STUDY TO ANALYSE PRE AND POST NABH STANDARD IMPLEMENTATION SCENARIO OF A MULTI-SPECIALITY HOSPITAL FOR ENTRY LEVEL CERTIFICATION

Under the
Guidance of
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Introduction

- What is quality?

The standard of something as measured against other things of a similar kind; the degree of excellence of something.

- What is Quality in Healthcare?

Quality in healthcare means providing the care the patient needs when the patient needs it, in an affordable, safe, effective manner.

- What are Quality standards?

Documents that provide requirements, specifications, guidelines, or characteristics that can be used consistently to ensure that materials, products, processes, and services are fit for their purpose.

- What is NABH?

NABH is a constituent board of Quality Council of India, set up to establish and operate accreditation programme for healthcare organizations. Formed in 2005, it is the principal accreditation for hospitals in India.

Introduction

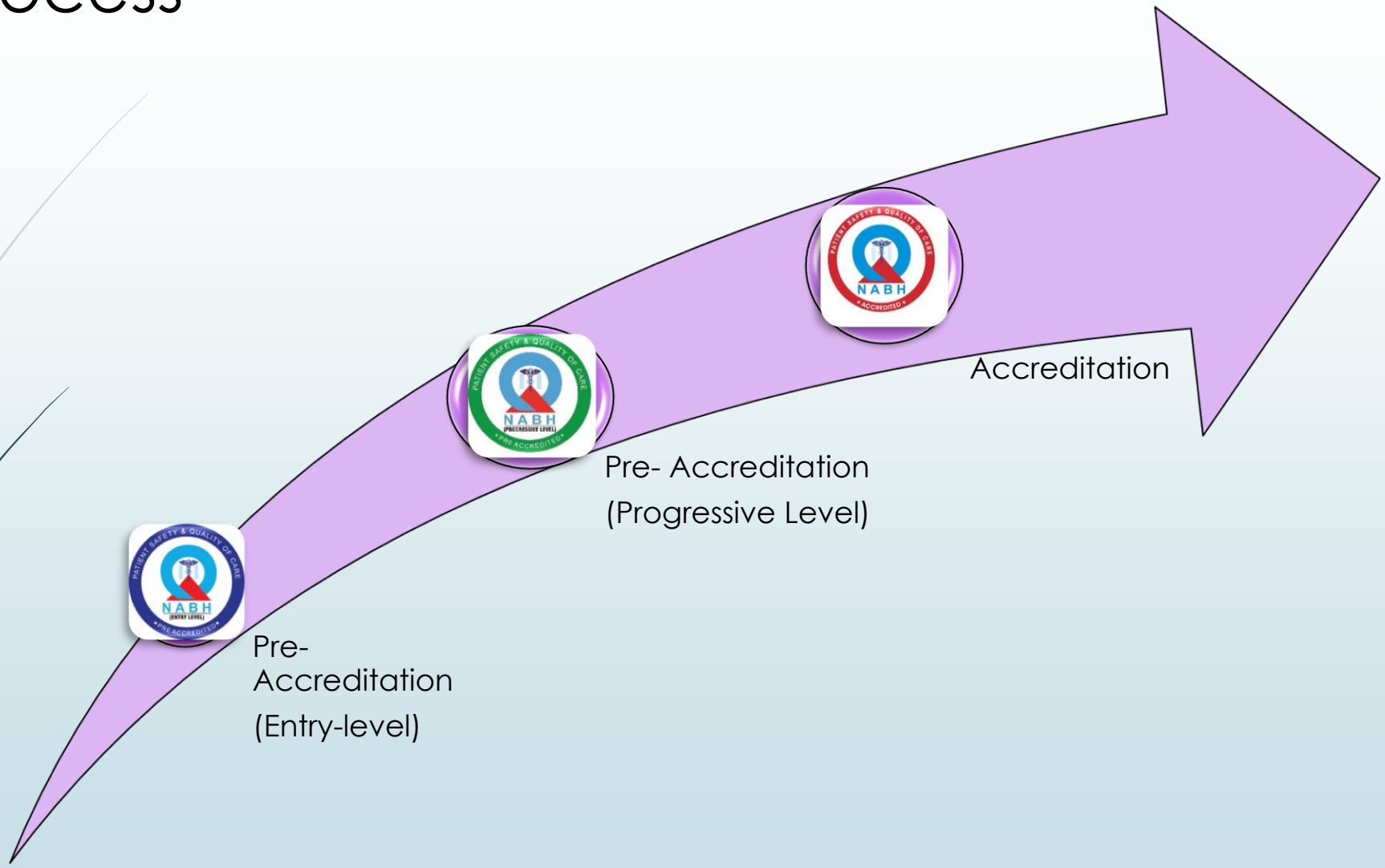
- What is HOPE?

