSESSOR'S OBSERVATION	CORRECTIVE ACTION TAKEN	OBSERVATION	CURRENT STATUS	RECOMMENDATIONS
1	AAC 2 f	There is no system in the OPD to ensure that access to the healthcare services is prioritised according to the clinical needs of the patient.	To prioritize access to healthcare services in the OPD as per the clinical needs of the patients, nursing and other hospital staff is trained to recognize the signs and call for assistance in form of the rapid response team and if required the CPR team. in addition to the same, posters are put up in the OPD to create awareness for patients to ask for help - 'IN CASE YOU REQUIRE URGENT MEDICAL CARE, PLEASE CONTACT THE NURSE AT YOUR LOCATION'	Vital parameters of OPD patients are not checked on arrival in OPD. Weight is checked for patients who can stand on their own. Nurses assess the patients by observing when they come to OPD with the voucher and while measuring their weight. Nurses could not specify the parameters they check during visual assessment. Patients on wheel chair or stretcher are kept near the consultant's cabin in the corridor. Nurses are aware about the activation process for code blue and RRT. Mentioned poster is put up only in two locations (waiting area on 2nd floor - 3rd and 4 th Wing.	27 th April 2019: Nurses observe– general appearance, gait, breathing pattern of patient. Patients on wheelchair and stretcher are observed on arrival. Relatives inform nurses in case of deterioration in patient's condition. Additional mentioned signage to be displayed in waiting areas. Submitted bilingual content for the signage to marketing dept.	• Checking vitals of all patients on wheelchair and stretcher. • Periodic audit by quality department for the same.

2	AAC 9 g	Documentary evidence of appropriate follow-up of a critical alert was not seen	Based on the recommendation , process flow guidelines for - appropriate follow-up of the critical alerts/ results (with documentary evidence) have been formulated, communicated and implemented in all clinical fields of the hospital	Laboratory follows guidelines for critical result follow up. On the floors, 7% - Complete 40% - Partially Complete and 53% - Incomplete records (N = 15)	Not Closed. Out of 23 Samples, Complete – 52%, Partial Complete – 4%, Incomplete- 43%	- Periodic audit for adherence to guidelines - Periodic training on guidelines to be followed
3	COP 5 c	There is no real time recording of events during a CPR	Real time recording of the CPR activities will be done for all CPR calls from the time the CPR call is given till completed as per pre-defined checklist which will be a part of the CPR form.	It has not been decided who is responsible for the documentation in the team.	Not Closed. Escalated to DPS Office. DPS office forwarded the message to consultants. They will be discussing it in MSAC	Provision of name tags mentioning role of each team member in CPR Team. E.g. Airway, Chest Compressions, IV Medications, Documentation, etc.

SN	STANDARD / OE	ASSESSOR'S OBSERVATION	CORRECTIVE ACTION TAKEN	OBSERVATION	CURRENT STATUS	RECOMMENDATION S
----	---------------	------------------------	-------------------------	-------------	----------------	------------------

