Summer Training at
Postgraduate Institute of Medical Education and Research, Chandigarh

Compliance Study on Crash Cart Content Use in Nehru Hospital of Post Graduate Institute of Medical Education and Research, Chandigarh

By
Harkirat Kaur

Under the guidance of
Dr. Sandesh Kumar Sharma

MBA Hospital & Health Management
2017-2019

Institute of Health Management Research
The IIHMR University, Jaipur
2018

INSTITUTE OF HEALTH
MANAGEMENT RESEARCH
(WHO Collaborating Centre for District Health System Based on Primary Health Care)

IIHMR UNIVERSITY

CERTIFICATE

This is to certify that **Dr Harkirat Kaur** has undergone summer training at **Post Graduate Institute of Medical Education and Research , Chandigarh** from **02nd April 2018 to 01st June 2018**.

The candidate herself completed the project assigned to her during summer training. Her approach to the project was sincere and proactive. This summer training is in partial fulfillment of the course requirement recommended for the award of MBA in Hospital and Health management.

I wish her success in all her future endeavors.

22-6-18.

Dr. Sandesh Kumar Sharma
Associate Professor
IIHMR University, Jaipur

(Col (Dr) Pramod Kumar)
for **Col. (Dr.) Ashok Kaushik** 22.6.18.
Dean (Academic and Student Affairs)
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NEHRU HOSPITAL
POSTGRADUATE INSTITUTE OF MEDICAL EDUCATION & RESEARCH, CHANDIGARH-1600 12 (INDIA)

Prof. Anil Kumar Gupta
Medical Superintendent –cum-
Professor & Head Dept. of Hospital Administration

No.MS-18/ 56
Dated: 01/06/ 2018

TO WHOM IT MAY CONCERN

This is to certify that Dr.Harkirat Kaur student of MBA Hospital and Health Management from IIHMR University, Jaipur has undergone a short term attachment (summer training) at PGIMER, Chandigarh from 2.04.2018 to 1.06.2018.

The candidate has successfully carried out the study designated to her during short term attachment and her approach to the study has been sincere, scientific and analytical.

The short term attachment is in fulfilment of the course requirement. I wish her all success in all her future endeavours.

Project Guided by:

Pankaj Arora 1/6/18

Dr. Pankaj Arora
Assistant Professor
Dept. Hospital Administration
PGIMER, Chandigarh

Prof. Anil Kumar Gupta
Medical Superintendent-cum-
Professor & Head
Dept. of Hospital Administration
PGIMER, Chandigarh

Prof. Anil Kumar Gupta
प्रो. अनिल कुमार गुप्ता
Medical Superintendent-cum-
Professor & Head,
Deptt. of Hospital Administration
चिकित्सा अधिक्षक एवं प्रध्यापक तथा अध्यक्ष
हस्पताल प्रशासन विभाग
P.G.I.,Chandigarh/पी.जी.आई.,चण्डीगढ़

ACKNOWLEDGMENT

The Summer Training at PGIMER, CHANDIGARH helped in furnishing me with both, a learning background and a look into the day by day administrative level issues of this eminent healing facility. I was sufficiently blessed to cooperate with the regarded specialists and staff of the healing center, who have energized and guided me with their help and persistence

I might want to express gratitude toward Mr. AK GUPTA (Medical Superintendent) for giving me a chance to do my temporary job at PGIMER, CHANDIGARH.

I need to offer my thanks and earnest on account of my coaches Dr. Shweta Talati and Dr. Pankaj Arora for their consistent help and important time-to-time direction and kind help in fulfillment of this venture. I likewise need to stretch out my gratitude to Col. (Dr.) Ashok Kaushik, Dean-Academic and Students Affairs, IIHMR, for encouraging and supporting me to achieve my objectives and attempts".

At long last I recognize my obligation to the staff of the Hospital and my regarded Guide of The IIHMR University Dr Sandesh Kumar for giving his consistent help by managing me all through my Training period. I might likewise want to thank every one of the individuals who have specifically or by implication upheld me towards the fruition of this Internship.

