Study on care of patients undergoing surgical procedures complying with NABH standards

A dissertation submitted in partial fulfillment of the requirements

For the award of

Post Graduate Diploma in Health and Hospital Management

By

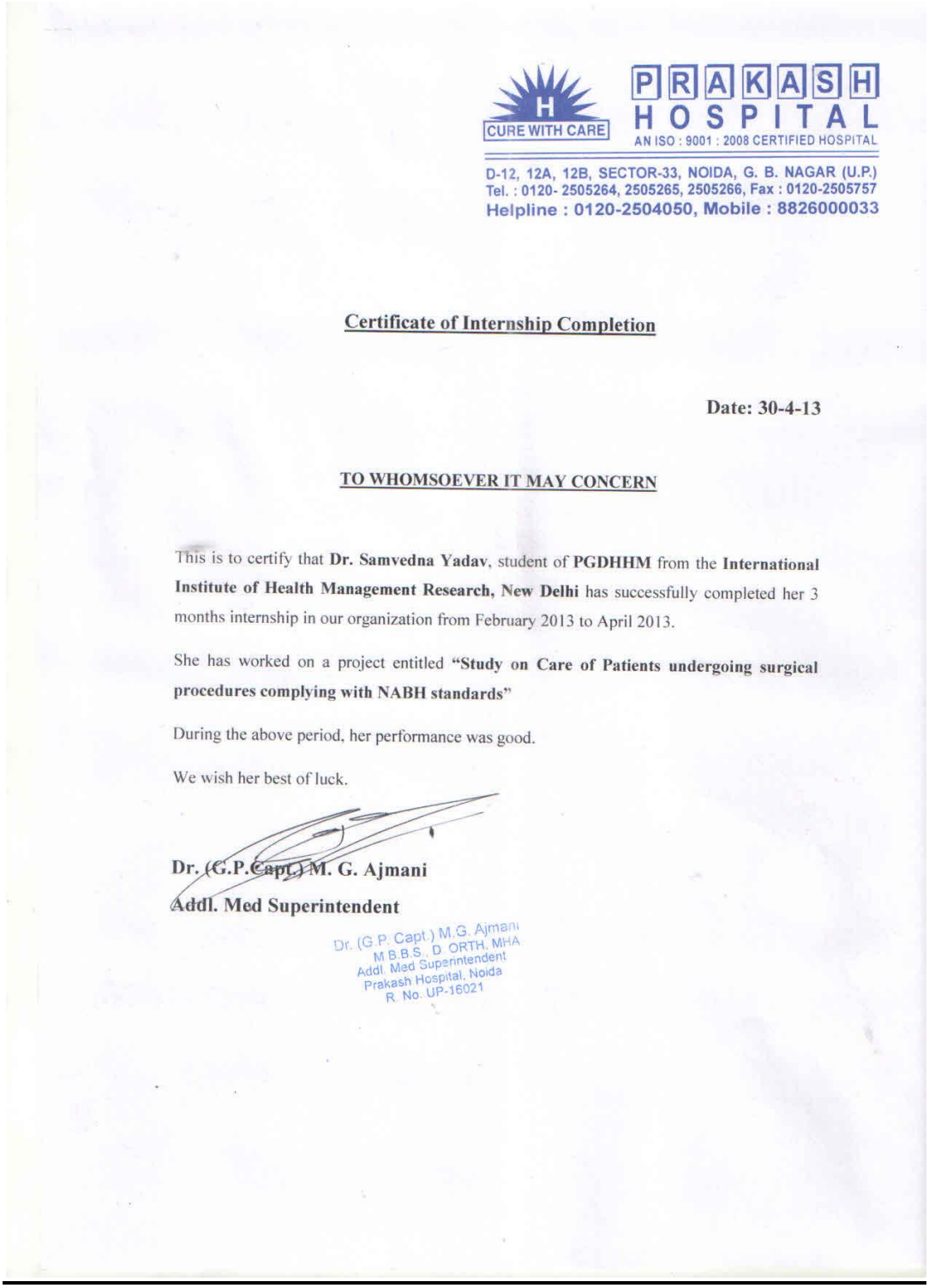
Dr. Samvedna Yadav

International Institute of Health Management Research

New Delhi

May, 2013

Certificate of internship completion



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Date: 30-4-13

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Dr. Samvedna Yadav**, student of **PGDHHM** from the **International Institute of Health Management Research, New Delhi** has successfully completed her 3 months internship in our organization from February 2013 to April 2013.

She has worked on a project entitled **"Study on Care of Patients undergoing surgical procedures complying with NABH standards"**

During the above period, her performance was good.

We wish her best of luck.

Dr. (G.P.Capt.) M. G. Ajmani
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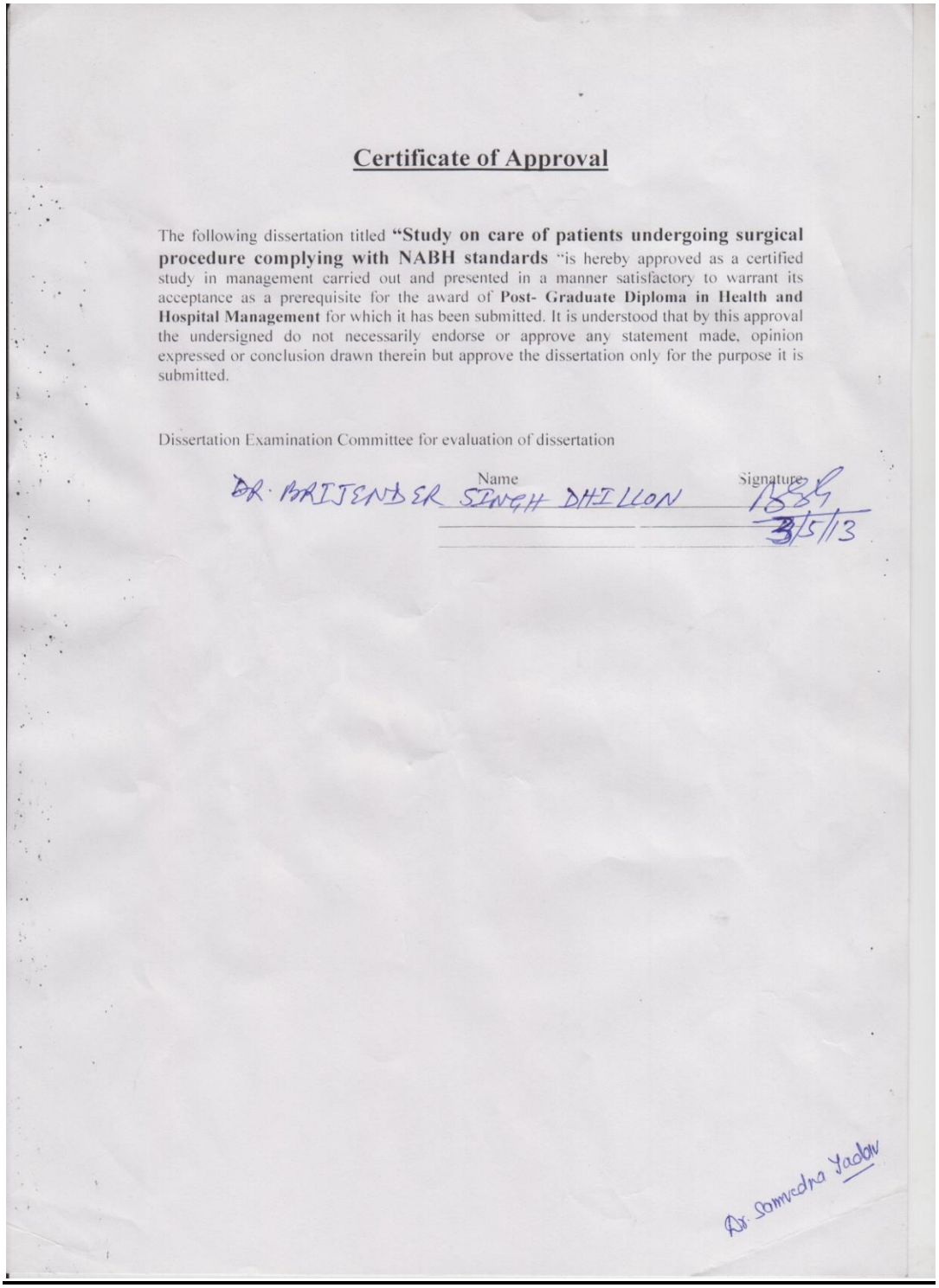
Certificate of approval