(HOPE)Healthcare Organization Platform for Entry Level Certification (HOPE) is a revision of NABH's current certification process for entry level HCOs/SHCOs, successful completion of which will ensure quality assurance of HCOs and SHCOs across the nation and will allow them to be eligible for NABH accreditation.

- What is Entry level certification?

National Accreditation Board for Hospitals and Healthcare Providers (NABH) has partnered with IRDA to carry out entry level certification of hospitals which has been made mandatory for providing cashless insurance facility to the citizens at their premises.

NABH Accreditation Process



Introduction

- What are NABH standards?

NABH Standards for Hospitals is prepared by the technical committee constituted by NABH that has eminent persons from Clinical, Nursing and Medical Administration areas. The accreditation standards take into consideration the requirements of various laws and regulations and guidelines set by the government from time to time. NABH Standard has 10 chapters incorporating 100 standards and 651 objective elements

	Pre-Accreditation (Entry level)	Pre-Accreditation (Progressive level)	Accreditation
Chapters	10	10	10
Standards	45	72	102
Objective Elements	167	231	636

10 Chapters of Hospital Standards by NABH

- Patient Centered Standards:

a) Access, Assessment and Continuity of Care (AAC)

b) Care Of Patient (COP)

c) Management of Medication (MOM)

d) Patient Right and Education (PRE)

e) Hospital Infection Control (HIC)

- Organization Centered Standards:

a) Continuous Quality Improvement (CQI)

b) Responsibilities of Management (ROM)

c) Facility Management and Safety (FMS)

d) Human Resource Management (HRM)

e) Information Management System (IMS)

Rationale

- Entry level NABH certification will aid the Hospital abide by IRDAI's order which makes all allopathic healthcare providers who provide cashless facilities to their patients to have mandatory NABH certification
- The study will help the hospital understand the standard of services it is providing and understand the existing gap.
- Analysing the gap will help understand the steps to be taken to comply with standards.
- Comparing before and after NABH standard implementation will help the hospital understand the changes in terms of quality and streamlining processes, which in turn impact on patient safety.

Objectives

- To perform a gap analysis in quality compliance using the NABH assessment tool kit
- To prepare the facility for further accreditation by NABH for Entry level certification

Research Methodology

- **Area where study was conducted:** The live project was conducted in Vivekananda Hospital, a multi-speciality 65 bedded small healthcare organisation at Punjagutta, Hyderabad.
- **Study design:** Descriptive, cross-sectional study
- **Tools utilized in the project:** Along with observing the structural and operational aspect clinical records were assessed and scoring was done based on NABH self-assessment toolkit. The scores were later analysed on Microsoft Excel
- **Study Duration:** The study was conducted in the client location for 2 months
- **Methodology:** Phase 1: The hospital was surveyed in terms of breadth of service offered, manpower, physical facilities, medicines, and lab services using the NABH self-assessment tools. Standard scores are assigned to the concerned region using the toolkit.
  - Score -0 - non-compliance
  - Score -5 - partial compliance
  - Score-10 - complete compliance

  The evaluation criteria are an overall score of minimum 50% in all standards and overall score of minimum 50% in each chapter. [10]

Phase 2: Phase 2 involved observation and reviewing clinical records to understand the hospital's procedures and learn how the various departments work.

Phase 3: A report is created based on the analysis of phases 1 and 2 and the data collected to reflect the process, infrastructure, equipment, and people, as well as the hospital's strength and different gaps found in the process and other characteristics. Based on this report, steps to close gaps can be taken.

NABH SELF-ASSESSEMENT TOOLKIT

Self Assessment Toolkit

Organisation is required to provide self assessment report in the format 'Self Assessment Toolkit' given below. All the entries are to be properly filled up. Regarding scoring following criteria would be applicable.