Sincerely,

Dr Harkirat Kaur

CONTENT:-

ABBREVATIONS USED

OPD – Outpatient services department

RICU- Renal Intensive care unit

SICU- Surgical Intensive care unit

HDU- High dependency unit

ICU – Intensive care unit

MRD- Medical record room

ACC- Advanced cardiac centre

APC – Advanced Paedtric centre

ATC – Advanced trauma centre

AEC – Advanced eye centre

CT scan – Computer Tomography scan

PET – Positron Emission Tomography scan

MRI Magnetic Resonance Imaging

SLR – Septic labour room

CLR – Clean Labour room

CSSD – central sterile supply department

MLC – Medico legal case

MLR – Medico legal report

ABG – Arterial Blood Gas

HISTORY :

The foundation began in 1962, Pt Jawahar Lal Nehru initiated the clinic currently named Nehru Hospital" on seventh July 1963. The Institute was initially under the Government of unified Punjab. After the revamping of the express, the managerial control of the organization passed on to the Union Territory of Chandigarh in November 1966. The Institute turned into a self-governing body under the Act of Parliament in 1967 working under the Ministry of Health and Family Welfare, Government of India, with the accompanying command

MANDATE

PGIMER ACT 1967

- Provide top notch persistent care
- Attain independence in PG Restorative Education ,meet nation's requirement for very qualified medicinal teachers in all therapeutic/careful fields
- Provide instructive offices for preparing of work force in extremely imperative branches of wellbeing movement
- Undertake essential network based research

MISSION

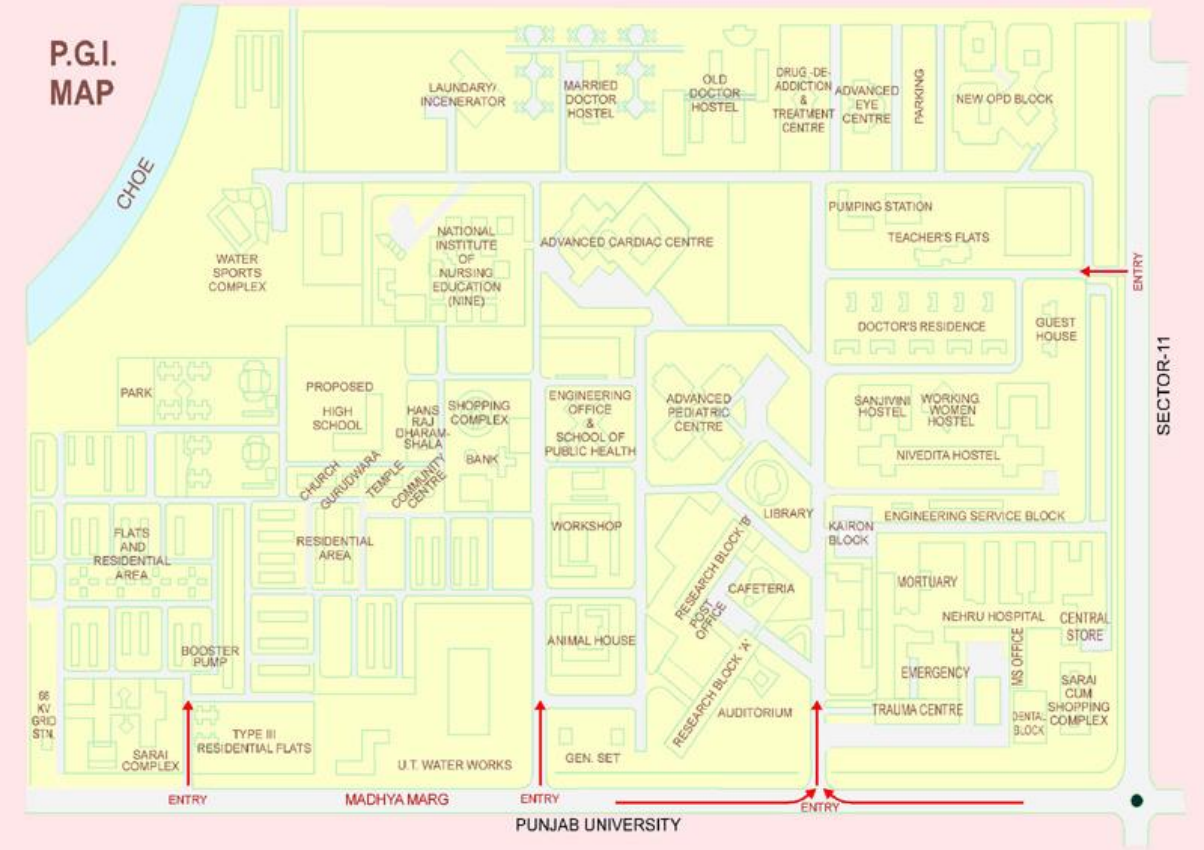
आर्त्त सेवा सर्वभद्रः शोधश्च

Service to the community,

care of the needy and

research for the good of all”

PGI MAP



NEHRU HOSPITAL

PGIMER is a referral place for a few northern states, and gives tertiary care, and crisis therapeutic, careful and concentrated care administrations . It is a standout amongst the most renowned restorative organizations of national significance.