Certificate of Approval

The following dissertation titled **"Study on care of patients undergoing surgical procedure complying with NABH standards** "is hereby approved as a certified study in management carried out and presented in a manner satisfactory 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 dissertation only for the purpose it is submitted.

Dissertation Examination Committee for evaluation of dissertation

Name Signature

DR. BRIJENDER SINGH DHILLON

3/5/13

Dr. Samvedna Yadav

Certificate of dissertation advisory committee

Certificate from Dissertation Advisory Committee

This is to certify that Dr. Samvedna Yadav, a participant of the Post-Graduate Diploma in Health and Hospital Management has worked under our guidance and supervision. She has submitted the dissertation titled "Study on care of patients undergoing surgical procedures complying with NABH standards" in partial fulfillment of the requirements for the award of Post-Graduate Diploma in Health and Hospital Management.

This dissertation has the requisite standard and to the best of our knowledge no part of it has been reproduced from any other dissertation, monograph, report or book.

Organizational advisor

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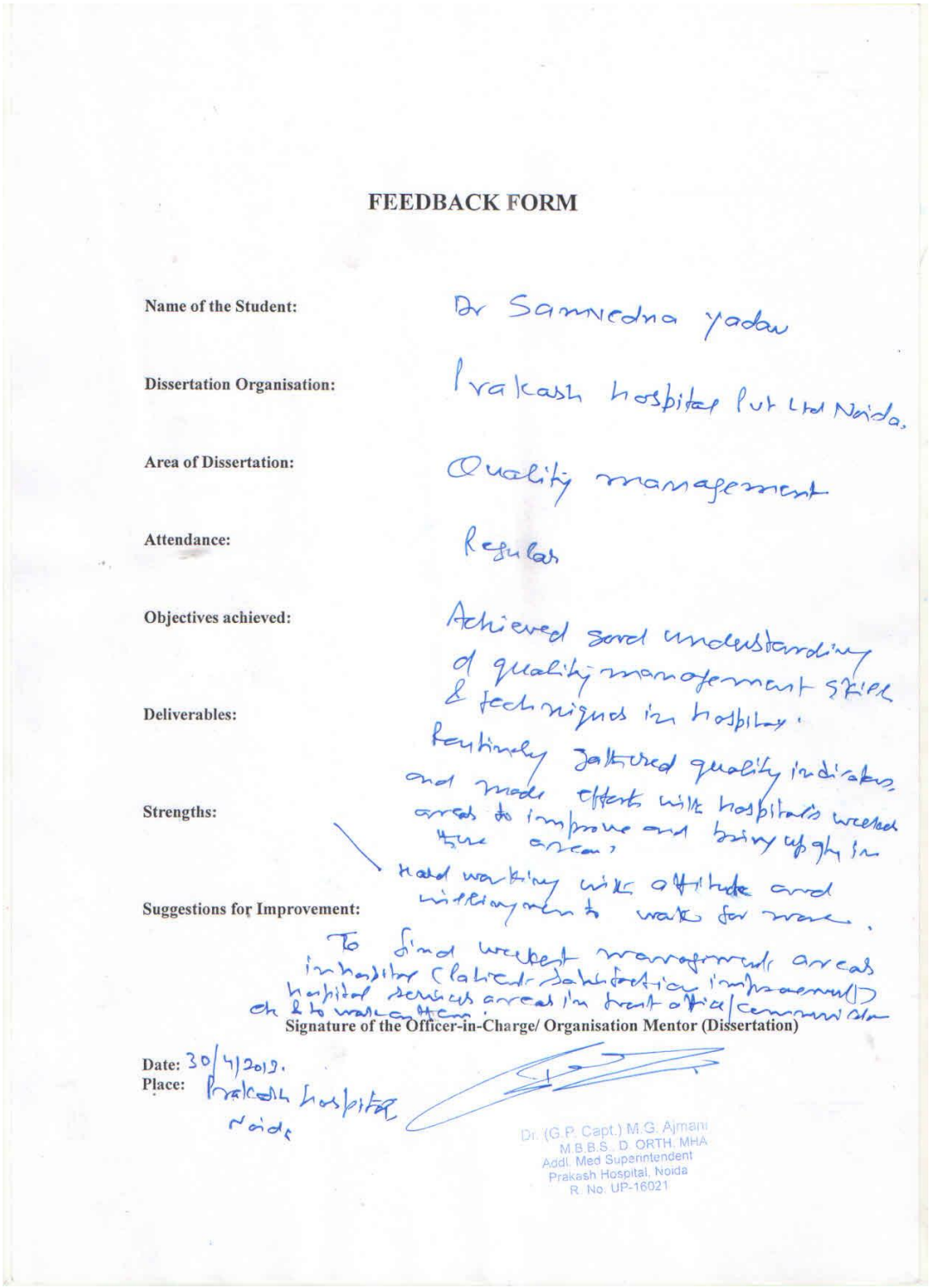

FEEDBACK FORM

Name of the Student: Dr Samvedna yadav

Dissertation Organisation: Prakash hospital Pvt Ltd Noida.

Area of Dissertation: Quality management

Attendance: Regular

Objectives achieved: Achieved good understanding of quality management skills & techniques in hospitals.

Deliverables: Routinely captured quality indicators and made efforts with hospitals worked areas to improve and bring up gaps in these areas.

Strengths: Hard working with attitude and willingness to work for more.

Suggestions for Improvement: To find weakest management areas in hospital (Patient Satisfaction, improvement) hospital services areas in front office/ communication & to work on them.

Signature of the Officer-in-Charge/ Organisation Mentor (Dissertation)

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Abbreviations

COP	Care of patient
PSQH	Patient safety and quality health care
CSSD	Central sterile supply department
SOP	Standard operating procedures
NABH	National accreditation board for hospital and healthcare provider
ECG	Electrocardiogram
AANA	American Association of Nurse Anesthetists
PACU	Post anesthesia care unit
IOM	Institute of medicine
QCI	Quality council of India
ISQUA	International Society for Quality in Health care
TQM	Total quality management
HEPA	High efficiency particulate air
OT	Operation Theater

Acknowledgement

From the bottom of my heart, I would like to express my sincere thanks to Dr. V.S.Chauhan (CMD Prakash hospital, Noida) for giving me opportunity to work with the dedicated staff of the hospital.

