Measuring and Ensuring Compliance of JCI Standards and Quality Protocols at Medanta – The Medicity

Mentored By: Dr. A.K. Agarwal

Submitted by : Dr. Animesh Gupta (PG/14/007)
International Institute of Health Management Research, New Delhi

On The Job Training
At
Medanta- The Medicity, Gurgaon

Measuring and Ensuring Compliance of JCI Standards

Dr. Animesh Gupta

Post–Graduate Diploma in Hospital & Health Management
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International Institute of Health Management Research, New Delhi

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Dr. Animesh Gupta**, student of Post Graduate Diploma in Hospital and Health Management (PGDHM) from International Institute of Health Management Research, New Delhi had undergone training at **Medanta – The Medicity, Gurgaon, Haryana** from **08.02.2016** to**08.04.2016**.

The candidate has successfully carried out the study designated to him during dissertation training and his approach to the study has been sincere, scientific and analytical.

The Dissertation is in fulfillment of the course requirements.

I wish him all success in all his future endeavors.

Dr. A.K. Agarwal
Dean, Academics and Student Affairs
IIHMR, New Delhi

Certificate of Approval

The Following dissertation titled "**To ensure compliance and bring it up to 100% for the deficient JCI standards in the Neurosciences IPD Wards**" is hereby approved as a certified study in management carried out and presented in a manner satisfactorily to warrant its acceptance as a prerequisite for the award of **Post Graduate Diploma in Health and Hospital Management** for which it has been submitted. It is understood that by this approval the undersigned do not necessarily endorse or approve any statement made, opinion expressed or conclusion drawn therein but approve the dissertation only for the purpose it is submitted.

Dissertation Examination Committee for evaluation of Dissertation

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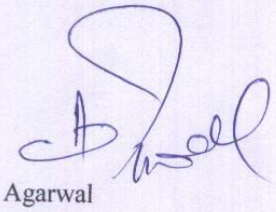
Certificate from Dissertation Advisory Committee

This is to certify that **Dr. Animesh Gupta**, a graduate student of the Post Graduate Diploma in Health and Hospital Management has worked under our guidance and supervision. He/She is submitting this dissertation titled "**To ensure compliance and bring it up to 100% for the deficient JCI standards in the Neurosciences IPD Wards"** at " **Medanta – The Medicity, Gurgaon, Haryana** " in partial fulfillment of the requirement for the award of the 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.



Dr. A.K. Agarwal
Dean , Academics & Student Affairs
IIHMR, New Delhi

Global Health
Private Ltd.

Date: 09th April 2016

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Mr. Animesh Gupta** has completed his 2 months internship in the **Department of Medical Administration** from **08th February' 2016** to **07th April' 2016** with **Global Health Private Ltd. (GHPL) Medanta – The Medicity.**

We wish him all the best for his future endeavors.

For **GLOBAL HEALTH PVT LTD**

Monica

MONICA MUDGAL

SENIOR VICE PRESIDENT & HEAD - HR

Regd. Office: E-18, Defence Colony, New Delhi 110024, Ph No.011- 44114411
WWW.MEDANTA.ORG
CIN: U85110DL2004PTC126319

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"*Knowledge is in the end based on acknowledgement."*

—Ludwig Wittgenstein

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In the end I would also like to acknowledge with a deep sense of reverence, my gratitude towards my family who have believed in me, every step of the way.

Any omission in this brief acknowledgement does not mean lack of gratitude.

Thanking You

Dr. Animesh Gupta

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ACRONYMNS/ABBREVIATIONS

Serial No.	Abbreviation	Full form
1	TAT	Turnaround time
2	IPD	In patient department
3	Ortho	Orthopaedics
4	Admin	Administrator
5	OPD	Outpatient department
6	ER	Emergency room
7	ICU	Intensive care unit
8	OT	Operation theatre
9	NCR	National capital region
10	PCR	Polymerase chain reaction
11	GI	Gastrointestinal
12	HIV	Human immunodeficiency virus
13	CRE	Cross referral executive
14	ENT	Ear nose throat
15	NDO	Non-drug order
16	MRI	Magnetic resonance imaging
17	CT	Computerized tomography
18	HIS	Hospital information system
19	RIS	Radiology information system
20	PACS	Picture archiving & communication system
21	TL	Team Leader
22	CAUTI	Catheter associated urinary tract infection
21	IDTR	Inter-disciplinary team record
22	LP	Lumber Puncture
23	CAPA	Corrective and preventive action
24	JCI	Joint commission international
25	IPSG	International patient safety goals

INTRODUCTION

The dictum '*Primum non nocere (*first, do no harm),' paraphrased from the Hippocratic Oath has been an enduring and leading axiom for the institution of medicine and the delivery of healthcare services globally. However, medical harm is done every day. Not only does the medical literature bear testimony to this conundrum but public awareness of medical errors and unexpected adverse patient outcomes is mounting

.

Furthermore, management of healthcare costs and improving the quality of healthcare are ubiquitous challenges in healthcare organizations and systems today. A substantial percentage of public expenditure is rationed on maintaining healthcare systems. According to Cowan *et al*. (2004), $1.6 trillion was spent on healthcare in 2002 in the United States resulting in a 93% increase from the previous year. The Organization for Economic Co-operation and Development (OECD), as a result of the analysis of thirty European countries, demonstrated that over the past ten years (1998-2008) the average *per capita* health spending had grown by 4.6% annually. Costs associated with poor quality and medical errors are considerable. The total national costs of preventable medical errors were estimated to be between $17 billion and $29 billion in the United States (US), annually. Using an actuarial approach the annual cost of measurable US medical errors, identified through medical claims data, was $17.1 billion in 2008.