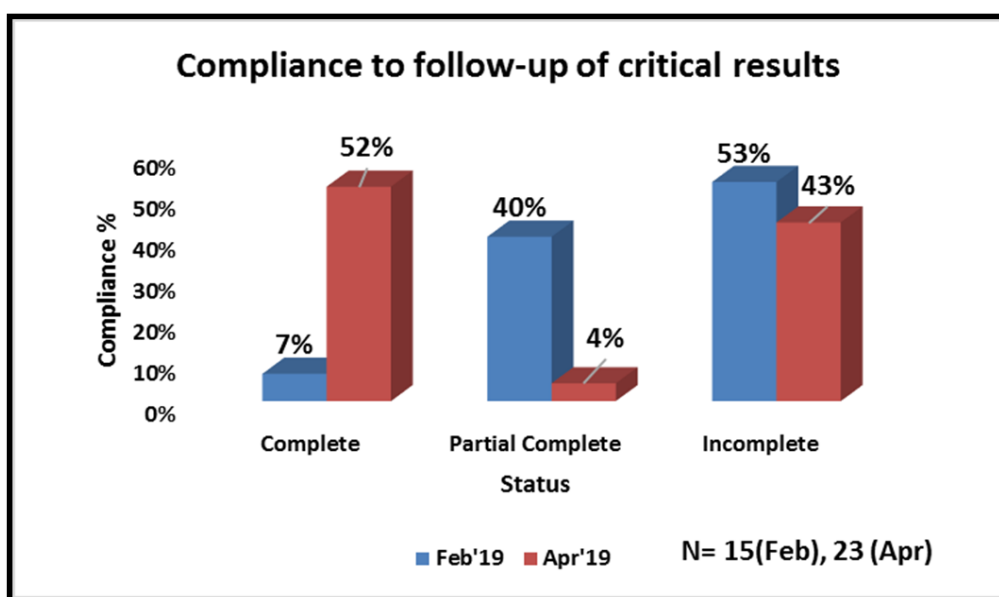
3	COP 9 h	Patients' relatives being informed about the progress of the ICU patients, is not evidenced	The ICU doctors will note on the patient record on a daily basis regarding the update given to the patient/ patient relative regarding the patient condition at least once a day. In critical cases of in case of deterioration of patient condition or refusal of treatment, this will be informed to the patient relative and the same documented in detail on the patient record.	Out of the 20 cases audited, two of them had documentation of deterioration in patient's condition and none of them had documentation of daily patient's condition.	Not Closed. Escalated to DPS Office. DPS office forwarded the message to consultants. They will be discussing it in MSAC	Addition of printed statement mentioning update given to relatives about patient's condition in daily ICU note sheet with space for relative's signature.
4	MOM 4 f	Phrases like "continue same treatment" and "continue all" were found in some of the doctors drug orders	communication sent by director professional services to all hospital doctors endorsing the requirements	Out of the 91 Case sheets audited, phrases like "CT all", "CT same" were found in 23% case sheets.	Not Closed. Escalated to DPS Office. DPS office forwarded the message to consultants. They will be discussing it in MSAC	

SN	STANDARD / OE	ASSESSOR'S OBSERVATION	CORRECTIVE ACTION TAKEN	OBSERVATION	CURRENT STATUS
5	AAC 4 h	Although the care plan is documented, it does not reflect the desired treatment outcome	Communication sent by Director Professional Services to all hospital doctors endorsing the requirements	ICU - 87% (N=30) WARD - 55% (N=65) ER - 0% (N=26) Compliance Doctors write plan of care/action in the initial assessment sheet but fail to mention the desired outcome.	Not Closed. Escalated to DPS Office. DPS office forwarded the message to consultants. They will be discussing it in MSAC
6	MOM 4 f, g	Medication orders are being transcribed from the physician's orders sheet to medication chart by the nurse, leading to the possibility of errors	To reduce chances of medication error, the ICU doctors will continue to prescribe their orders on ICU drug order sheet but they will also counter sign and validate (with date and time), the drug orders transcribed by the nursing staff on the drug administration form ICU, on the same day.	ICU Doctors prescribes drugs on drug order sheet. Compliance to use of capital letters for prescription is about 71%, doctor's signature is 67%. Counter sign of doctors was present on drug administration sheet in 60% cases (ICU).	Not Closed. Escalated to DPS Office. DPS office forwarded the message to consultants. They will be discussing it in MSAC

SN	STANDARD / OE	ASSESSOR'S OBSERVATION	CORRECTIVE ACTION TAKEN	OBSERVATION	CURRENT STATUS
7	MOM 4 g	Doctors' signatures were not evidenced in some case sheets	Communication sent by director professional services to all hospital doctors endorsing the requirements	Out of the 91 case sheets audited, 71% had doctor's signature on it, 99% had date documented and 16% had time documented on it.	Not Closed. Escalated to DPS Office. DPS office forwarded the message to consultants. They will be discussing it in MSAC
8	MOM 4 i	Verbal orders were found not countersigned by the doctors in one of the case records	Communication sent by director professional services to all hospital doctors endorsing the requirements	Out of 13 verbal orders audited, only 4 were countersigned by doctor	Not Closed. Escalated to DPS Office. DPS office forwarded the message to consultants. They will be discussing it in MSAC