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I am grateful to my mentors, Mrs.Minakshi Gautam (Assistant Professor IIHMR) and Dr. M.G.Ajmani for their guidance and sincere support accomplishing the task of preparing the project report. It is my proud privilege to express my profound gratitude to the entire management of Prakash hospital, Noida. They guided me and provided valuable information and feedback. I felt honored working under their able leadership. They facilitated all necessary support and comfort level while working with them. Despite their busy schedule they helped me throughout the study offering their valuable time for solving all my problems.
I would also like to thank my family and friends. They were always supporting me and encouraging me with their best wishes.

Dr. Samvedna Yadav
PGDHHM
IIHMR

Abstract

Background: A healthcare organization can develop a community-based approach to quality care and patient safety beyond hospital walls. Every patient is the most important member of the health care team. Patient safety and quality health care (PSQH) is a most important issue in healthcare organization. In the healthcare industry, quality of care is more than a concept. It has become Essential to patient well-being and financial survival. "Quality" in health care has a wide variety of meanings. Accreditation to a health care organization stimulates continuous improvement. It enables the organization in demonstrating commitment to quality care. It raises community confidence in the services provided by the health care organization.

Method: It was a cross sectional study conducted in a multispecialty hospital with the objective of assessing the documented SOP`s and ongoing policies and procedures for Care of Patients undergoing surgical procedures in the hospital**.** The study was conducted by using an interview schedule cum checklist. Hospital patients undergoing surgical procedures were the study population.

Findings: The hospital is maintaining a scale of 6.5 which is not sufficient for getting NABH accreditations. Hospital is having standard operative protocol for preoperative, intra operative and for post operative procedures but hospital staff should strictly follow these protocols which is lacking. Training should be provided to the staff for documentation. There should be quality assurance programme for Surveillance activities like, daily monitoring of humidity and temperature, at least monthly monitoring of pressure differential, and at least six monthly monitoring of integrity of filter. Hospital should maintain proper CSSD, airflow in Operation Theater with proper zoning which can decrease the infection rate and improve quality of patient care. Procedures for preventing adverse events (wrong site, wrong patient and wrong surgery) like identification tags, cross-checks or time in, time-outs are available in the hospital and staff should follow all policies and procedures as documented and training should be given to them on regular basis along with monitoring for the same.

Conclusion: The study includes an assortment of details about the documented SOP's and ongoing practices for care of patients undergoing surgery in the hospital. The hospital is maintaining a scale of 6.5 which is not sufficient for getting NABH accreditations. Hence there is a scope for the hospital to get a NABH accreditation concerned with the Standard – 14, chapter – 2 of Care of Patients.

Internship Report

1.1 Organization profile

1.1.1 History

Prakash Hospital Pvt. Ltd. Noida is an ISO 9001:2008 certified 100 bedded Multi-Specialty hospital which provides a wide range of medical and surgical services.

It has been acknowledged as an Advance Trauma and Orthopedics Centre and is also a Centre for Advance Laparoscopic Surgeries.

The hospital renders Multi-Specialty services like Gastroenterology, Rheumatology, Nephrology, Neuro-Surgery, Pediatric Surgery, Vascular Surgery, Thoracic Surgery Maxillo-Facial, Plastic Surgery, Endocrinology, Urology, Pain Management, Joint Replacement Surgeries, and Arthroscopy etc.

1.1.2 Mission

"To Provide Quality Healthcare Facilities to community at most affordable cost with human touch"

1.1.3 Vision

"To be known as one of the best Healthcare Provider in Noida, Greater Noida and NCR"

1.1.4 Values

- Cure, Care and Healing
- Patient comes First
- Treat each other like family
- Strive for excellence

1.1.5 Scope of service

- Orthopedics and Trauma
- Emergency and Accidents
- General medicine
- Obs and Gynae
- Pediatrics
- Eye (Ophthalmology)
- Ear, Nose, Throat
- Skin and VD
- Psychiatry (OPD)
- Nephrology
- Urology
- Gastroenterology
- Endocrinology
- Neurology
- Cardiology (Non Invasive)
- Laproscopic Surgery
- Dental clinic

1.2 Areas engaged in and tasks undertaken

1.2.1 Routine or general management

Gathered quality indicators from all the departments across the hospital and made efforts with weaker areas of the hospital to bring up quality in those areas.

1.2.2 Reflective learning during internship

- Understanding of hospital functioning
- Understanding of quality management skills and techniques

Dissertation Report

Chapter1: Introduction

The health care team is comprised of a diverse group of specialized professionals, and the most important part of the medical team is the patient. Putting patients needs first and allowing them to be the focal point and at the center of the team will foster a better patient relationship and better outcomes. By being empathetic, listening and communicating and understanding that patients are the most important part of the team; health care professionals can create a treatment plan that correlates with patients needs. Every patient is the most important member of the health care team. Patient safety and quality health care (PSQH) is a most important issue in healthcare organization. A healthcare organization can develop a community-based approach to quality care and patient safety beyond hospital walls. Patient safety and care quality do not end with patient discharge. Hospitals and clinics are places where patients are examined and treated. Rather, the highest quality of medical care and patient safety is a continuum that spans both time and place.[1]

1.1 Care of surgical patient

Care of patient who is undergoing surgery can be defined as the preparation and management of patient before surgery, during surgery and after surgery. Care of patient include three basic component which is given following-

1. Preoperative care.
2. Intra operative care.
3. Post operative care.

[1] Barbara fiacre 28/10/12 PATIENT CARE: why you, the patient are the most important part of the healthcare team.

Preoperative care

Preoperative care is the preparation and management of a patient prior to surgery. It includes both physical and psychological preparation. Patients who are physically and psychologically prepared for surgery tend to have better surgical outcomes. Preoperative teaching meets the patient's need for information regarding the surgical experience, which in turn may alleviate most of his or her fears. Patients who are more knowledgeable about what to expect after surgery, and who have an opportunity to express their goals and opinions, often cope better with postoperative pain and decreased mobility. Preoperative care is extremely important prior to any invasive procedure, regardless of whether the procedure is minimally invasive or a form of major surgery. Preoperative teaching must be individualized for each patient. Some people want as much information as possible, while others prefer only minimal information because too much knowledge may increase their anxiety. Patients have different abilities to comprehend medical procedures; some prefer printed information, while others learn more from oral presentations. It is important for the patient to ask questions during preoperative teaching sessions. Preoperative care involves many components, and may be done the day before surgery in the hospital, or during the weeks before surgery on an outpatient basis. The nurse performs and explains the preoperative procedures; reinforces the physician's explanation of the operation; provides instruction and emotional support; answers the patient's questions as honestly as possible, avoiding standard clichés in responding to any anxiety; and reassures the patient that medication will be available to relieve postoperative pain. Depending on the surgical procedure, the nurse shows the patient how to turn, cough, deep breathe, and support the incision during coughing. Instructions on leg exercises are also given. The nurse informs the patient and the patient's family about the postoperative period in the post anesthesia care unit or the intensive care unit, if indicated.[2]

Physical preparation

Many surgical procedure Physical preparations may consist of a complete medical history and physical exam, including the patient's surgical and anesthesia background. The patient should

[2] http://www.surgery encyclopedia.com/Pa-St/Preoperative-care.html

inform the physician and hospital staff if he or she has ever had an adverse reaction to anesthesia (such as anaphylactic shock), or if there is a family history of malignant hyperthermia. Laboratory tests may include complete blood count, electrolytes, prothrombin time, activated partial thromboplastin time, and urinalysis .