In response to concerns about quality, mounting costs and government regulated accountability standards, healthcare leaders at all levels are in search of effective methods for improving the quality of healthcare in organizations. Effective solutions, however, are proving to be a daunting challenge. Although several concepts, 2 methodologies and tools have been postulated to advance quality and patient safety in healthcare, there still exists a dearth of compelling evidence of their impact and effectiveness, none more so than the all-pervading strategy of accreditation.

Several of the established accreditation programs provide development support to other countries, but Joint Commission International (JCI) was the first to offer external international accreditation. JCI is a not-for-profit affiliate that originated from the United States accreditation organization Joint Commission. The extension of the Joint Commission model was initially visible during the 1990s in other English-speaking countries and Europe, Latin America, Africa and the Western Pacific. Nevertheless, developing countries are frequently utilizing accreditation as a tool for government regulation to guarantee quality of care and improve patient safety. Many countries are beginning to use accreditation as an extension of statutory licensing for institutions intended for control and public accountability. However, implementation of accreditation standards is demanding on individuals and organizations. In addition, the empirical and theoretical literature on accreditation is sparse especially in the emerging economy of the Middle East.

OBJECTIVES

- **General Objective:** To ensure compliance and bring it up to 100% for the deficient JCI standards and medical quality protocols in the East wing of Neurosciences IPD ward

- **Specific Objective:**
  1. To measure and compare:
     - ✓ The compliance of Clinical Pathway for Stroke
     - ✓ The incident reporting
     - ✓ Medication errors
     - ✓ Cross referral TAT
     - ✓ Hand hygiene
  2. To identify the cases of CAUTI and train the staff to ensure 100% compliance to CAUTI maintenance checklist
  3. To measure compliance to Verbal orders, Patient fall, Patient identification, Handovers and Critical alerts and train the staff to achieve 100% compliance.
  4. To measure and compare the patient feedback analysis.

METHOD & DATA

- Universe
  - ✓ Neurosciences Floor of Medanta- The Medicity, Gurgaon
- Study Period
  - ✓ 2 months (1st March – 30th April)
- Data collection tools & technique:
  - ✓ Checklist-Observation
  - ✓ Interview - Interview Schedule
  - ✓ Feedback form and Audits
- Source of data
  - ✓ Primary data – via observation, interview, feedback form
  - ✓ Secondary data – consolidated data collected from the HIS

HOSPITAL PROFILE

Medanta – The Medicity is one of India's largest multi-super specialty institutes located in Gurgaon, a bustling town in the National Capital Region. Founded by eminent cardiac surgeon, Dr. Naresh Trehan, the institution has been envisioned with the aim of bringing to India the highest standards of medical care along with clinical research, education and training. Medanta is governed under the guiding principles of providing medical services to patients with care, compassion & commitment.

Spread across 43 acres, the institute includes a research centre, medical and nursing school. It has 1250 beds and over 350 critical care beds with 45 operation theatres catering to over 20 specialties. Medanta houses 6 centres of excellence which will provide medical intelligentsia, cutting-edge technology and state-of-the-art infrastructure with a well-integrated and comprehensive information system.

Medanta – The Medicity brings together an outstanding pool of doctors, scientists and clinical researchers to foster collaborative, multidisciplinary investigation, inspiring new ideas and discoveries; and translating scientific advances more swiftly into new ways of diagnosing and treating patients and preventing diseases. A one-of-its-kind facility across the world, Medanta through its research integrates modern and traditional forms of medicine to provide accessible and affordable healthcare.

VISION & VALUES

"The Institute is governed under the guiding principles of providing affordable medical services to patients with care, compassion & commitment."

MISSION

"Our mission is to deliver world class health care by creating institutes of excellence in integrated medical care, teaching and research. We aspire to create an ethical & safe environment to treat all with respect and dignity."

INSTITUTES:

1. Bone & joint Institute
2. Cancer institute
3. Heart Institute
4. Institute of Critical Care & anaesthesiology
5. Institute of Digestive & Hepatobiliary Sciences
6. Institute of Neurosciences
7. Institute of Liver transplantation & Regenerative Medicine
8. Kidney & Urology Institute
9. Medanta Vattikutti Institute of Robotic Surgery

DEPARTMENTS:

1. Department of Dental Surgery
2. Department of Integrative Medicine & Holistic Therapies
3. Department of Internal Medicine
4. Department of Nursing
5. Division of Ophthalmology
6. Department of Pathology & Laboratory Medicine
7. Department of Paediatric Gastroenterology, Hepatology & Liver Transplantation
8. Department of Physiotherapy & Rehabilitation
9. Department of Respiratory & Sleep Medicine
10. Department of Transfusion Medicine(Blood Bank)
11. Division of Chest services
12. Division of Endocrinology & Diabetes
13. Division of GI & Bariatric Surgery
14. Division of Gynaecology & Gynaeconcology
15. Division of Mental health & quality of life
16. Division of Peripheral Vascular & Endovascular Sciences
17. Division of Plastic, Aesthetic & Reconstructive Surgery
18. Division of radiology & Nuclear medicine
19. Division of Rheumatology & Nuclear Medicine
20. Emergency & trauma Care and Pharmacy
21. Medanta Breast Service