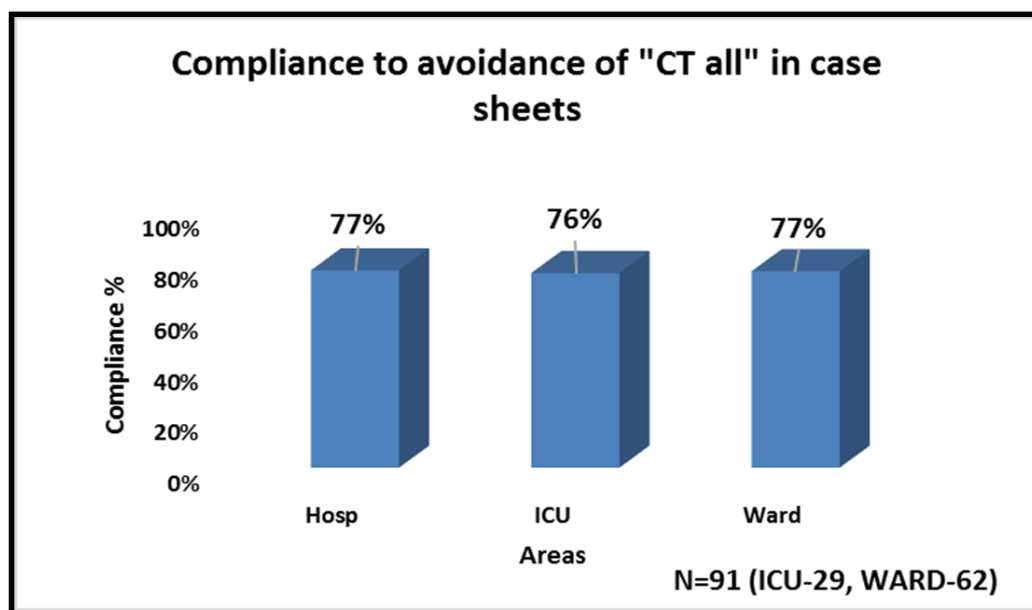
SN	STANDARD / OE	ASSESSOR'S OBSERVATION	CORRECTIVE ACTION TAKEN	OBSERVATION	CURRENT STATUS
9	MOM 41	There is no reconciliation of medications when patients are being admitted	Reconciliation of medications when the patients are admitted are done in two ways in PDHH. Initial assessment of all admitted patients is done by the junior medical staff (JMS) within two hours of admission. The JMS take down the history including any details of current medications being taken by the patient. The nursing staff will not administer any medication to the patient without the doctor's prescription which is done only after the initial assessment is complete. If the patient is currently on any medication, the nurses will also make a record of the same in the nursing kardex.	14% Compliance in documentation of medication history in initial assessment sheet. All 32 nursing kardex audited recorded medications taken by patients before admission.	Not Closed. Escalated to DPS Office. DPS office forwarded the message to consultants. They will be discussing it in MSAC