The patient will most likely have an electrocardiogram (ECG) if he or she has a history of cardiac disease, or is over 50 years of age. A chest x ray is done if the patient has a history of respiratory disease. Part of the preparation includes assessment for risk factors that might impair healing, such as nutritional deficiencies, steroid use, radiation or chemotherapy, drug or alcohol abuse, or metabolic diseases such as diabetes. The patient should also provide a list of all medications, vitamins, and herbal or food supplements that he or she uses. Supplements are often overlooked, but may cause adverse effects when used with general anesthetics. Some supplements can prolong bleeding time (e.g., garlic, gingko biloba).

Bowel clearance may be ordered if the patient is having surgery of the lower gastrointestinal tract. The patient should start the bowel preparation early the evening before surgery to prevent interrupted sleep during the night. Some patients may benefit from a sleeping pill the night before surgery.

The night before surgery, skin preparation is often ordered, which can take the form of scrubbing with a special soap (i.e., Hibiclens), or possibly hair removal from the surgical area. Shaving hair is no longer recommended because studies show that this practice may increase the chance of infection. Instead, adhesive barrier drapes can contain hair growth on the skin around the incision. The patient's nothing-by-mouth (NPO) status, nutritional state, medical and surgical history, allergies, current medication, physical handicaps, signs of infection, and elimination habits are recorded. The patient understands of the operative, preoperative, and postoperative procedures; the patient's ability to verbalize anxieties; and the family's knowledge of the planned surgery are ascertained and education provided. The, accuracy of patient's signed informed consent is verified, requests in the physician's preoperative orders are fulfilled, and the patient's identification bands and blood type are checked. Vital signs are recorded, and any abnormalities of the electrocardiogram, chest x-ray, or laboratory tests are reported to the surgeon and anesthesiologist. If needed, the number of matched blood units required to be held for a possible blood transfusion is determined. When ordered, an enema is given, a bowel preparation is completed, a nasogastric tube or indwelling catheter is inserted,

and parenteral fluids are administered. If preoperative sedation is administered, the side rails of the bed are raised. Before transfer to the operating room with the completed chart, the patient voids, and any dentures, contact lenses, jewelry, and valuables are removed for safekeeping.

The thing which is necessary before surgery:-

1) Administer an enema the night before surgery, if ordered. An enema is used to cleanse the colon of fecal material, thus reducing the possibility of wound contamination during surgery.

2) Ensure that the operative site skin prep is done. An operating room technician or other designated person will clean and shave the area surrounding the side of the planned incision(s).

- The skin prep is done to make the skin as free of microorganisms as possible, thus decreasing the possibility of microorganisms entering the wound from the skin surface during surgery.
- A wide area of skin around the site of the incision is shaved and cleansed to further reduce the possibility of infection.

3) Personal hygiene. Assist the patient with personal hygiene and related care.

a) Bath or shower. This is done to remove excess body dirt and oils. It gives the patient a sense of relaxation. Depending upon the extent of surgery, it may be several days before a patient may take a "real bath."

(b) Shampoo hair. This is also done for the same reasons as in the previous paragraph.

(c) Remove nail polish and make-up. During surgery, numerous areas must be observed carefully for evidence of cyanosis to include the face, lips, and nail beds. Make-up and nail polish hide true coloration.

4) Mouth care. All preoperative patients should have thorough mouth care before surgery. A clean mouth makes the patient more comfortable and prevents accidental aspiration of food particles. Chewing gum must be removed before the patient goes to the operating room.

5) Attire. Give the patient a clean hospital gown. The wearing of his own gown or pajamas to surgery is not permitted because of potential loss or damage.

6) Prostheses. Ask the patient to remove his dentures, contact lenses, and artificial limbs. Be sure to place all items in a container labeled with the patient's name and room number. Take extra care not to break or loose patient's prostheses. If possible, send the prostheses home with a relative.

7) Jewelry. Jewelry should be removed for safekeeping. Do NOT store in bedside stand -- give the jewelry to a relative. The patient may wear a wedding band to surgery secured with tape or gauze wrapping. Do not secure it so tightly as to impair circulation.

8) Food and fluids. Follow the doctor's orders for type of diet preoperatively. Usually, the patient will be NPO from midnight on. Remove the patient's water pitcher. Place an NPO sign outside patient's room. Mark the diet roster.

9) Offer emotional support. Answer questions concerning surgery. Provide explanation of each preoperative nursing measure. Ask the patient about spiritual needs. Provide family members with information concerning their role the morning of surgery, waiting room location, postoperative visit by surgeon, rational for stay in recovery room, and presence of any special tubes or machines attached to their loved one.

10) Sedative. Administer the patient a sedative for a good night's sleep, if ordered.

11) Communication. Good communication between all members of the health care team will ensure that the patient is well prepared and ready to undergo surgery. All shifts and nursing personnel must be an active participant in the preoperative phase of the surgical patient.

Psychological preparation

Patients are often fearful or anxious about having surgery. It is often helpful for them to express their concerns to health care workers. This can be especially beneficial for patients who are critically ill, or who are having a high-risk procedure. The family needs to be included in psychological preoperative care. Pastoral care is usually offered in the hospital. If the patient has a fear of dying during surgery, this concern should be expressed, and the surgeon notified. In some cases, the procedure may be postponed until the patient feels more secure.

Children may be especially fearful. They should be allowed to have a parent with them as much as possible, as long as the parent is not demonstrably fearful and contributing to the child's apprehension. Children should be encouraged to bring a favorite toy or blanket to the hospital on the day of surgery.

Patients and families who are prepared psychologically tend to cope better with the patient's postoperative course. Preparation leads to superior outcomes since the goals of recovery are known ahead of time, and the patient is able to manage postoperative pain more effectively.

Preoperative Period - The period extending from the time of hospitalization for surgery to the time of discharge

Preoperative Phase-That phase of the preoperative period during which the nurse admits the patient to the surgical unit and helps the individual prepare physically and emotionally for the operation[3]

[3] Preoperative care/Definition and patient education
http://www.healthline.com/galecontent/Preoperative-care

Intra operative care

The term "intra operative" refers to the time during surgery. Intra operative care is patient care during an operation and ancillary to that operation.

Activities such as monitoring the patient's **vital signs**, **blood** oxygenation levels, fluid therapy, medication transfusion, anesthesia, radiography, and retrieving samples for laboratory tests, are examples of intra operative care. Intra operative care is provided by nurses, anesthesiologists, nurse anesthetists, surgical technicians, surgeons, and residents, all working as a team.

Purpose

The purpose of intra operative care is to maintain patient safety and comfort during surgical procedures. Some of the goals of intra operative care include maintaining homeostasis during the procedure, maintaining strict sterile techniques to decrease the chance of cross-infection, ensuring that the patient is secure on the operating table, and taking measures to prevent hematomas from safety strips or from positioning. Intra operative care includes the activities performed by the health care team during surgery that ensure the patient's safety and comfort, implement the surgical procedure, monitor and maintain vital functions, and document care given. The Intra operative time period can vary greatly from less than one hour to 12 hours or more, depending on the complexity of the surgery being performed.