GENERAL FINDINGS

- **Department of dental and maxillofacial implant surgery** at Medanta - The Medicity has a dedicated team of doctors, trained assistants and efficient laboratory staff to ensure that the patients get the best of treatment. It provides a wide range of oral care, ranging from routine dental exams to complex reconstruction surgery and specialty dental services.
  With a focus on personalized and customized care, the Dental Centre follows international guidelines in hygiene and infection control. Along with the specialized treatment modalities being offered, the Centres also assist people in preventive dental care routines and is active in adding awareness in the field of dentistry

- **Medanta department of integrative medicine** brings together the technological advantage that Medanta offers, combined with the time-tested practice of Ayurveda. Through the unique Prakruti analysis of Ayurveda and co-relating the information to the genetic makeup of a person, Medanta Executive Health Check-up can now predict diseases and offer preventive interventions and life-style modifications to its patrons.

  Integrating Ayurvedic medicines, Panchakarma, Yoga and diet to the management protocols of Parkinson's disease, Medanta now offers a comprehensive holistic approach towards Parkinson's disease management.

  Highly specific and targeted chemo and radiation therapy in oncology has opened doors to integrative approaches in specific tissue/organ targeted cyto-protection using Ayurvedic drugs and procedures.

  Cardiac insufficiency and Pulmonary Hypertension are two areas in Cardiology which Medanta is actively addressing through an integrative approach with Ayurveda. Synergistic approach in the management of all kinds of Rheumatism is another area of active integration at Medanta. In Diabetes the integrative approach focuses on early prediction, prevention of the disease and management of diabetes-associated complications. General Practitioner-based regular preventive healthcare for the elderly, based on Ayurveda principles, modern medical

diagnostics and curative care is yet another integrative program offered by the Medanta Department of Integrative Medicine

- **Division of internal medicine** at Medanta - The Medicity is among the hospital's premier departments, bringing together an elite cadre of clinicians, investigators and educators.
  Medanta specializes in maintaining long-term adult wellness. It combines patient-centred adult care of the highest quality along with physician expertise and the latest advances in medical technology.
  The Department also organizes small group interactive educational programmes for training of primary care physicians in the management of non-communicable diseases. The faculty is actively involved in giving emergency care to all the medical emergencies including various poisonings.
  The department also takes care of all the Executive Health Check programmes of the institute. Medanta has expertise in prevention, early diagnosis and treatment of common disorders like diabetes, hypertension, bronchial asthma, hepatitis, allergy, infections & communicable diseases like malaria, typhoid, influenza, etc.

- **Medanta's nursing department** has a dedicated team of over 2,000 nurses, who deliver health care to the patients with care, compassion and commitment, treating all with respect and dignity, in an ethical and safe environment.

  Equipped and trained to work collaboratively with the physicians and other experts, the nurses have made positive patient outcomes the most integral aspect of our successful work environment.
  The nurses at Medanta undergo a rigorous orientation program before taking charge at our OPDs, IPDs, Airport Emergency & Trauma Centre and Mediclinic.
  The nursing department is driven by the 4 Ds of nursing profession
  Dedication
  Determination
  Diligence
  Discipline

The department is structured around three vital aspects of Administration, Training and Quality, as an integrated process, each leading to the other. Administration is divided into six zones, viz. OPDs, ERs, ICUs, OTs, Cath Labs and In-Patient Wards. Training is done via a group of dynamic facilitators, including highly qualified nursing tutors, clinical instructors and preceptors who mentor the nurses.

Quality co-coordinators to audit compliance of administrative processes for continuously enhanced standards of care

- **The Medanta department of ophthalmology** is designed to provide a comprehensive range of medical and surgical eye care for the protection, preservation, enhancement and restoration of vision, for any age group. The Ophthalmology Department is equipped with cutting edge technology in the form of sophisticated diagnostic and microsurgical equipment. As a response to the social needs of the community across all sections of society, the Medanta Department of Ophthalmology conducts Eye & Healthcare Camps in various areas in Delhi NCR.

- **Clinical laboratory services of Medanta**- The Medicity is a state-of-the-art department provided with the finest equipment for comprehensive diagnostic support to their clinical counterparts and a patient-centric approach. Not only does the laboratory undertake routine investigations, it also lays emphasis on super specialty pathology for sub-branches such as Neuropathology, Nephropathology, Oncopathology, GI Pathology, Transplant Pathology, Haematopathology, Transfusion Medicine, Infection Control, and Specialized Microbiology.

  The new-generation clinical microbiology laboratory concentrates not only on routine cultures and sensitivities testing, but also on molecular, serological and immunological diagnostic tests for all infectious diseases.

  In addition, an important function is the specialized role it plays in controlling hospital-acquired infections. Apart from providing state-of-the-art infectious disease diagnoses, it provides consultative services for the clinical staff and

physicians of the hospital and information to all the support staff.

The services are being developed in the area of bacteriological analysis, antibiotic susceptibility testing, mycology, virology, tick-borne pathogens, molecular microbiology, mycobacteriology, international microbiology, molecular epidemiology, and parasitology. Newer techniques include PCR diagnostics, bacterial gene sequencing for identification and susceptibility testing of Tuberculosis.

- **The Department of Paediatric Gastroenterology, Hepatology and Liver Transplantation** at Medanta is the first such department in the country which provides comprehensive A to Z facilities for new-borns, children and adolescents with gastrointestinal and liver diseases including the highest level of liver care that is liver transplantation. The department provides services ranging from outpatient clinics to managing emergencies in the state of the art ICU.