Graph 6.3 Comparison of Compliance to follow-up of critical results



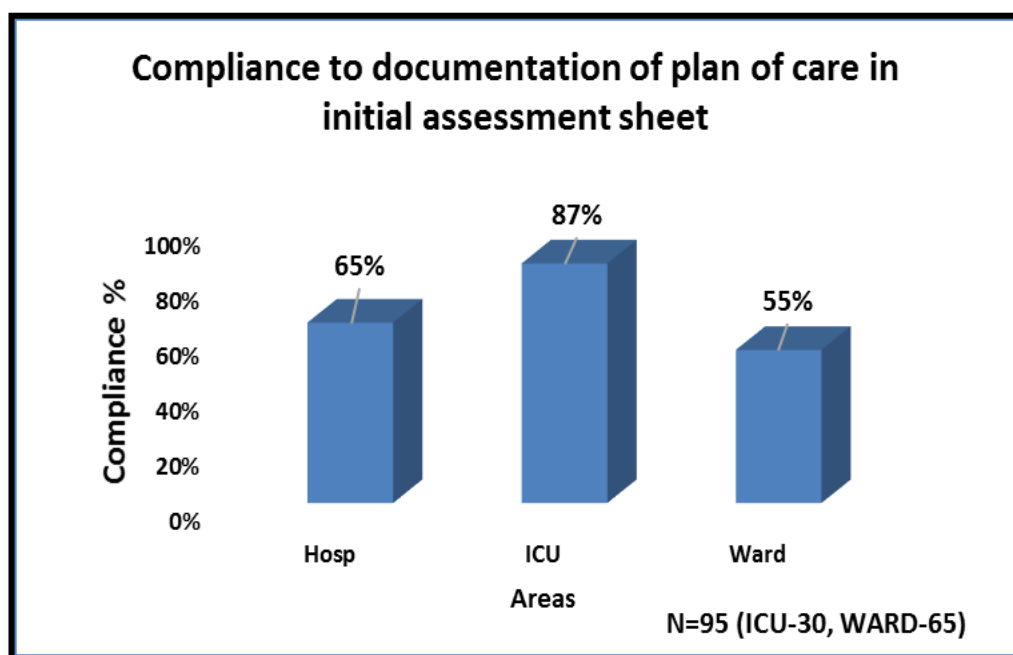
Graph 6.3 shows the comparison of compliance percentage of follow-up of critical results before and after implementing the interventions. The audit conducted before implementation of interventions showed 7% complete compliance to follow up of critical results in wards. This report was discussed with the nursing department and emphasis on documentation of critical result reporting was done. The nursing department conducted training for their nurses on documentation of critical result and its reporting. Post implementation of intervention, audit showed 45% increase in complete compliance to follow-up of critical results.

Graph 6.4 Comparison of Compliance to follow-up of critical results among ICU and Wards



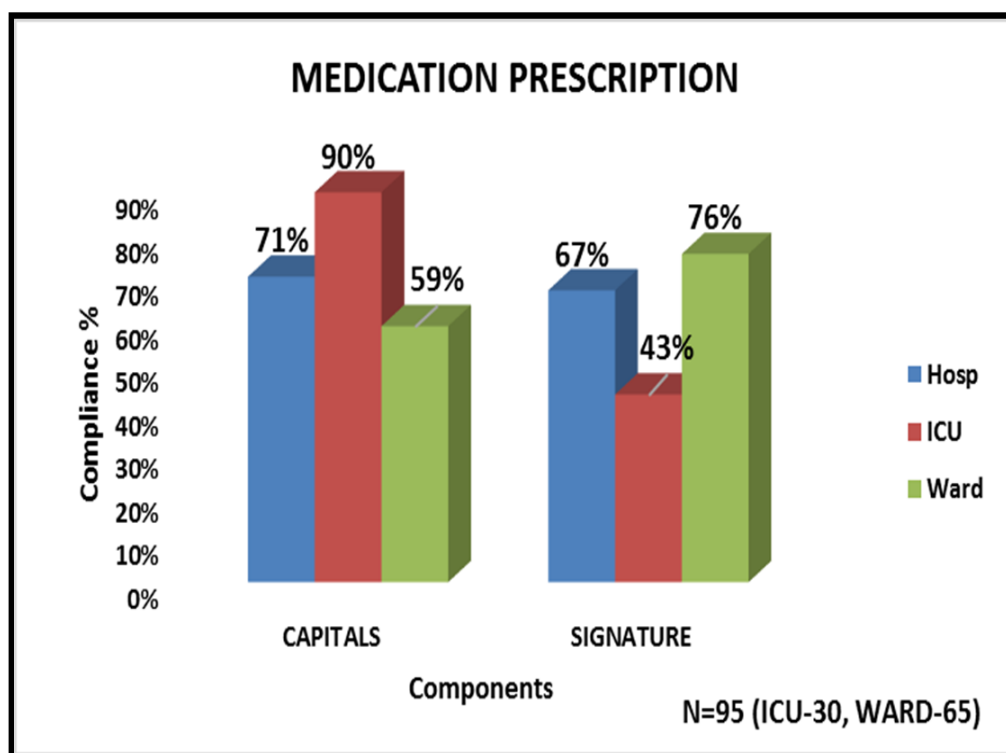
Graph 6.4 shows comparison of adherence to avoiding terms like “CT all”, “CT same”, “Continue all”,etc in wards and ICU. The graph reflects that there is no considerable difference in compliance between ICU and wards. 23% of case sheets assessed, had terms like “CT all”, “CT same”, “Continue all” written in it. The consultants and JMS in department are responsible for documentation in case sheets. This deficiency in compliance has been brought to notice of the DPS and they have planned to discuss this issue in their meeting with speciality heads and consultants.