Precaution

Patients undergoing surgery most often are given some type of anesthesia. The administration of general anesthesia has a relaxing effect on the patient's body, which can suppress cardiovascular function or heighten cardiovascular irritability. It may also result in respiratory depression, loss of consciousness, paralysis, and lack of sensation. These effects, some of which are intentional for the period of the surgery, mean the patient is in a very vulnerable position. It is the responsibility of the health care team in the operating room to maintain the patient's safety and yet facilitate surgery.

In 1992 the American Association of Nurse Anesthetists (AANA) established guidelines for monitoring patients undergoing general anesthesia. The guidelines call for continuous

observation of the patient by the nurse assigned to the patient. Ventilation should be assessed by continuous auscultation of breath sounds, and oxygenation should be monitored by continuous pulse oximetry. Continuous electrocardiograph (ECG) showing the patient's cardiac function should be in place, and the patient's heart rate and blood pressure should be monitored at least every five minutes. A means to monitor the patient's temperature must be available immediately for use.

Total analgesia is a goal of general anesthesia in order to facilitate surgery. This means that the patient does not have the normal "pain" sensations that warn of potential injury. The health care team must keep this in mind when they are positioning the patient for a surgical procedure. Although it may be necessary for a patient to be positioned in an unusual way for access to a particular area during surgery, care must be taken to ensure that the patient's body is in proper alignment and that joints and muscles are not in such an unnatural position that they will be damaged if they remain in that position for a lengthy procedure. Areas of the operating table that come into contact with the patient's bony prominences must be padded to prevent skin trauma and hematomas.[4]

Most surgical procedures are invasive and compromise a patient's skin integrity. This increases the risk of infection. To decrease the risk, strict asepsis (sterile technique) must be followed at all times. It is recommended that the ventilation system in an operative area provide a minimum of fifteen exchanges of filtered air per hour. The temperature in the Intra operative area should be maintained at 683°F (203°C), and the relative humidity should be maintained at 30%0%. Health care personnel who work in the operating room must not be permitted to work if they have open lesions on the hands or arms, eye infections, diarrhea, or respiratory infections. Scrub attire must be worn by all personnel entering the operating room. Fresh scrub attire must be donned daily and, if heavily soiled during one case, should be changed before the next case. Most facilities provide personnel with scrub attire that is professionally laundered. Shoe covers are required and should be changed often. Head and facial hair must be completely contained in a lint-free cap or hood. Properly fitting disposable surgical masks must be worn at all times and discarded immediately after use. Sterile gloves and sterile gowns must be worn by

[4] Intra operative care Study Guide and Homework Help-Reference-eNotes.com
http://www.enotes.com/intraoperative-care-references/intraoperative-care

those working in, and in proximity to, the sterile field. Careful skin preparation with appropriate antiseptic solutions is preformed on the patient's arrival to the operating area.

The patients should also be identified (some facilities use special colored identification bands and colored tapes on the patient's medical record) so that all health care personnel can recognize them. Special care must be taken to limit the uses of equipment containing latex that will contact the patient's skin. This includes anesthesia masks, adhesive tape and dressings, injections drawn from multidose vials with rubber stoppers, adhesive ground plates for electrocautery or diathermy, and pad coverings on the operating table and arm extensions.

Complication

Intra operative complications are surgery related, anesthesia related, or position related. One complication occurring during the Intra operative period that is not common but can be life threatening is an anaphylactic (allergic) reaction to anesthesia. The Intra operative staff is trained extensively in the treatment of such a reaction, and emergency equipment should always be available in the event it is needed for this purpose. Another anesthesia-related complication is called "awareness under anesthesia." This occurs when the patient receives sufficient muscle relaxant (paralytic agent) to prohibit voluntary motor function but insufficient sedation and analgesia to block pain and the sense of hearing.[5]

[5] Intra operative care-Gale Encyclopedia of nursing and allied Health/ Encyclopedia.com http://www.encyclopedia.com/article-1G2-2584700465/intraoperative-care.html

Postoperative care

Postoperative care begins in the recovery room and continues throughout the recovery period. Critical concerns are airway clearance, pain control, mental status, and wound healing. Other important concerns are preventing urinary retention, constipation, deep venous thrombosis, and BP variability (high or low). For patients with diabetes, plasma glucose levels are monitored closely by finger stick testing every 1 to 4 hour until patients are awake and eating because better glycemic control improves outcome.

Postoperative care is the management of a patient after surgery. This includes care given during the immediate postoperative period, both in the operative room and post anesthesia care unit (PACU), as well as during the days following surgery. Postoperative care involves assessment, diagnosis, planning, intervention, and outcome evaluation. The extent of postoperative care required depends on the individual's pre-surgical health status, type of surgery, and whether the surgery was performed in a day-surgery setting or in the hospital. Patients who have procedures done in a day-surgery center usually require only a few hours of care by health care professionals before they are discharged to go home. If post anesthesia or postoperative complications occur within these hours, the patient must be admitted to the hospital. Patients who are admitted to the hospital may require days or weeks of postoperative care by hospital staff before they are discharged.[6]

Post anesthesia care unit (PACU)

The patient is transferred to the PACU after the surgical procedure, anesthesia reversal, and exudation (if it was necessary). The amount of time the patient spends in the PACU depends on the length of surgery, type of surgery, status of regional anesthesia (e.g., spinal anesthesia), and the patient's level of consciousness. Rather than being sent to the PACU, some patients may be transferred directly to the critical care unit. For example, patients who have had coronary artery bypass grafting are sent directly to the critical care unit.

In the PACU, the anesthesiologist or the nurse anesthetist reports on the patient's condition, type of surgery performed, type of anesthesia given, estimated blood loss, and total input of

[6] Post operative care: care of the surgical patient: Merck Mannual Professional www.merckmannuals.com/professional/special-subjects/care-of-the-surgical-patient/postoperative-care.html

fluids and output of urine during surgery. The PACU nurse should also be made aware of any complications during surgery, including variations in hemodynamic (blood circulation) stability. The patient is discharged from the PACU when he or she meets established criteria for discharge, as determined by a scale. One example is the Aldrete scale, which scores the patient's mobility, respiratory status, circulation, consciousness, and pulse oximetry. Depending on the type of surgery and the patient's condition, the patient may be admitted to either a general surgical floor or the intensive care unit. Since the patient may still be sedated from anesthesia, safety is a primary goal. The patient's call light should be in the hand and side rails up. Patients in a day surgery setting are either discharged from the PACU to the unit, or are directly discharged home after they have urinated, gotten out of bed, and tolerated a small amount of oral intake.[7]

After care

Aftercare includes ensuring that patients are comfortable, either in bed or chair, and that they have their call lights accessible. After dressing changes, blood-soaked dressings should be properly disposed of in a bio-hazard container. Pain medication should be offered before any procedure that might cause discomfort. Patients should be given the opportunity to ask questions. In some cases, they may ask the nurse to demonstrate certain techniques so that they can perform them properly once they return home.[8]

[7] Post-operative care-care world home care and Home help Services www.careworld.ie/post-operative-care/

[8] Post operative care health article

Table 1: Care of patient

Care of patient	
Preoperative care	***Intra operative care***
Postoperative care	

1.2 Quality

In the healthcare industry, quality of care is more than a concept. It has become Essential to patient well-being and financial survival. "Quality" in health care has a wide variety of meanings. To some people, sitting in the waiting room a short time to see a doctor means "quality" in health care. To others, being treated politely by the doctor's staff means "quality" in health care. There are those who define "quality" in health care by how much time the doctor devotes to examining you. Quality consists of the degree to which health services for individuals and populations increase the likelihood of desired health outcomes (quality principles), are consistent with current professional knowledge (professional practitioner skill), and meet the expectations of healthcare users (the marketplace).