  Medanta is the busiest paediatric liver transplant team in the country and is credited with several firsts in this field in India and a few in the world. The department is equipped with highly advanced endoscopes. The team is supported by other paediatric super-specialties, Intensivists, skilled GI, liver surgeons and interventional radiologist.

- **The Department of Physiotherapy and Rehabilitation at Medanta**- The Medicity has a present strength of sixteen in house and five domiciliary physiotherapists, all of whom are totally geared towards patient care and rehabilitation.

  Keeping in mind the present functioning super specialities of the hospital the Department has been loosely divided into three sub-specialities – namely

  1) Orthopaedics Physiotherapy
  2) Neuro-Physiotherapy
  3) Cardio- Pulmonary Physiotherapy.

Medanta is looking at expansion to the degree of having a full-fledged state of the art Physiotherapy and Rehabilitation department spread over an area of 10,000 sq. ft. and catering to people with various ailments.

- **Department of transfusion medicine:** Transfusion Medicine Specialists deal with the transfer of blood or blood products from one person (the donor) into another person's (the recipient's) bloodstream. Transfusion of your own blood (autologous) is the safest method but requires planning and not all patients are eligible. Directed donor blood allows the patient to receive blood from known donors. Volunteer donor blood is the safest.

  The endeavour of the department is to supply safest possible blood components. The safety begins with diligent check of donor's medical history and physical examination. The tests for HIV 1 & 2, Hepatitis B & C, Malaria and Syphilis are done using best of technology and methods. There is an additional layer of safety in testing called Nuclear Amplification Technology (NAT). There are few blood centres in the country which use this testing technology. There are advance technologies like Universal Leucodepletion, Irregular Antibody Screen, etc to reduce the chances of adverse reactions to the patient.
  The doctors at Medanta perform therapeutic apheresis procedures in patients suffering from certain neurological disorders like Myasthenia gravis, G B Syndrome, etc. The department is also part of stem cell harvest, their cryopreservation and infusion as part of the stem cell therapy for variety of disorders

- **Medanta division of chest services:** Medanta offers world class service in the treatment of lung, mediastinal, and oesophageal diseases. Medanta’s Department of Minimally Invasive Thoracic Surgery is a first of its kind in India, offering a range of Robotic Thoracic Surgery and Video Assisted Thoracoscopic Surgery (VATS). 98% of our work is done by minimally invasive techniques involving small incisions on the skin with no muscle cutting and no spreading of ribs. This gives patients quicker recovery, less pain, better cosmetics, and early return to work.

The department is equipped for surgical management of lung cancer, smoking related lung diseases, mediastinaltumors, thymectomy, oesophageal disease, lasering/stenting of the respiratory tree & cosmetic correction of chest wall deformities. Patients with these complex disorders are evaluated and staged completely and the optimal methods of treatment are offered.

- **Medanta division of endocrinology & diabetes:** Endocrinology is the science of hormones. It is one of the most rapidly evolving disciplines of medicine and encompasses a wide array of clinical conditions. The facility provides the latest in diagnosis and treatment of widely prevalent disorders like diabetes, obesity, thyroid, PCOS, osteoporosis, as well as less common, highly complex hormonal disorders.

  The ultimate goal is to empower all patients to manage their condition without compromising on quality of life. The team is also actively involved in clinical research and drug trials. Particular areas of interest include: Diabetes and heart disease, Transplant endocrinology and secondary prevention of fractures.

- **Department of ENT and Head Neck surgery** is equipped with the finest technology and the best manpower to provide the best possible facilities for the patients. It has state-of-the-art facilities for voice disorders, phonosurgery and laryngology and is one of the few exclusive centres in the country and abroad doing so.

  It is carrying on treatment of Head and Neck Cancer along with the radiation medicine and medical oncology teams. There is collaboration with neurosurgeons for the treatment of skull base lesions.

  The latest generation Lumenis Acupulse (Surgitouch) CO^2 Laser System will provide latest and cutting edge technology for treatment of Juvenile papillomas, bilateral abductor cord paralysis, vascular lesions, and premalignant lesions, cancer of larynx, oral cavity, oropharynx and hypopharynx, and laryngotracheal stenosis.

  Sialoendoscopy and sialology is another new speciality being developed by the Department. Endoscopic sinus and nasal surgery for diseases of the nose and paranasal sinuses, chronic dacrocystitis, malignant exopthalmos and optic nerve decompression is also carried out.

The Department is well-equipped to take care of all Ear, Nose and Throat emergencies and has teams available round the clock to do so. The Department also provides audiology, voice and speech therapy as allied services.

- **The Division of GI Surgery, GI Oncology, Minimal Access and Bariatric Surgery** at Medanta Institute of Digestive & Hepatobiliary Sciences is equipped with the most modern facilities and caries out almost all major GI, Hepatobiliary, Pancreatic procedures and has an active bariatric surgery programme. Approximately 75 surgical procedures are carried out every month and the department has its own gastrointestinal and liver Intensive Care Unit for sick patients.

- **The Division of Gynaecology & Gynaec Oncology** offers holistic services for the reproductive health and gynaecological needs of women in a comprehensive, compassionate, sophisticated and dedicated manner with highest emphasis on patient safety. The entire team of Gynaecology & Gynaec oncology at Medanta works with patients, families & partnered healthcare providers to assure high quality treatment, therapy and care. Medanta being a tertiary care centre, patients are referred from all over the world for various gynaecological conditions.