Graph 6.5 Comparison of Compliance to documentation of plan of care in initial assessment sheet among ICU and Wards



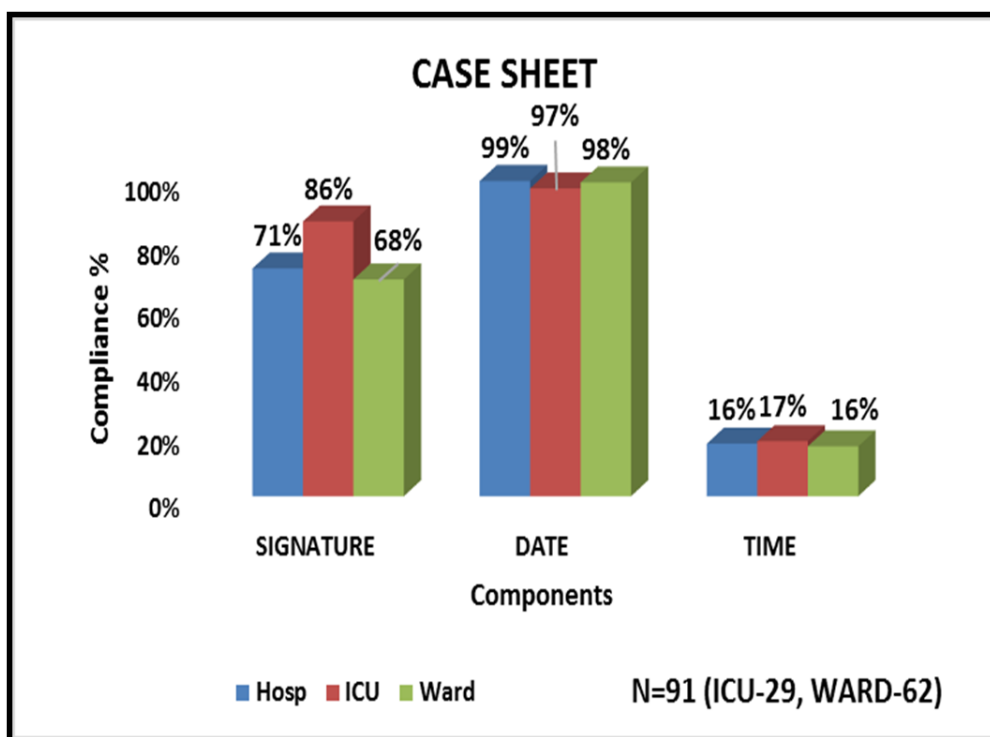
Graph 6.5 reflects comparison of Compliance to documentation of plan of care in initial assessment sheet among ICU and wards. The Compliance in ICU is found to be better than that of wards by 22%. The compliance to the same in casualty department is zero percent. Documentation of plan of care is done by JMS on initial assessment of patient i.e within 2 hours of patient's arrival in the department. This deficiency in compliance has been brought to notice of the DPS and they have planned to discuss this issue in their meeting with speciality heads and consultants.