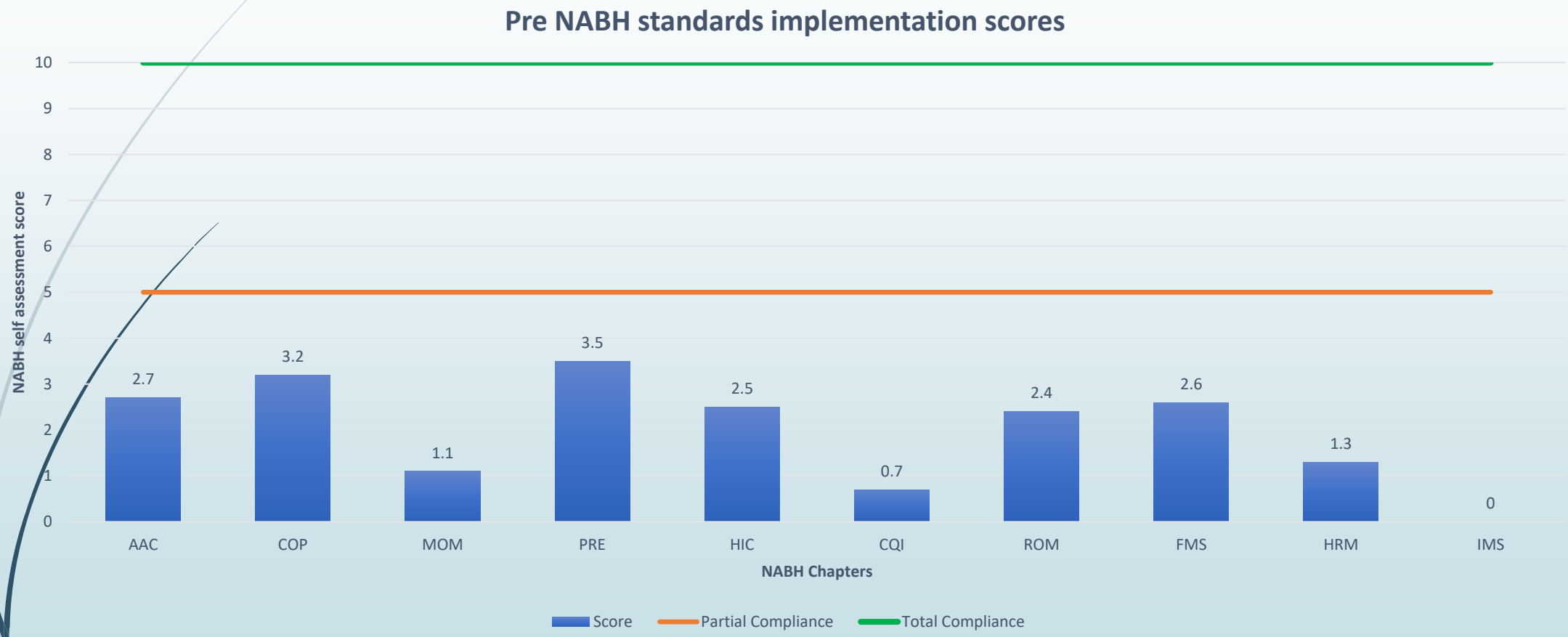
Compliance to the requirement: 10
Partial compliance to the requirement: 5 (if any of the sample is found to be noncomplying out of total samples selected)
Non-compliance to the requirement: 0
Not Applicable: NA

Evaluation Criteria:

- Overall score of minimum 50% in all standards
- Overall score of minimum 50% in each chapter

(Name & Address of the Hospital)

Results and Discussion



- AAC.1, AAC.3 and AAC.7 non-compliant and AAC.4 and AAC.5 were partially compliant. Lab services were provided were not outlined and displayed. The organisation did not have well defined and documented discharge processes. Radiation safety programme was not established but the services were provided as per scope.
- COP.1, COP.4, COP.7 non-compliant. Documented procedures and policies were missing regarding patients' norms and policies, administration of anaesthesia and even procedures for ICUs. The operation theatre (OT) did not have a quality assurance programme or documented procedures and policies on cleaning of OT. Several checklists were missing, and anaesthesia administration and post anaesthesia documentation was missing.
- MOM.1, MOM.2, MOM.3, MOM.4, MOM.6 were non-compliant. MOM.7 was not applicable as radioactive drugs were not used in the organisation. Look-alike, sound-alike drugs were not stored separately, list of high-risk drugs were not defined and marked or stored separately. Emergency drug list was also missing. Narcotic drugs were not stored as per guidelines and access to narcotic locker was present with the pharmacy supervisor. Documentation on near expiry drugs, local purchase and hospital formulary were missing or not maintained or not updated from time to time. Quality indicators for pharmacy performance are not calculated and maintained from time to time. Adverse drug event monitoring procedures and policies are not in place.
- The PRE chapter was non-compliant as PRE.1. PRE.2. showed partial compliance.
- HIC.2 partially complying because of some practices followed by employees in preventing HAIs but because they are not documented and displayed. BMW management practices were in place but were not followed. The infection control committee was not constituted, and infection control team and manual were absent. Quality monitoring parameters like urinary tract infections, surgical site infections were monitored but no proper documentation exists. Hand hygiene provision are not present at all patient care areas, and no signages.