  Medanta Division of Gynaecology harnesses the latest in technology & medical innovations in the complete range of medical services offered to maintain optimal gynaecologic well-being throughout the different phases of a woman's life, including those in her pre-reproductive, child-bearing & menopausal years.

  The specialists of this department are highly qualified & experienced, and their dedicated efforts result in patient wellness and reduced morbidity. The department specializes in diagnosing & treating all cases of benign and malignant gynaecological diseases by conservative & operative approach. Surgeries ranging from simple day-care procedures to the most advanced minimal invasive surgeries (Laparoscopic & Robotic) are undertaken with care, compassion and commitment.

- **Medanta's Division of Mental Health and Quality of Life** offers comprehensive, innovative and recovery focused services to help with mental health problems.

  Often mental health problems graduate to psychiatric disorders. Common mental disorders like anxiety, OCD and depression lead to major psychiatric disorders like schizophrenia, mood disorders and dementia or to substance abuse disorders like alcohol dependence and personality disorders.
  Mental health problems get compounded due to a huge stigma attached to seeking help for these. Psychiatric help available mostly focuses on medicine, while comprehensive care - which includes psychological and social interventions, is not easily available from a single service provider.
  The Division of Mental Health and Quality of Life is the first of its kind in India. Medanta brings comprehensive care for the mind through a multi-disciplinary approach, where a team of psychiatrists, clinical psychologists, social workers and counsellors work together to help deal with mental health problems and difficult circumstances.

- **The Division of Peripheral Vascular & Endovascular Sciences** caters to patients from all over India and abroad who come with complaints of gangrene, pain on walking, non-healing wounds & ulcer, leg swellings, varicose veins, pain in legs, ulcers, stroke or paralysis and limb threatening trauma. Detailed evaluation of the peripheral arterial and venous system is done in a Non-invasive lab by a vascular specialist who detects blockage in the arteries and also predicts future blockages. The Division takes care of all vascular injuries, both arterial and venous, sustained during Road Traffic Accidents or Industrial Accidents round the clock.

  The Division provides help to patients with non-reconstructable vascular disease for relief of pain and limb salvage. Division holds the distinction of having a dedicated dual plane Vascular Cath lab along with a state of the art "ARTIS ZEEGO" Cath lab in the operation theatre. The Division provides overall management of all peripheral vascular diseases and also arranges medical and

public awareness lectures, camps and seminars for various medical associations, NGOs and corporate houses to increase the awareness of this new super-specialty

- **Division of Plastic, Aesthetic and Reconstructive Surgery** at Medanta is a state of the art ultra-modern facility that combines plastic surgery with ancillary disciplines in an effort to provide wholesome care to our patients. Plastic surgeons at Medanta are dedicated to specific areas of focus giving us expertise and width in all areas of plastic surgery i.e. Aesthetic/Cosmetic surgery, Cleft and Craniofaciomaxillary surgery, Hand and Reconstructive Microsurgery, Brachial Plexus and Peripheral nerve surgery, Breast Reconstruction and Lower limb reconstruction etc. We are committed to excellence in patient care and inter disciplinary research that brings current medical development into clinical practice.

  Among the advanced surgeries introduced at Medanta are the Endoscopic Plastic Surgery and Minimally Invasive Cosmetic and Microvascular Surgery.

- **Radiology department:** The facilities are equipped with high end, latest generation machines with cutting edge technology. This coupled with the highly qualified team of Doctors, skilled technicians, nurses and supporting staff provide exceptional patient care and services round the clock.

  Medanta has one of the best equipped radiology departments - One 3T MRI, Two CT scans, Six Ultrasound machines, Two Digital X-Ray machines, One Fluoroscopy machine, One Digital Mammography unit , One Bone Densitometry unit and Three Computed Radiography Units. The HIS and RIS are fully functional. The PACS is under installation.

  The MAGNETOM VERIO- is a 3T, latest generation MRI system providing exceptional image quality with shorter imaging time and maximum patient comfort.

  The DEFINITION FLASH- is a dual source dual energy, 256 slice, CT scanner with tremendous clinical and research capabilities, which has revolutionised the CT industry. It performs high quality CT studies and angiographies at a much

lesser radiation doses and contrast volume. The Definition Flash Mode completes a CT Coronary Angiography in about 1/3rd of a second at less than 1mSv of radiation dose. It is ideal for performing brain perfusion studies in acute stroke patients; the other organ perfusion studies like myocardial perfusion are also possible. The machine is lightning fast and completes a scan within no time at much lesser radiation dose to the patient. This is the first scanner of its kind in India and amongst the only few in the world.

EMOTION- a 16 slice CT scanner, supplements the definition flash for routine work. The Acuson S2000 and Acuson ANTERES Ultrasound and color Doppler machines are fully upgraded with 4D, Contrast Ultrasound and Elastography capabilities, Digital Mammography with state of the art stereotactic breast biopsy system. It enables to accurately biopsy lesions as small as 2-3 mm. Fully Digitalized and Computerised radiography systems.