Definition of quality

Quality can be defined as, "totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs"

The most durable and widely cited definition of healthcare quality was formulated by the Institute of Medicine (IOM) in 1990. According to the IOM, quality consists of the "degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge."[9]

Concept of quality in health care

Quality in healthcare is encompassed of three attributes-

Structure- refers to "physical aspect of healthcare delivery including infrastructure, equipment and human resource.

Process- pertains to procedure and protocol of the organization.

Outcome- pertains to the well-being of the patient after delivery of health care service.

[9] Quality in healthcare: concepts and practices

Total quality management-

TQM refers to “A comprehensive system of management that emphasizes a commitment to quality, focus on customer needs and continual process improvement enlisting all members of the organization.[10]

Quality assurance

Quality assurance refers to the planned and systematic activities implemented in a quality system so that quality requirements for a product or service will be fulfilled. It is the systematic measurement, comparison with a standard, monitoring of processes and an associated feedback loop that confers error prevention. This can be contrasted with Quality "Control". Which is focused on process outputs?[11]

Two principles included in QA are: **"Fit for purpose"**, the product should be suitable for the intended purpose; and **"Right first time"**, mistakes should be eliminated. QA includes management of the quality of raw materials, assemblies, products and components, services related to production, and management, production and inspection processes.[12]

[10] Chapter44 Tools and strategies for quality improvement and patient safety (Ronda G.Hughes)
www.ahrq.gov/professionals/cliniciansproviders/resources/nursing/nurseshdbk/HughesR-QMBMP.pdf

[11] Babylon 9 Translation Software and Dictionary Tool
www.babylon.com/definition/Quality-assurance/English

[12] www.veravalonline.com/about-us/our-qa.html

1.3 NABH

NABH is an acronym for **National Accreditation Board for Hospitals & Healthcare Providers** is a constituent board of Quality Council of India, set up to establish and operate accreditation programme for healthcare organizations. NABH was established in year 2006. Organizations like the Quality council of India (QCI) and its National Accreditation Board for Hospitals and Healthcare providers NABH have designed an exhaustive healthcare standard for hospitals and healthcare providers. NABH is an institutional member of the International Society for Quality in Health care (ISQUA).[13]

Figure- 1.1

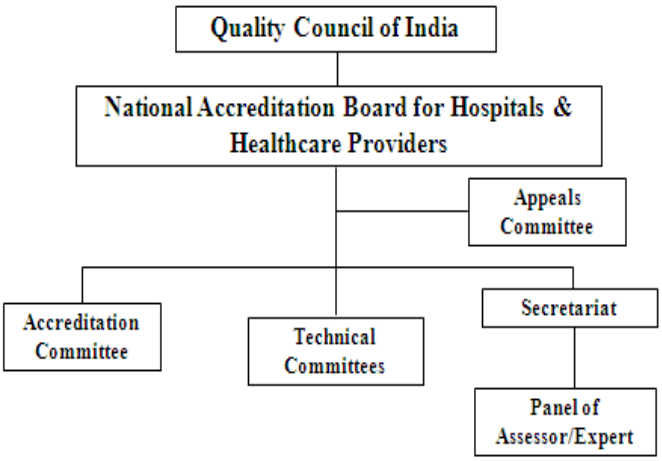
Structure of QCI

[13] www.visionquality.in/pages/nabh
en.wikipedia.org/wiki/NABH
www.continentalhospitals.com/nabh_ja.html

The Society has approved the 'Standards for Hospitals' developed by NABH. This approval ensures that the standards are in tune with global benchmarks. This standard consists of stringent 500 plus objective elements for the hospital to achieve in order to get the NABH accreditation. These standards are divided between patient centered standards and organization centered standards. To comply with these standard elements, the hospital will need to have a process-driven approach in all aspects of hospital activities – from registration, admission, pre-surgery, and during-surgery, and post-surgery protocols, discharge from the hospital to follow-up with the hospital after discharge. Not only the clinical aspects but the governance aspects are to process driven based on clear and transparent policies and protocols. In a nutshell NABH aims at streamlining the entire operations of a hospital.[14]

Figure 1.2

Structure of NABH



[14] www.nabhindia.com/Nabh/nabh-accreditation.html

Why NABH?

The main purpose of NABH accreditation is to help planners to promote, implement, monitor and evaluate robust practice in order to ensure that occupies a central place in the development of the health care system.

Current policies and processes for health care are inadequate or not responsive to ensure health care services of acceptable quality and prevent negligence. Problems range from inadequate and inappropriate treatments, excessive use of higher technologies, and wasting of scarce resources, to serious problems of medical malpractice and negligence. Quality Assurance should help improves effectiveness, efficiency and in cost containment, and should address accountability and the need to reduce errors and increase safety in the system. Thus the objective of NABH accreditation is on continuous improvement in the organizational and clinical performance of health services, not just the achievement of a certificate or award or merely assuring compliance with minimum acceptable standards.[15]

Table 2: NABH Standards

Patient centered	***Organization centered***
1. Access, Assessment and Continuity of Care (AAC)	6. Continuous Quality Improvement (CQI)
2. Care of Patients (COP)	7. Responsibilities of Management (ROM)
3. Management of Medication (MOM)	8. Facility Management and Safety (FMS)
4. Patient Rights and Education (PRE)	9. Human Resource Management (HRM)
5. Hospital Infection Control (HIC)	10. Information Management System

[15] NABH Training-kvqa.in
www.kvqa.in/nabh.htm

1.4 Surgical department

Departments of hospital where surgical procedure performs and which is equipped with all the necessary equipments and surgical instruments can be refer as surgical department.

Surgery

Surgery is branch of medical science that treats disease or injury by operative procedure. A procedure is considered surgical when it involves cutting of a patient's tissues or closure of a previously sustained wound. An act of performing surgery may be called a surgical procedure, operation, or simply surgery. A surgeon is a person who performs operations on patients.[16]

Type of surgery

Surgical procedures are the commonly categorized by urgency, type of procedure, body system involved, degree of invasiveness, and special instrumentation.

Based on time

Elective surgery- This type of surgery done to correct a non-life-threatening condition, and is carried out at the patient's request, subject to the surgeon's and the surgical facility's availability. An example might be to have a birthmark removed, or to circumcise your male infant.

Emergency surgery- is surgery which must be done promptly to save life, limb, or functional capacity. This type of surgery is done in response to an urgent medical need, such as heart malformation or the repair of injured internal organs after an auto mobile accident.

Semi-elective surgery- is one that must be done to avoid permanent disability or death, but can be postponed for a short time.

Based on purpose

Exploratory surgery- is performed to aid or confirm a diagnosis. Therapeutic surgery treats a previously diagnosed condition.

[16] surgery.askdefine.com/

By type of procedure

Amputation- involves cutting off a body part, usually a limb or digit; castration is also an example.

Replantation- involves reattaching a severed body part.