- The CQI chapter was non-compliant. Clinical quality indicators like blood packs wasted, transfusion reactions were recorded but never analysed or updated.
- Non-compliance in ROM.1 and ROM.3. Partial compliance in ROM.2. The responsibilities of management were not defined and on paper. Clear span of control was not established. No specific committees were made for patient safety as well.
- The FMS chapter was non-compliant. No procedures, maintenance checklists, preventive measure scheduling, equipment management programmes were in place. Fire exit plan was also not displayed in every floor or trainings regarding disaster management was not done.
- HRM chapter was non-compliant. HRM.2 and HRM.3 were completely not present. HRM.1, HRM.4 and HRM.5 were very partially compliant. The hospital did not have any programs for training and development of staff, nor they had a well-documented grievance handling policy or procedure. The hospital did not produce and display the employee rights and no system of periodic or annual health check-up for staff was not in place.

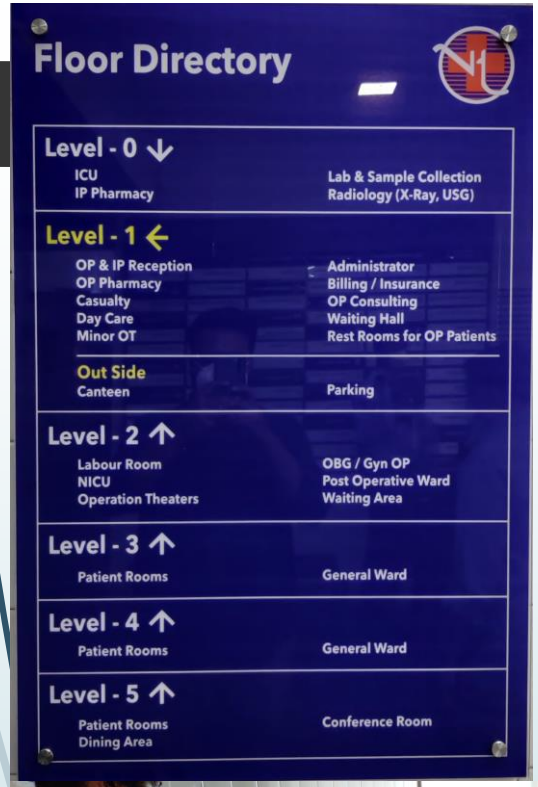
Implementation of standards:

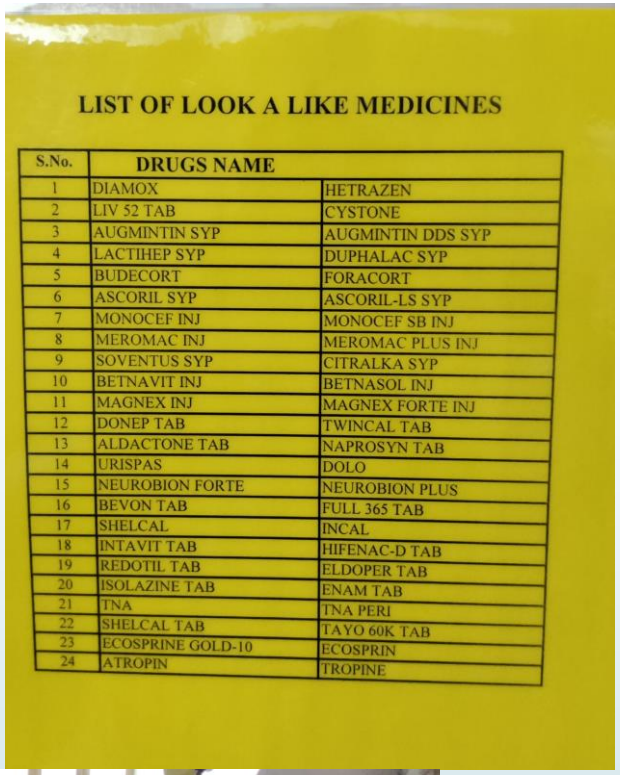
- After the gaps have been identified, a strategic plan was laid down which included short term and long-term goals. Several discussions were held with all the stakeholders involved with NABH standard implementation and an action plan was laid down.
- Establishment of the quality department which recruited the quality team which constituted of:
  - Head of the Department
  - Quality executives
  - Constitution of committees (blood transfusion committee, medical audit committee, Pharmacotherapeutics committee, Quality core committee)
  - Grievance committee to prevent violence
  - Additional responsibilities were given to Medical Superintendent to organise accreditation processes.
  - Lab in charge was given responsibility to ensure calibrations of instruments and physical requirements within the laboratory
  - Pharmacy in charge was given responsibility to prepare hospital formulary, document procedures to procure drugs and monitor the drug adverse events inside the hospital
  - ICN (Infection Control nurse) was recruited, and the roles and responsibilities were briefed
  - A dedicated dietician was recruited to ensure nutritional assessments for the patients
  - Quality manager was recruited who will ensure the implemented processes go smoothly and fulfil any physical requirement in the hospital.