Apart from this, the department plays a very important and significant role in the overall health care delivery system and academic activities of the hospital. It also provides platform for research activities and plans to conduct various educational and research activities in near future

- **Rheumatology & Clinical Immunology** is the medical super-specialty that deals with arthritis and other connective tissue disorders or autoimmune disorders. There are at least 100 different types of arthritis and rheumatism. These include diseases like rheumatoid arthritis, osteoarthritis, ankylosing spondylitis, psoriatic arthritis, reactive arthritis, gout, still's disease, post infectious arthritis & other connective tissue disorder like systemic lupus erythematosus, systemic sclerosis, sjogren's syndrome, sarcoidosis; myositis like polymyositis, dermatomyositis; systemic vasculitis like wegner'sgranolomatosis, polyarteritisnodosa , takayasu arteritis, etc; metabolic bone diseases like osteomalacia, osteoporosis; chronic musculoskeletal pain disorders like chronic pain syndrome, fibromyalgia ; amyloidosis; primary immunodeficiency syndromes; rare autoimmune disorders, etc.

- **Medanta Emergency & Trauma facility** has 45 beds in emergency & trauma care area. Critically ill or injured patients with life-threatening conditions are immediately taken under the care of a team of specialized emergency doctors and

the patient is evaluated, resuscitated and stabilized as per protocols.

The Trauma Centre in Medanta-The Medicity is "Level I," which means it provides the highest level of specialty expertise and meets strict standards. There are 2 operating rooms dedicated solely to trauma patients with 24x7 availability of specialists in trauma surgery, orthopaedic surgery, neurosurgery, surgical critical care, rehabilitation medicine and emergency medicine to adequately respond and care for the various forms of trauma.

Medanta - The Medicity provides pre-hospital care (road & air evacuation of critically ill patient), following the GOLDEN HOUR concept. The rescue team consists of critical care physician, technician and rescue nurse along with additional specialists if required. Patient evacuation is done by surface ambulance or by air ambulance. The ambulances are fully equipped mobile ICUs with advanced cardiac life support systems.

- **The Medanta Breast Service** calls on the world class expertise of the multidisciplinary group to offer holistic and personalized care for all breast cancer patients. The state of the art equipment that includes a full field digital mammogram, stereotactic biopsy, Mammotome and gamma probe for sentinel node biopsy compliments the excellent facilities in radiology. A biopsy can be performed and results available during the clinic or within 24 to 48 hours, which reduces the waiting time and the need for multiple visits. Health promotion, cancer prevention, surveillance of women at increased risk for breast cancer, early diagnosis and an aim for cure & return to normal life stand out as the major facets of care at Medanta.

- **Pharmacy:** Medanta - The Medicity provides a wide range of pharmaceutical products, surgical, disposables, anti-cancer, lifesaving and general healthcare products and nutritional supplements. The pharmacy provision has been outsourced to GUARDIAN pharmacy.

Project Undertaken

The project undertaken was in the light of the hospital undergoing the re-audit for the JCI accreditation renewal in the month of July. The project was based on 6 chapters of the JCI handbook which are directly related to patient care and are relevant to the neuroscience department. The 6 chapters which were taken into consideration are:

1. International patient safety goals
2. Access to care and continuity of care
3. Patient and family rights
4. Assessments of patients
5. Care of patients
6. Patient and family education

The chapters were evaluated from the neuroscience department point of view and the specific points relevant to the neuroscience department were identified. From these points the non-compliant areas were isolated and focused upon to raise their compliance to a target of 100%

The following were the focus areas where efforts were required:

1. **Non drug order sheet (NDO sheet)**

   One of the most non-compliant area, the NDO sheet is attached just after the medication administration records (MAR sheet). In this sheet the doctors are supposed to prescribe all the orders relating to the patient which are not associated with the administration of the medicines. The form has 2 sections i.e. the investigation section and the 'Other non-drug orders' section which would include the orders like diet orders, physiotherapy, cross referrals etc. the nursing staff has to make sure the orders written in the sheet are to be carried out and to be acknowledged in the sheet.

2. **Inter-disciplinary Team Record (IDTR form)**

   This form is the prerogative of and has to be initiated by the Floor manager. This form is the documentation of the fact that the treatment plan of the patient has

been discussed with all the relevant people involved in the care of the patient and each one of them know what their role is in the care plan of the patient. The stake holders, namely the floor manager, the nursing supervisor, the floor doctor, the dietician and the physiotherapist (if applicable) are to sign the form after the plan of care is discussed. The form is to be initiated by the floor manager 48 hours after the admission of the patient and is to be completed by 72 hours. Thereafter the form needs to be renewed after every 7 days.

3. **Patient Family and Education**

   This form is to be filled and signed by the Doctor, head nurse, physiotherapist and the dietician acknowledging the fact that the patient has been counseled about the condition and also the plan of care and what he should be expecting during the stay in the hospital. Also the family has been explained the condition and how they are supposed to be involved in the care of the patient. The patient or the attendant also signs the form for acknowledging the same.

4. **Initial assessment form**

   This is filled by the floor doctor or the medical officer on duty within an hour of the patient getting admitted in the ward. As soon as the patient arrives, the nursing staff receives the patient and fills the part to be filled by the nurses and is cross signed by the head nurse. The medical officer is also informed about the admission via an automated SMS and also by the nursing staff and the medical officer makes the initial assessment within an hour of the admission and puts his sign with the date and time. The assessment is counter signed by the consultant within 24 hours of the admission.

5. **Cross consultation forms**

   This form is used by the primary consultant team for making cross consultation requests to other teams and record the notes from them. The form has 2 sections, the top one is filled by the primary team stating the reason for the cross referral and the bottom section, which is bigger, is for the referral team to put their notes. This reduces the need for the referral team to go through the whole file of the patient and consult the primary team doctor for the reasons of referral.

6. **Implant form**

   This is a specific form for the surgery patients who will receive an implant. All the details of the implant are recorded by the doctor in this form which is then filed in the patients records and a copy is also given to the patient for future references.