Graph 6.6 Comparison of Compliance to use of Capital letters and doctors signature on medication sheet among ICU and Wards



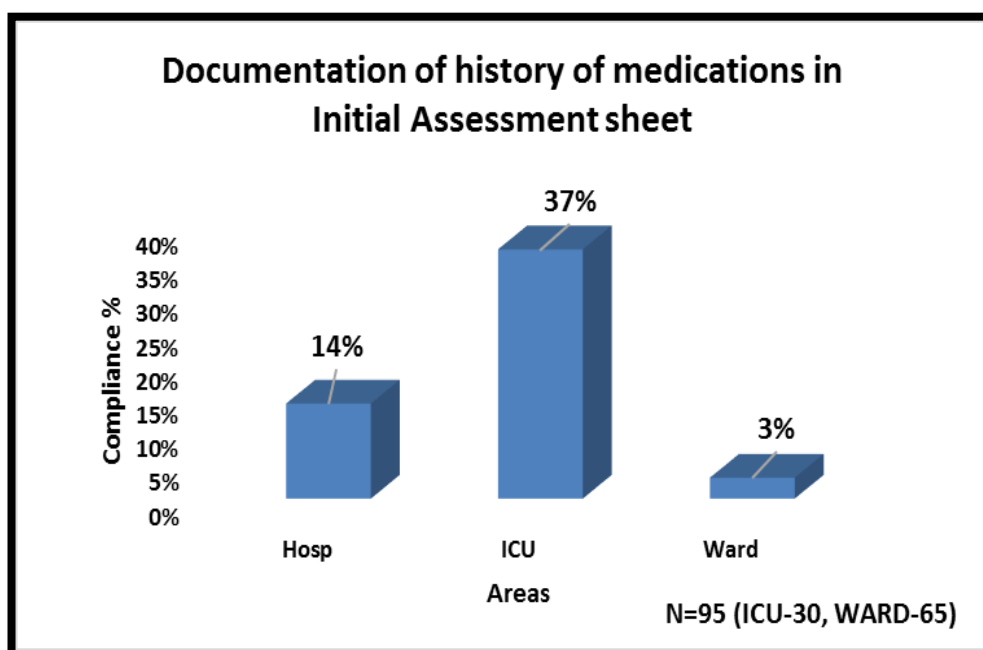
Graph 6.6 shows comparison of compliance to use of capital letters and doctors signature on medication sheet among ICU and Wards. It shows that the use of capital letters is more in ICU as compared to wards i.e. by 31%. However signatures of doctors were present in wards is more than that of ICU i.e. by 33%. Even though the medication sheets have water print on them mentioning use of capital letters while prescribing medication in order to prevent prescription error, the compliance is very low in wards. This deficiency in compliance has been brought to notice of the DPS and they have planned to discuss this issue in their meeting with speciality heads and consultants.

Graph 6.7 Comparison of Compliance to documentation of time, date and doctors signature in case sheets among ICU and Wards



Graph 6.7 shows comparison of compliance to documentation of time date and doctor's signature in case sheets among ICU and Wards. The compliance to documentation of date is almost 99% in the hospital and there is no considerable difference in compliance to these parameters among ICU and wards. Compliance to Doctor's signature is more in case sheets of ICU patients than that of ward patients. I.e. by 18%. Compliance to documentation of time is low in ICU and ward both. There is no considerable difference in their adherence to documentation of time in case sheets. Consultants and JMS are responsible to record the above mentioned parameters in patient's case sheets. These deficiencies in compliance has been brought to notice of the DPS and they have planned to discuss this issue in their meeting with speciality heads and consultants.

Graph 6.8 Comparison of Compliance to documentation of history of medications in Initial assessment sheet among ICU and Wards



Graph 6.8 shows comparison of compliance to documentation of history of medications in initial assessment sheet among ICU and Wards. It is found that the compliance to documentation of history of medications in initial assessment sheet is better in ICU than that of wards i.e. by 34%. There is zero percent compliance to the same in casualty department. JMS is responsible for documentation of history of medications in initial assessment. Initial assessment sheet is filled within 2 hours of patient's arrival in the department. These deficiencies in compliance has been brought to notice of the DPS and they have planned to discuss this issue in their meeting with speciality heads and consultants.

7. DISCUSSION

The non-compliance in OPD in relation to access to healthcare prioritized as per clinical needs of the patient is said to be because of lack of personal and infrastructural restrictions. Although vital signs are not checked for patients consulting any consultants, the nurses check vital signs of patient visiting two consultants in particular as the consultant demands it. The reason for not checking vitals of all the patients is said to be due to lack of manpower. Also the patients who come to OPD on wheelchair or stretcher, even their vital signs are not checked. On an average, 20% times the doctors and nurses are not aware of the wheelchair bound patients or patients on stretcher waiting in OPD. It is recommended at least vitals be checked for the patients who come on wheelchair or stretcher to OPD as they are vulnerable.