Implementation of standards:

- The road to obtaining accreditation process was laid down which involved
  - Putting up signages.
  - Formulating standard forms and formats for various processes in the care areas and as well as maintenance areas.
  - Obtaining and pending licenses and renewing if any, obtaining requirements regarding infrastructure and human resource.
  - Training staff in all areas of care and management (fire safety, disaster management).
  - Documenting, monitoring, and analysing quality indicators for clinical and managerial related areas.

Implementation of Standards:





LIST OF LOOK A LIKE MEDICINES

S.No.	DRUGS NAME	
1	DIAMOX	HETRAZEN
2	LIV 52 TAB	CYSTONE
3	AUGMINTIN SYP	AUGMINTIN DDS SYP
4	LACTIHEP SYP	DUPHALAC SYP
5	BUDECORT	FORACORT
6	ASCORIL SYP	ASCORIL-LS SYP
7	MONOCEF INJ	MONOCEF SB INJ
8	MEROMAC INJ	MEROMAC PLUS INJ
9	SOVENTUS SYP	CITRALKA SYP
10	BETNAVIT INJ	BETNASOL INJ
11	MAGNEX INJ	MAGNEX FORTE INJ
12	DONEP TAB	TWINCAL TAB
13	ALDACTONE TAB	NAPROSYN TAB
14	URISPAS	DOLO
15	NEUROBION FORTE	NEUROBION PLUS
16	BEVON TAB	FULL 365 TAB
17	SHELCAL	INCAL
18	INTAVIT TAB	HIFENAC-D TAB
19	REDOTIL TAB	ELDOPER TAB
20	ISOLAZINE TAB	ENAM TAB
21	TNA	TNA PERI
22	SHELCAL TAB	TAYO 60K TAB
23	ECOSPRINE GOLD-10	ECOSPRIN
24	ATROPIN	TROPINE

HIGH-RISK MEDICINES

SNO	GENERIC/DRUG NAME	BRAND NAME
1.	ADRENALINE BITARTRATE INJECTION I.P	VASOCON 1ML INJ
2.	AMIODARONE STERILE	AMIODON 3ML INJ
3.	ATROPINE SULPHATE	TROPIN 1ML INJ
4.	BUPIVACAINE HYDROCHLORIDE	ANAWIN 0.25% 20ML INJ
5.	BUPIVACAINE HYDROCHLORIDE	ANAWIN HEAVY 4ML INJ
6.	CLONIDINE	ARKAMIN 100 MCG TAB
7.	DEXMEDETOMIDINE	DEXTOMID 100 MCG INJ
8.	DILTIAZEM	DILZEM 5ML INJ
9.	DOBUTAMINE	DOTAMIN 250MG 5ML INJ
10.	DOPAMINE	DOMIN 200MG 5ML INJ
11.	GLIMIPRIDE & METFORMINE &VOGLIBOSE	VOLIX –TRIO- 2MG TAB
12.	ISOFLURANE	FORANE 250ML INJ
13.	LABETALOL HYDROCHLORIDE 20MG	LABLOL 4ML INJ
14.	LORAZEPAM 2MG	LOPEZ 2ML INJ
15.	METHOTREXATE 2.5MG	FOLITRAX INJECTION
16.	METOPROLOL TARTRATE	METOLAR 5ML INJ
17.	NEOSTIGMINE 2.5MG	MYOSTIGMIN 5ML INJ
18.	NITROGLYCERIN 25MG	NITROPLUS 5ML INJ
19.	NORADRENALINE	NORAD 2ML INJ
20.	PHENOBARBITONE 200MG	FENOBARB 1ML INJ
21.	PHENYTOIN 50MG	EPTOIN 2ML INJ
22.	PROPOFOL	NEOROF 10ML INJ
23.	SODIUM BICARBONATE	SODAC 25ML INJ
24.	SODIUM CHLORIDE	NS 3% 100ML INJ
25.	SUCCINYLCHOLINE	SUCOL 10ML INJ
26.	VASOPRESSIN	VPRESS 1ML INJ
27.	VECURONIUM BROMIDE	NEOVAC 4MG INJ