Reconstructive- involves reconstruction of an injured, mutilated, or deformed part of the body.

Cosmetic surgery- is done to improve the appearance of an otherwise normal structure. Excision is the cutting out or removal of an organ, tissue, or other body part from the patient.

Transplant- surgery is the replacement of an organ or body part by insertion of another from different human (or animal) into the patient. Removing an organ or body part from a live human or animal for use in transplant is also a type of surgery.

By body part

When surgery is performed on one organ system or structure, it may be classed by the organ, organ system. Examples include cardiac surgery (performed on the heart).

By degree of invasiveness

Minimally invasive surgery involves smaller outer incision(s) to insert miniaturized instruments within a body cavity or structure, as in laparoscopic surgery or angioplasty. By contrast, an open surgical procedure or laparotomy requires a large incision to access the area of interest.

By equipment used

Laser surgery involves use of a laser for cutting tissue instead of a scalpel or similar surgical instruments. Microsurgery involves the use of an operating microscope for the surgeon to see small structures. Robotic surgery makes use of a surgical robot, such as the Da Vinci or the Zeus surgical systems, to control the instrumentation under the direction of the surgeon.

1.5 Rationale of study

Comparing the Standard Operating Procedures (SOP`s) regarding Care of Patients (COP) in the hospital with the standards prescribed by NABH, we can estimate the quality services provided and the quality improvement in the hospital.

Chapter-2 Literature Review

A randomized, single-blind study was conducted to evaluate the effects of guided imagery on postoperative outcomes in patients undergoing same-day surgical procedures. Forty-four adults scheduled for head and neck procedures were randomly assigned into 2 groups for this single-blind investigation. Anxiety and baseline pain levels were documented preoperatively. Both groups received 28 minutes of privacy, during which subjects in the experimental group listened to a guided imagery compact disk (CD), but control group patients received no intervention. Data were collected on pain and narcotic consumption at 1- and 2-hour postoperative intervals. In addition, discharge times from the postoperative anesthesia care unit (PACU) and the ambulatory procedure unit and patient satisfaction scores were collected. The change in anxiety levels decreased significantly in the guided imagery group (P = .002). At 2 hours, the guided imagery group reported significantly less pain (P = .041). In addition, length of stay in PACU in the guided imagery group was an average of 9 minutes less than in the control group (P = .055). The use of guided imagery in the ambulatory surgery setting can significantly reduce preoperative anxiety, which can result in less postoperative pain and earlier PACU discharge times.[17]

Another study was conducted with the objective to discover what constitutes best practice in terms of effectiveness in the pre-admission care of patients undergoing day surgery. The patients who were undergoing day surgery procedures without apparent complications were included in the study. Outcomes measures of interests were infection rates, readmission; unplanned admission rate or transfer rate; intraoperative complication rate (like overweight/hypertension); healing; patient satisfaction; length of stay; pain levels; anxiety levels; psychosocial measures; discharge planning; patient knowledge levels; perceived independence; cancellation rate; postoperative nausea and vomiting; and Activity of Daily Living Scale. Pre-operative telephone screening or questionnaires were found to be effective in reducing the rate of cancellations/postponements, with home visits less effective than pre-operative phone calls in reducing cancellation rates. Patient anxiety and satisfaction, improved state of mind and understanding of the admission process, the importance of fasting before surgery and after-care instructions were found to be increased with the provision of pre-

[17] *www.ncbi.nlm.nih.gov/pubmed/20572403*

admission clinics. This information is based on level II and level III.2 evidence. Recommendations would be:

1. Patients may benefit from being telephoned pre-operatively to reinforce appointment dates and times, pre-operative oral intake, and to screen for any illness that may postpone surgery.
2. Patients may benefit from attending pre-admission clinics as this may reduce patient anxiety and increase patient understanding and satisfaction levels.
3. Further research is needed to establish the effectiveness of both telephone pre-admission contact and pre-admission.[18]

[18] *www.joannabriggs.edu.au/documents/HCR_2004_2_1.pdf*

Chapter 3: Objectives of the study

3.1 General objective

- To assess the documented SOP`s and ongoing policies and procedures for Care of Patients undergoing surgical procedures in the hospital

3.2 Specific objective

- To compare the SOP`s for care of patients undergoing surgical procedures with the NABH standards in Chapter 2, COP 14
- To analyze and find the loopholes in the quality of services provided by the hospital.
- To recommend possible remedial measures

Chapter 4: Methodology

4.1 Study area

Prakash hospital, Noida

4.2 Study population

Patients undergoing surgical procedure

4.3 Sample size

100 patients were interviewed and their files were checked

4.4 Sampling method

Convenience sampling

4.5 Study design

Cross-sectional descriptive study

4.6 Data collection technique

Quantitative

4.7 Data collection tool

Check list & Interview schedule

4.8 Type of data

Primary data & Secondary data

4.9 Study period

Feb-April 2013

Chapter 5: Data analysis and evaluation

Data analysis

The term analysis refers to the computation of certain measures along with searching for patterns of relationship that exist among data group.

The data was procured using the Interview schedule cum checklist as in (appendix - 1).Each element was studied thoroughly using the NABH-2003 booklet and the elements were converted to Interview Schedule cum Checklist and the scores were allotted according to the responses to the interview Schedule**.** As follows

Compliance to the requirement: 10

Partial compliance to the requirement: 5

Non-compliance to the requirement: 0

Evaluation Criteria during assessment:

No individual standard should have more than one zero to qualify.

However, no zero is accepted in the regulatory/legal requirements.

The average score for individual standard must not be less than 5.

The average score for individual chapter must not be less than 7.

The overall average score for all standards must exceed 7.

Evaluation

Cop-12 policies and procedures guide the care of patients undergoing surgical procedures.			
COP-12 Elements converted into Questions with Grading (0/5/10) and its score evaluated after analysis (surgical procedure)			
ELEMENT		**QUESTIONS**	**SCORE**
1.	The policy and procedure are documented.	1) Are the policies and the procedures regarding the surgeries as well as competency level for performing these surgeries well documented?	5
2.	Surgical patient have preoperative assessment and a provisional diagnosis documented prior to the surgery.	2) Was the pre-assessment checkup before surgery done by the surgeon and duly signed by him? 3) Was the provisional diagnosis after pre-assessment mentioned or documented and was explained to the patient and his relatives? 4) Pre-assessment Checklist/investigations done before surgery. 5) Checklist for pre-operative clinical assessment by doctors (Clinical Checkup)	8.4+8+9.03+10 =8.8575
3.	An inform consent is obtained by surgeon prior to the procedure.	6) Checklist for Consent of Surgery.	6.77
4.	Documented policies and procedure	7) Are there identification tags/wrist bands present for the identification of right patient?	7.1+9.1/2 =8.1

	exist to prevent adverse events like wrong site, wrong patient and wrong surgery.	8) Time in and Time out procedure are being carried out before surgery	
5.	Persons qualified by law are permitted to perform the procedure that they are entitled to perform.	9) Was the patient and relatives informed about the name of the surgeon who will perform surgery and his qualification? 10) A qualified surgeon performs the surgeries.	6.6+10/2 =8.3
6.	A brief operative note is documented prior to transfer out of patient from recovery area**.**	11) Operative notes checklist	9.55
7.	The operating surgeons documented the post operative plan of care.	12) Post-Operative therapeutic plan with doctors/surgeons signature	9.84
8.	Patient , personnel and material flow conforms to infection control practices	13) Surveillance audit is being carried out by the HIC team to maintain proper infection control practices	0
9.	Appropriate facilities and	14) All OT equipments and instruments are properly calibrated and available	5

	equipment/ appliances /instrumentation are available in operating theatre		
10.	A quality assurance programme is followed for the surgical services.	15) Is the Quality assurance program focusing on post-operative events practiced, without any complications?	0
11	The quality assurance programme includes surveillance of the operation theatre environment.	16) Quality of Air in Operation Theater	0

Discussion

This was a cross sectional hospital based study conducted in Prakash hospital Pvt Ltd. During the three months span, 100 patients who had to undergo surgery were surveyed. An Interview Schedule, Checklist with Direct observation and structured interview was used as a tool to acquire the data during the survey.