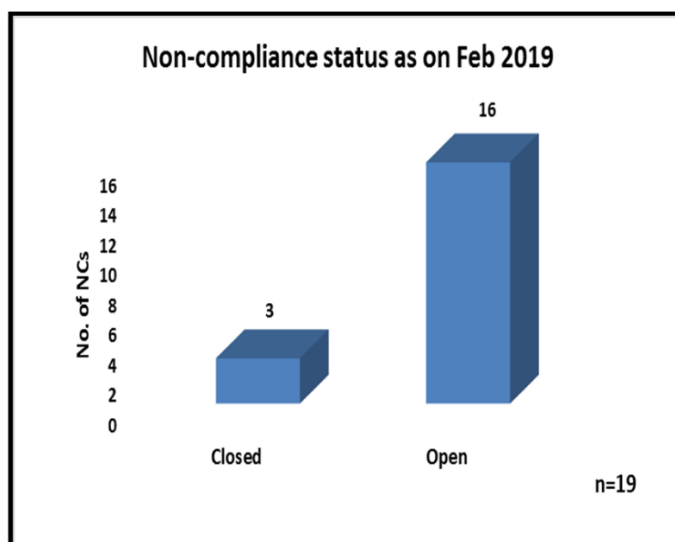
Non-compliance due to lack of follow-up of critical result can be minimized by developing a methodology for reporting and documenting critical results in wards. The nurses must be trained to follow the format while documenting so that no parameters are missed out in documentation.

Non-compliance for lack of real time recording of CPR events is said to be because it has not been decided who among the team members or the employee from the floors is responsible for documentation of the events during CPR. The roles of the team members and the floor employees must be defined and one member has to be given responsibility of documentation of events during CPR.

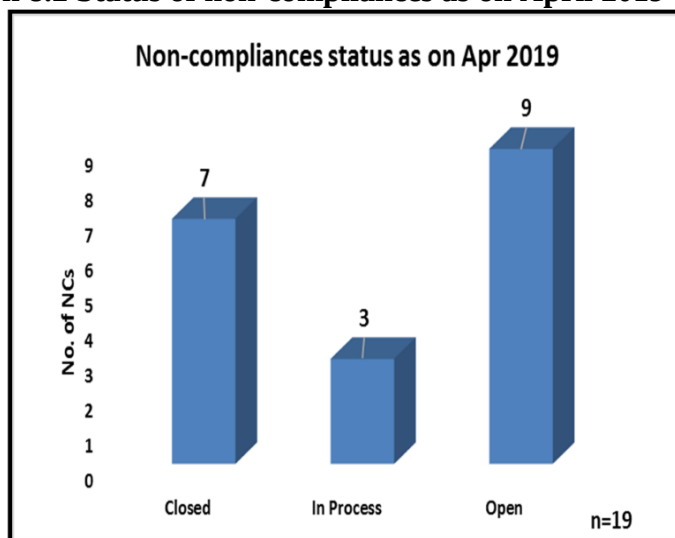
Out of the 19 clinical non-compliances, 9 are still open. Most of the non-compliances are due to lack of adherence to the documentation protocols. The non-adherence is said to be mainly because of high turnover rates among JMS. Also not all JMS undergo the induction programme. This results in discrepancy in documentation and non-compliance to NABH standards. The JMS on joining need to undergo induction training on parameters of documentation. Also periodically, emphasis must be done on adherence to documentation protocol. Use of HIS software could minimize the documentation errors to large extent.