7. **Procedure sheet**

   In the department of neurosciences only Lumber puncture is performed on the bedside of the patient in the ward. For any other procedure which is to be performed, the patient is shifted to minor OT. Hence, the procedure form is filled on for LP when it is performed.

8. **Monitoring of the admission and discharges**

   Admission and discharge form a major part of the daily activities and hence it is very important that the monitoring of both the processes is done on a continuous basis. The data is collected from the HIS and analyzed regularly by the quality department. Also the analysis is shared with all the stake holders in the particular department. This helps in continuous monitoring of the performance and brings to light any deterioration.

9. **Clinical pathway compliance**

   This is also a very important indicator for the department of the neuroscience as the indicator shows how efficient the process is in managing the stoke patients. The compliance is measured continuously and the analysis is shared with the department members regularly to evaluate their performance and make improvements or changes, if necessary. In this pathway, if a suspected stroke patient arrives in emergeny, the patient has to be evaluated within 10 mins of the arrival and if stroke is suspected ‘Brain Rescue’ code is activated within 15 mins. A neurologist has to examine the patient within 20 mins of the arrival and a CT is performed in <25 mins. Within an hour of the arrival of the patient, he is to be started the required medications if a stroke is confirmed.

10. **Incident reporting**

    Incident reporting is encouraged so as to bring to light the real number of the incidents that occur and to ensure that preventive and corrective actions are taken

for such cases. Also the data helps in finding ways to reduce and prevent the frequency of incidents. Online portal has been initiated and all the employees are encouraged to report any incident immediately through that portal. Pharmacists have been deployed on floors to identify the medication errors and lodge them in the system for continuous monitoring.

11. Cross referral TAT compliance

This indicator is also continuously monitored and the data and analysis is shared with various departments to ensure that the TAT for referrals is adhered to. The TAT for STAT referrals is <10 mins, for Urgent within 3 hours and routine within 8 hours. Non adherence to the timeline is escalated to the consultants and the chair persons of the respective departments.

12. Infection Control

Patients with urinary catheter are closely monitored for infections and if a catheter associated urinary tract infection (CAUTI) is identified and confirmed, the case is taken up by the infection control committee and a root cause analysis is done to identify the reason and to prevent future CAUTI cases.

Hand hygiene also forms a very vital component of the infection control. Hand hygiene is closely monitored by the infection control nurses and any non-compliance to hand washing is immediately brought to the notice of the concerned individual and the head of the department.

13. Patient Safety

One of the most important aspect to be considered by the hospital. The staff is trained continuously for the patient identification methods, verbal order policies, patient fall risk prevention methods and handovers methods and critical lab value notifications methods. Various checklists are used to measure the compliance to these standards and the staff is continuously trained to keep the compliance at 100%

OBSERVATIONS AND FINDINGS

1. Since the NDO form was recently introduced, there was little clarity on what orders will fall in which section of the form and whether the order will or will not be entered in the NDO sheet. For this reason, the compliance of NDO sheet varied from 30-40% in the first 2 weeks. Afterwards the floor doctors, the DNB doctors and consultants were sensitized about the importance of the form and all of them were trained about which section will contain what kind of orders. The compliance was monitored for the rest of the duration and it was seen that compliance improved to mean daily average of 86%. This shows that there was a lack of knowledge of the purpose of the form and once doctors were enlightened about the purpose of the form, they were willing to comply with the protocol.

2. The IDTR form had no compliance since there was no floor manager in the wing for the past few months. This form was completely forgotten as it a prerogative of the floor manager. The staff was trained and the doctors were explained the importance of this form. Initially the staff had to be re-trained for the form and its importance but once the practice was started, there was little resistance from any of the staff members and all of them started to comply to the form and the compliance measured by the end of the project was at a mean daily average of >90%

3. Patient family and education is a very crucial part of the stay of patient in the hospital. Patient and his family members have to be educated at the time of admission itself. This form is a record of this particular activity and this form was also neglected and hence the compliance was as low as 20% on some days and the daily mean average was 58%. After the trainings, the mean daily average was calculated and 98% while it was 100% in the last week of the project.

4. Initial assessment compliance was already being taken up regularly and although the compliance was above average and pre-training mean daily average was 73%; to bring the compliance to 100%, chronic defaulters

were identified and were personally counselled by their heads and the quality department. By the end of the project the compliance was almost 100% with only 0.7% going above the specified 1 hour limit.