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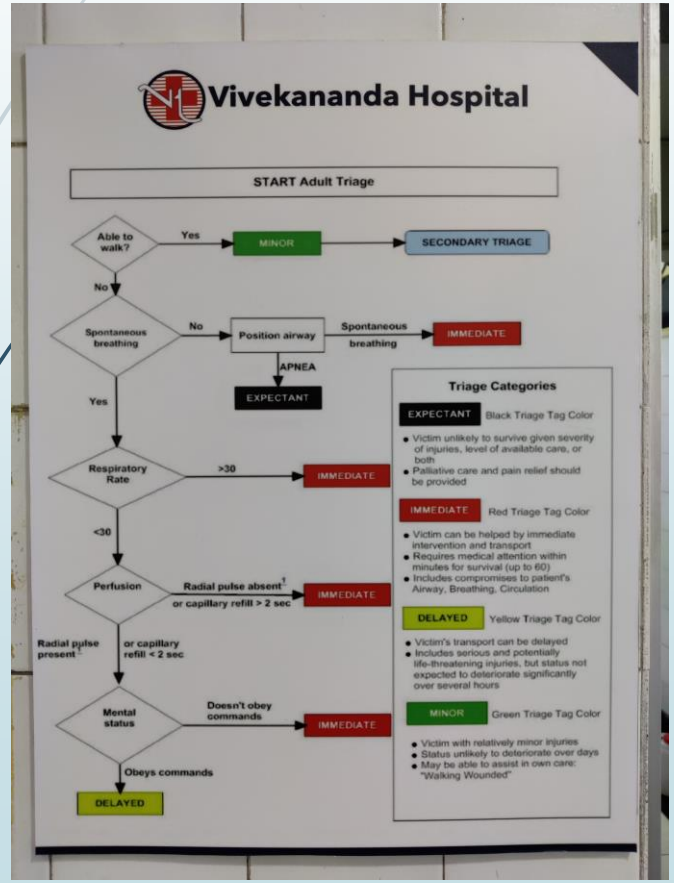
Organogram