The framework for tolerant care incorporates the Nehru Clinic - a 1400 slept with doctor's facility with 98 rooms in the 5 private wards and two research obstructs for fundamental sciences. The framework for educating incorporates address theatres and meeting corridors, a hall with a seating limit of 1000, a very much supplied library, PC offices including web/Email, and boarding and hotel offices

Floor	A -Block	B -Block	C- Block	D -Block	F- block	Cobalt block
I	1 Nuclear medicine 2 Clinical photography 3 Neurophysiology 4 Department of Neurology	1Dept. of Radiology 2 Fees section 3 Security office 4 Registration counter 5 Generic pharmacy 6 Amrit pharmacy 7 Dept. of orthopedics	1Dept of Nephrology 2 Central store	1 Medical superintendent office 2 Nursing office	1 Dept of Gastrology 2 IP phramacy / Night dispensary	1 Dept of Radiotherapy / Oncology OPD
II	1 Robotics surgery dept. 2 Main ICU 3 ABG LAB	1 Advanced urology dept 2 HDU 3 Emergency Ortho OT	1 Renal ICU 2 Liver ICU 3 Respiratory ICU 4 Renal OT	1 Faculty offices	1 Data centre 2 Dept of gastro Gastro ICU	1 MRD 2 CSSD 3 Radiotherapy day care
III	1 Private ward 2 Neurology ward 3 Neurosurgery ICU	1 Blood bank 2 Maternity ward 3 Sample collection center	1 Gynae ward 2 Labour room 3 New born unit 4 SLR Unit 5Hematology HDU 6 Bone marrow Txp uni	1CLR Extension 2NICU Extension	1 Gynae Faculty Ofc 2 Nursery ward 3 Premature baby ICU 4 Neonatal ICU 5 Phototherapy unit 6 CLR Unit 7 Preclampsia dept	1 Psychatric dept 2 Communicable disease dept 3 Tetanus ICU
IV	1 Private ward 2 Special male surgical & ENT ward 3 Dept of Anaethesia and Intensive care unit	1 Female Surgical ward 2 OT Complex	1 Female Medical Ward 2 Dept of Dietitics	1 Private ward	1 Med & Pulmo Faculty office	
V	1 Private ward 2 Plastic surgery	1 Male surgical ward	1 Male medical ward	1 Private ward	1 Faculty ofc	

	ward 3 Burn ICU 4 Burn HDU	2 Dept of Otolyrngeology 3 OT complex	2 Dept of Dietitics			

USP of Nehru hospital – Burn ICU , Bone Marrow transplant Unit / Hematology HDU , Gamma Knife Centre , PET scan centre

ADVANCED PEDIATRIC CENTER

It was introduced by Dr. Shanker Dyal sharma Leader of India on May 22,1997. There are a few claims to fame for the care of youngsters, for example, Sensitivity Immunology, Hematology and Oncology, Pediatric Neurology, Pulmonology, Cardiology, Nephrology, Hereditary qualities and Digestion.

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STRUCTURAL LAYOUT

LEVEL	BLOCK- A	BLOCK- B	BLOCK- C	BLOCK- D
1	Administration staff stores	AC plant Electricity room	Manifold room	1 Laundry room
2	Auditorium	Emergency	X Rays labs	OPD dispensary
3	Faculty room	ICU	Service labs	Medical OPD
4	Research lab	Wards	General wards	Special clinics
5	Research lab	Wards	General wards	OPD
6	Operation theatre	Special surgical wards	Special surgical wards	
7	Kitchen			

Neonatal Emergency unit: life support to 1000 infants and counterfeit ventilation to around 200 children weighting over 500 gms consistently. Pediatric Emergency unit: than 1000 youngsters get serious care including 60 kids who are given fake ventilation consistently. There is a different 24 hrs crisis benefit for kids. This middle additionally houses careful fortes for kids, for example, Pediatric Medical procedure and Pediatric Orthopedics

NEW OPD

PGIMER, Chandigarh have brought together outpatient administrations where all administrations are given in completely unique building which incorporates all analytic and restorative administrations at same place.