The patients were selected conveniently and were asked few questions, at the same time a checklist was used and filled by direct observation method. The elements 14 of the chapter- 2 Care of patients (COP) were transformed into interview schedule and checklists. Thus the qualitative data was converted into quantitative terms. This quantitative data was calculated and aggregated using the 0/5/10 scale denoting Non- Compliance, Partial Compliance, and Full Compliance respectively. The aggregated quantities were known as the score for the elements 14 of chapter – 2 (COP).

As per the evaluation criteria, the individual standard should not score less than 5, and it should exceed 7, thus we can see in the analyzed and interpreted data that the score 6.5 which is greater than 5, hence there is a scope for the hospital to get a NABH accreditation concerned with the Standard – 14, chapter – 2 of Care of Patients.

Hospital is having standard operative protocol for preoperative, intra operative and for post operative procedures but hospital staff should strictly follow these protocols which is lacking. Training should be provided to the staff for documentation. There should be quality assurance programme for Surveillance activities like, daily monitoring of humidity and temperature, at least monthly monitoring of pressure differential, and at least six monthly monitoring of integrity of filter. Hospital should maintain proper CSSD, airflow in Operation Theater with proper zoning which can decrease the infection rate and improve quality of patient care. Procedures for preventing adverse events (wrong site, wrong patient and wrong surgery) like identification tags, cross-checks or time in, time-outs are available in the hospital and staff should follow all policies and procedures as documented and training should be given to them on regular basis along with monitoring for the same.

Chapter 6: ***Conclusion and Recommendation***

Accreditation to a health care organization stimulates continuous improvement. It enables the organization in demonstrating commitment to quality care. It raises community confidence in the services provided by the health care organization. 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.

As per the evaluation criteria, the individual standard should not score less than 5, and it should exceed 7, thus we can see in the analyzed and interpreted data that the score 6.5 which is greater than 5, Hence there is a scope for the hospital to get a NABH accreditation concerned with the Standard – 14, chapter – 2 of Care of Patients.

Recommendation

- Hospital should strictly follow the time in, time out and identification tag or wrist band practices to control the adverse events like, wrong site surgery, wrong surgery, and wrong patients.
- For postoperative procedure there should be a quality assurance program which will lead to reduce the hospital infection rate as well as increase the patient satisfaction.
- Doctors are doing the pre-assessment checkups but sometimes they don't sign so after writing the pre- assessment doctors should sign on the prescription sheet.
- Hospital should take the particular majors to conduct surveillance audit by HIC team.
- Hospital should maintain proper CSSD, airflow in Operation Theater and HEPA filter should be fit in the entrance of Operation Theater with proper zoning to reduce the infection rate and improve quality of patient care.

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Appendices

Appendice-1

S.No	Q.1	Q.2	Q.3	Q.4	Q.5	Q.6	Q.7	Q.8	Q.9	Q.10	Q.11	Q.12	Q.13	Q.14	Q.15	Q.16
1	5	10	5	8	10	10	0	5	10	10	10	10	0	5	0	0
2	5	10	5	9	10	10	5	10	5	10	10	10	0	5	0	0
3	5	10	10	9	10	6.6	5	10	10	10	10	10	0	5	0	0
4	5	10	10	9	10	10	10	10	5	10	10	10	0	5	0	0
5	5	10	10	8	10	6.6	10	5	0	10	10	10	0	5	0	0
6	5	10	10	9	10	6.6	10	10	10	10	10	10	0	5	0	0
7	5	5	10	8	10	6.6	5	5	10	10	10	10	0	5	0	0
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97	5	10	5	9	10	6.6	10	5	5	10	10	10	0	5	0	0
98	5	10	10	10	10	6.6	10	10	10	10	10	10	0	5	0	0
99	5	10	10	10	10	6.6	5	10	0	10	10	10	0	5	0	0
100	5	10	10	10	10	10	5	10	10	10	10	10	0	5	0	0
Avg.Score	5	8.4	8	9	10	6.77	7.1	9.1	6.6	10	9.58	9.89	0	5	0	0

Total Average Score: 6.5

Appendice-2

INTERVIEW SCHEDULE

Name: Age: Sex:

Q.1 Are the policies and the procedures regarding the surgeries as well as competency level for performing these surgeries well documented?

Q. 2 Was the pre-assessment checkup before surgery done by the surgeon and duly signed by him?

Q. 3 Was the provisional diagnosis after pre-assessment mentioned or documented and was explained to the patient and his relatives?

Documented			
Explained to Relatives			

Q. 4 Pre-assessment Checklist/investigations done before surgery.

	YES	NO
• Hb %		
• HIV		
• Sr.Creatinine		

- CBC ☐ ☐
- USG ☐ ☐
- BSL ☐ ☐
- CT ☐ ☐
- BT ☐ ☐
- Blood Group ☐ ☐
- HBSAg ☐ ☐

Q. 5 Checklist for pre-operative clinical assessment by doctors (Clinical Checkup)

	Done	Not Done
• BP	☐	☐
• PULSE	☐	☐
• RR	☐	☐
• Temperature	☐	☐
• P/A	☐	☐
• S1,S2	☐	☐

Q.6 Checklist for Consent of Surgery

	Yes	No
• Doctors Signature	☐	☐
• Patients Signature	☐	☐
• Relatives Signature	☐	☐

Q. 7 Are there identification tags/wrist bands present for the identification of right patient?

☐ ☐ ☐

Q.8 Time in and Time out procedure are being carried out before surgery

☐ ☐ ☐

Q.9 Was the patient and relatives explained about the surgical procedures, its risks, benefits, alternative course of action available.

Q.10 A qualified surgeon performs the surgeries.

Q.11 Operative notes checklist

	Yes	NO
• Procedure documented		
• Post-operative Status		
• Status of patient before shifting from recovery area		
• Signature of surgeon or team member		

Q.12.Post-Operative therapeutic plan with doctors/surgeons signature

	Yes	No
• I.V – Fluids		
• Medications		
• Care of wound		
• Nursing Care		
• Complications care		

Q.13 Surveillance audit is being carried out by the HIC team to maintain proper infection control practices.

Q. 14 All OT equipments and instruments are properly calibrated and available.

Q. 15 Is the Quality assurance program focusing on post-operative events practiced, without any complications?

	Yes	No
BLEEDING		
RATIONAL USE OF ANTIBIOTICS		

Q. 16 Quality of Air in Operation Theater

- Rate of air exchange
- OT Temperature
- Humidity
- Preventive and Annual Maintenance of equipments