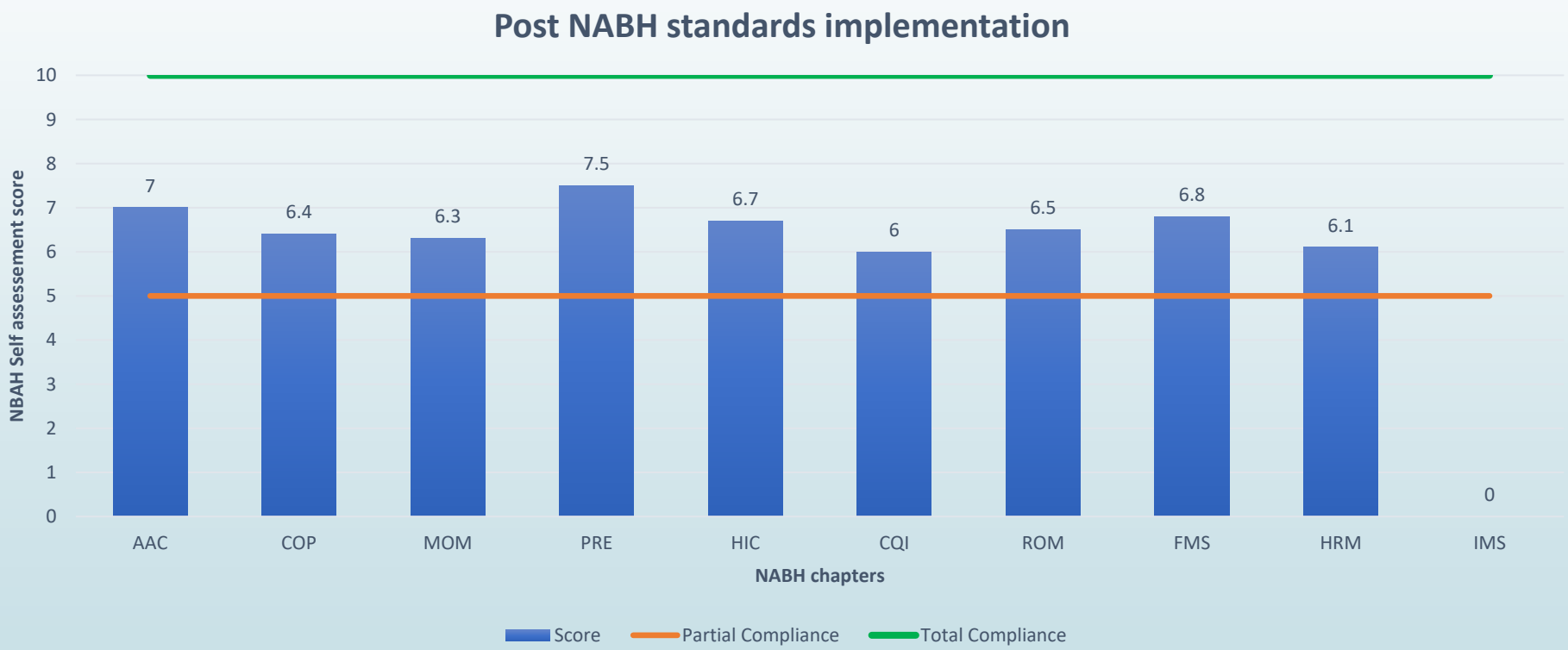

Managing Director
Clinical
Medical Services
Medical Director
Consultants
DMO's
Intensivist
Nursing Services
Nursing Supervisor
Nurses
ICU Nurses
Casualty Nurses
Ward Nurses
Pharmacy
Pharmacy Head
Pharmacist
Lab
Lab Head
Lab Technician
Non-Clinical
Support Services
HR
HR Manager
Security Services
Security
Housekeeping
Housekeeping Supervisor
Ayas / Housekeeping
Administration
Front Office
Front Office Manager
Front office Executive
Billing Dept
Billing Executive
Financial Accounts
Accounts Manager
Accounts Executive

Trainings

COLOUR CODE	ACTION
Code Red	Fire
Code Blue	Medical emergency
Code Pink	Child abduction
Code Yellow	External disaster
Code Orange	Spill
Code Violet	Violence