8. CONCLUSION

Graph 8.1 Status of non-compliances as on Feb 2019



Graph 8.2 Status of non-compliances as on April 2019



Graphs 8.1 and 8.2 shows the status of clinical non-compliances on Feb 2109 and April 2019. In the beginning of the study in Feb 2019, out of the 19 clinical non-compliances 3 were closed and had 100% compliance whereas 16 were open. At the end of study in April 2019, out of the 16 open clinical non-compliances, 4 were closed and had 100% compliance, 3 were in process of closure and 9 were still open. The open non-compliances were mainly due to lack of adherence to documentation protocols by doctors. The deficiencies were informed to DPS office who is the head of professional services and they have planned to discuss this issue in their meeting with speciality

heads and consultants to emphasis on adherence to documentation protocols. An audit is planned to assess the compliance after the mentioned meeting. The results will be compared with the results of audit conducted before the meeting.

8.1 RECOMMENDATIONS

To improve adherence to documentation

- Positive reinforcement through SMS by identifying the departments with maximum compliance to documentation on monthly or quarterly basis.
- Acknowledging the departments/ team adhering to documentation protocol during events like Quality week
- Monthly programmes emphasising on one aspect of documentation.
 - E.g. A month emphasising on use of Capital letters on drug order sheet,
 - A month emphasising on reconciliation of medications.
- HIS for documentation

To improve adherence to documentation of identification marks in MLC register

- Addition of printed headings for thumb impressions in MLC register.
- Checking MLC register for completion by Asst. Consultant- ER
- Counter checking of MLC register for completion by Casualty Manager on daily basis.
- Periodic Audits by quality department for adherence to protocol.

To improve critical result documentation in radiology department

- Use of software to capture the information by integrating CARE, PACS and use of tablet to inform the respective doctor.

To improve the effectiveness of CPR training

- Refresher trainings annually
- Uploading CPR training video on intranet
- Periodic Mock drills

To ensure compliance to return of issued files protocol in MRD

- Periodic audit for compliance to the given protocol

To ensure access to healthcare is prioritized in OPD

- Checking vitals of all patients on wheelchair and stretcher.
- Periodic audit by quality department for the same.

To ensure real time recording of events during a CPR

- Provision of name tags mentioning role of each team member in CPR Team. E.g. Airway, Chest Compressions, IV Medications, Documentation, etc.

To ensure patients relatives being informed about ICU patient's progress is documented

- Addition of printed statement mentioning update given to relatives about patient's condition in daily ICU note sheet with space for relative's signature.

9. BIBLIOGRAPHY

1. Dr. Jasmeen Bawa, and Dr. Susmit Jain. Gap Analysis in Internal Assessment against National Accreditation Board for Hospitals & Healthcare Providers (NABH) Standards in 200+ Bedded Super Specialty Hospital. *International Journal of Advance Research And Innovative Ideas In Education* [Internet]. 2017 [Cited : 22 April 2019]; 3(5) : 18-31.
2. NABH ACCREDITATION — HLPPT. 2019 from: <https://hlppt.org/nabh-accreditation/>
3. David S, Valas S. National Accreditation Board for Hospitals and Healthcare Providers (NABH) Standards: A review. *Current Medical Issues*. 2017;15(3):231.
4. Arora D, Doke D. Compliance Percentage Assessment to NABH Standards for Capacity Building in a Tertiary Care Hospital in India. *Paripex - Indian Journal Of Research*. 2012;3(4):186-192.
5. Sinha, R. and Shenoy, N. (2013). Assessment of Oncology Medical Records as per NABH Standards. *Journal of Health Management*, 15(3), pp.329-343.
6. Quality Council of India. National Accreditation Board for Hospitals & Healthcare Providers (NABH). Available from: <http://www.qcin.org>.
7. Devkaran S, O'Farrell PN. The impact of hospital accreditation on quality measures: An interrupted time series analysis. *BMC Health Serv Res* 2015;15:137.
8. Jovanovic B. Hospital accreditation as method for assessing quality in healthcare. *Oncology* 2005;13:156-7.
9. Brubakk K, Vist GE, Bukholm G, Barach P, Tjomsland O. A systematic review of hospital accreditation: The challenges of measuring complex intervention effects. *BMC Health Serv Res* 2015;15:280
10. Birg, L. and Voowinkel, J. (2015). Minimum Quality Standards and Non-Compliance. *SSRN Electronic Journal*.