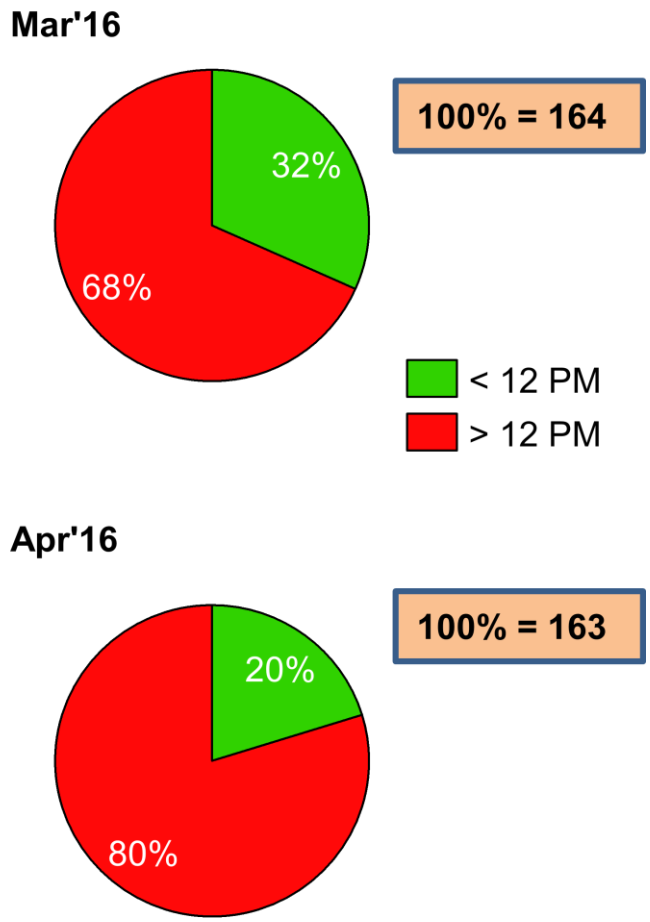
The consultant sign within 24 hours of the admission, was however lax and the mean daily average even after the training was 92%.

5. Cross consult forms was another area where the compliance was above average and hence only the chronic defaulters were identified and their counselling was done personally. The mean daily average post the counselling and training was 83%.

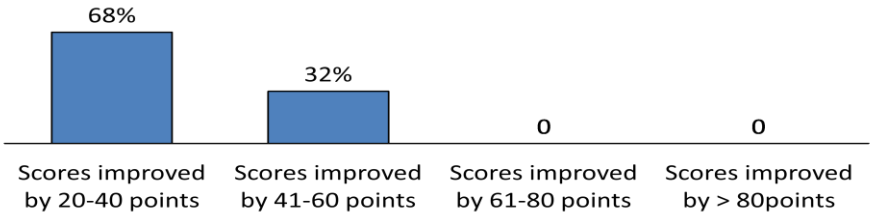
6. Implant form was recently introduced and hence the doctors' were continuously trained on how to fill the form and why is it important. Eventually they also felt that this is a good step for patient education and giving them a vital part of their record and hence the compliance was recorded at 100% after the trainings.

7. The only procedure being done in the ward is Lumber puncture (LP) and the compliance of procedure sheets being filled was above 80% even before the training and after the trainings it was at a 100% level.

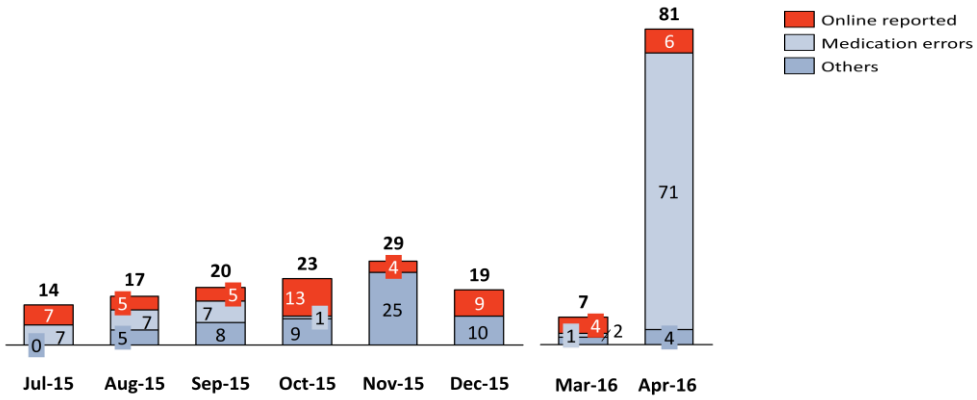
8. The performance of discharges had come down significantly compared to the previous month and hence the focus was on improving this indicator. The reasons which were identified were under-utilization of the discharge lounge, lack of patient's knowledge of the discharge process and delay in finalizing the discharge summaries. The doctors have been asked to prepare the summaries a day in advance if possible and D-1 counselling is done for the patients. Stable patients are also shifted to the discharge lounge once the discharge process is initiated.



9. The compliance to the clinical pathway of acute stroke was largely good and hence no extra effort was needed apart from the usual sessions.



10. Online incidence reporting in being promoted and the staff is being encouraged to report all kinds of incidents, whether big or small, immediately so that a CAPA can be done and avoid further problems. Dedicated pharmacists have proved in improving the reporting of medication errors. The number of reported incidents has drastically increased. The doctors being trained to keep the errors in check and bring it down to zero.



11. Hand hygiene has been emphasized constantly and regular trainings are done for every staff on the practices of hand hygiene. The compliance has improved from the last month.

	6th Floor (FEB)	6th Floor (MAR)	6th Floor (APR)
Nurses	71%	75%	83%
Doctors	54%	64%	82%
HK	100%	100%	100%
GDA	94%	83%	100%

12. Regular audits at various levels for the compliance of IPSG i.e. patient identification, patient fall risk prevention, handovers and critical alerts reporting, verbal orders have ensured that compliance is high and the safety of the patient is always given top priority.

Conclusion

After the study was concluded, it was seen that the compliance to the JCI parameters in the Neurosciences ward is not bad and overall the parameters were good. The non-compliance was mostly seen the newly implemented parameters and it was mostly due to lack of knowledge and sensitization of the importance. After the staff was sensitized and trained towards the new parameters and once they were told why they were important in the patient care and how it will be beneficial in the patient care, the compliance was seen to improve to acceptable levels and that further improvement was very much possible and that it is not a difficult task to achieve.

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