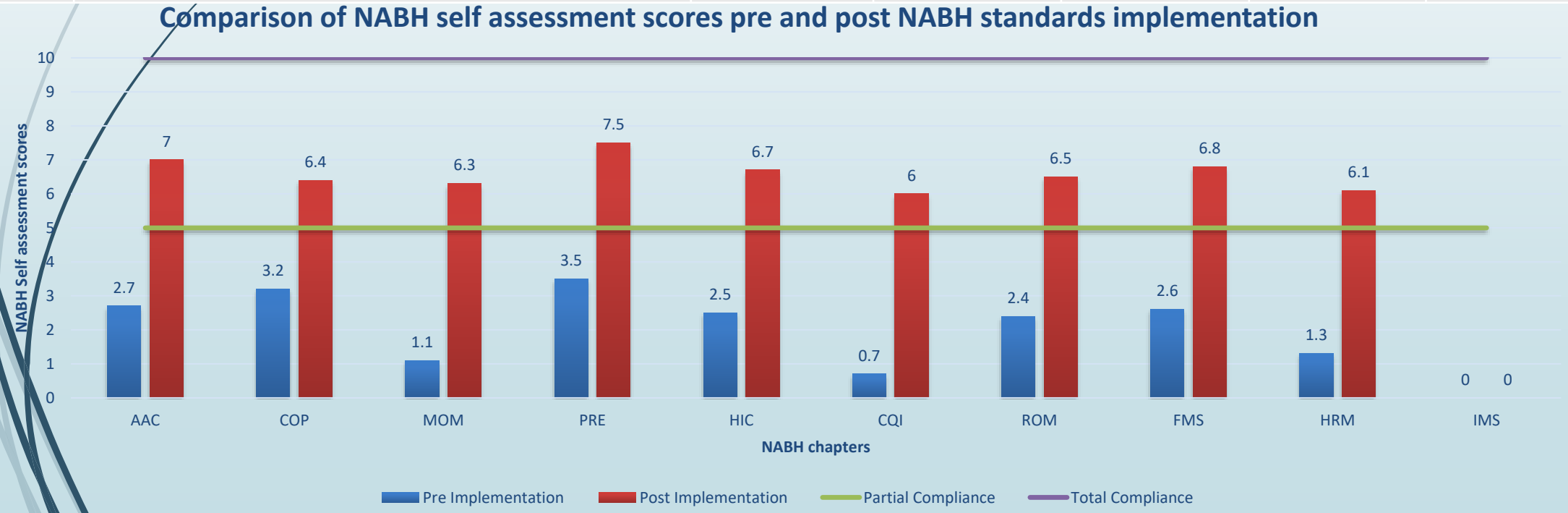
Results and discussion



- The AAC chapter had an average score of 7 and highest score of 8 in AAC.1 and AAC.8 thereby complying with the partial compliance of NABH assessment
- The COP chapter had an average score of 6.4 and highest scores in COP.1, COP.3, COP.5, and COP.7. The total average has partially complied with NABH assessment
- The MOM chapter had high scores of 7 in MOM.2, MOM.3, MOM.5 and a chapter average score of 6.3 thereby partially complying with NABH assessment
- PRE chapter had a highest score of 8 in PRE.1 and an average score of 7.5 thereby partially complying with NABH assessment.
- HIC chapter with its implementation of HIC committee made an average score of 6.7 with a highest score of 8 in HIC.3 and partially complying with NABH assessment.
- The CQI chapter scored an average of 6 and partially complied with NABH assessment, the CQI programme was implemented after the pre NABH standard implementation
- ROM chapter scored an average of 6.5 and highest being 7.3 in ROM.2 thereby partially complying with NABH assessment
- The FMS chapter scored an average of 6.8 and highest in FMS.1 thereby partially complying with NABH assessment
- The FMS chapter scored an average of 6.8 and highest in FMS.1 thereby partially complying with NABH assessment

Comparison

NABH SELF ASSESSMENT TOOLKIT SCORES						
Chapter	Chapter name	Pre Implementation	Post Implementation		Partial Compliance	Total Compliance
AAC	ACCESS, ASSESSMENT AND CONTINUITY OF CARE	2.7	7		5	10
COP	CARE OF PATIENTS	3.2	6.4		5	10
MOM	MANAGEMENT OF MEDICATION	1.1	6.3		5	10
PRE	PATIENT RIGHTS AND EDUCATION	3.5	7.5		5	10
HIC	HOSPITAL INFECTION CONTROL	2.5	6.7		5	10
CQI	CONTINUOUS QUALITY IMPROVEMENT	0.7	6		5	10
ROM	RESPONSIBILITY OF MANAGEMENT	2.4	6.5		5	10
FMS	FACILITY MANAGEMENT AND SAFETY	2.6	6.8		5	10
HRM	HUMAN RESOURCE MANAGEMENT	1.3	6.1		5	10
IMS	INFORMATION MANAGEMENT SYSTEM	NA	NA		5	10
	AVERAGE	2.2	6.6	Percentage Change		
	PERCENTAGE	22.2	65.9	43.7		



Recommendations

The hospital lacked some quality indicators to be monitored, so recommendations on the quality indicators and collection of data was made on the following.

- **Quality Indicators:**
  - Average time taken for initial assessment by doctor in wards (min)
  - Average time taken for initial assessment by nurses in wards (min)
  - Average time taken for initial assessment by doctor in ER (min)
  - Average time taken for initial assessment by nurse in ER (min)
  - Percentage of cases in which screening for nutritional needs has been done
  - Percentage of cases where modification of anaesthesia plan was done
  - Percentage of cases where unplanned ventilation following anaesthesia was done
  - Percentage of cases where adverse anaesthesia events have occurred
  - Mortality rate related to Anaesthesia
  - Percentage of cases where unplanned return to OT has occurred
  - Percentage of cases where re-scheduling of surgeries was done
  - Percentage of cases where change of procedure was done
  - Percentage of cases where the organisation's procedure to prevent adverse events like wrong site, wrong patient and wrong surgery have been adhered to
  - Percentage of cases where appropriate prophylactic antibiotics within specified time frame were administered.

Recommendations

- Percentage of case where transfusion reactions have occurred
- Blood and blood components wastage percentage
- Bed occupancy percentage
- Practice of Hand Hygiene Compliance
- Percentage of medical records where discharge summary was not present
- Percentage of medical records which had incomplete and/or improper consent
- Percentage of missing records
- Mortality rate
- Percentage of drugs and consumables procured through local purchase
- Percentages of stock outs including emergency drugs
- Percentages of drugs and consumables rejected before preparation of GRN

- These quality indicators would help monitor and assess monthly performances and changes to procedures and policies if need to be, to always be compliant with NABH standards. Several other recommendations included mock drill scheduling, crash cart arrangement and availability, fire rescue plans, evacuation plans, patient identification tags, adverse drug event monitoring, preventive maintenance scheduling.

- Regular trainings and drills calendar was laid down to increase the knowledge and skill of the staff, laying down proper processes for onboarding new employees would facilitate proper knowledge transfer and skill upgradation in case of promotions.

Thank You