OPD square is an extensive office with a secured zone of 274000 sq ft. In excess of 3500 patients go to it ordinary It works as an entire day mind healing facility. It has far reaching indicative and helpful administrations under one rooftop for 90 Extraordinary Centres and 6 Task Theatres. This square was Initiated on Walk 19,2001.

OPD STRUCTURAL LAYOUT

LEVEL	BLOCK A	BLOCK B	BLOCK C
1	Reception counter Registration counters	Physiotherapy Occupational Therapy	Collection centre Laboratory
2	Administration office Psychiatric dept.	Orthopaedics Pharmacy ART Centre Trauma clinic	Obstetric and gynaecology dept. STI/RTI centre
3	Neurosurgery dept.	Medicine dept. • Rheumatology • Immunology • Gastrology • Hematology • Leukemia	Nephrology dept. Urology dept. Chest Infertile clinic
4	ENT dept.	Renal dept. Hepatology dept. Endocrine dept.	General surgery dept. Plastic surgery dept.
5		Day care operation theatres Day care unit 1 (chemotherapy)	Skin clinic Pain clinic Day care unit 2

OPD SCHEDULING

CLINICS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
MEDICINE	General medicine	Endocrine	Gastrointestine 1	General medicine	Gastrointestine 2	General medicine
SURGERY	Unit 1	Unit 2	Unit 3	Unit 1	Unit 2	Unit 3
SPECIAL CLINICS	---	Breast clinic	Vascular clinic	---	Breast clinic	Vascular clinic
TRANSPLANT SURGERY	----	TRANSPLANT CLINIC	----	-----	----	TRANSPLANT CLINIC
DERMATOLOGY	DC	DC	DC	DC	DC	DC
CLINICS	CD1, 2 Dermatosurgery	Leprosy Uriticaries	STD	Psoriasis	Pigmented dermatosurgery	dermatosis
ENT	Unit 2	Unit 1	Unit 2	Unit 1	Unit 1	Unit 2
SPECIAL CLINICS	---	Vertigo	---	Ogology Allergy clinic	Tumor	---
ORTHOPEDICS	Unit- 2	Unit 1	Unit 2	Unit 1	Unit 2	Unit 1
SPECIAL CLINIC	Ortho oncology	----	Back pain	Sports injury	Cp clinic	Back/ sport
GYNAECOLOGY	Unit 1	Unit 2	Unit 3	Unit 1	Unit 2	Unit 3
SPECIAL CLINICS	Infertility MTP Contraception	Cardiac antenatal MTP Calposcopy Infertility	Prenatal counselling Antenatal MTP Infertility	Toxaemia MTP	------	-----

USP OF NEW OPD – Pain Clinic / Occupational Therapy unit / Special clinics for HIV/RNTCP centre for tuberculosis patients .

ADVANCED EYE CENTRE

Advanced Eye Centre was inaugurated by Sh. Bhairon Singh Shekhawat Hon'ble Vice President of India on March 18, 2006. The centre runs several special clinics and services viz. Lens, Cornea, Uvea, Glaucoma, Retina and Vitreous, Pediatric Ophthalmology and Strabismus, Contact Lens & Low Vision Aids, Oculoplastic and Tumour Clinics. Excellent patient care service is the most important objective of the centre

STRUCTURAL LAYOUT

LEVEL	AREAS
1	RECEPTION, FEES COUNTER, GENERAL OPD, EMERGENCY WARD(EYE)
2	RETINOBLASTOMA, RETINA CLINIC, RETINA CLINIC, UVEITIS CLINIC
3	PEDIATRIC OPD, SQUINT CLINIC, GALUCOMA CLINIC, LENS CLINIC, CORNEA CLINIC, EYE BANK
4	OCULOPLASTIC CLINIC, OPERATION THEATRE
5	RESEARCH AREA, LABS

USP for Advanced Eye centre – Eye bank services

ADVANCED CARDIAC CENTRE

Advanced cardiac centre is 210 bedded cardiac care facility which was formally inaugurated by then Prime Minister of India Hon'ble Sh Manmohan Singh on 3rd Nov 2009 The centre is fully air-conditioned facility including outpatient as well as indoor wards

It has fully equipped 46 bedded cardiac surgery as well as coronary care unit and three fully equipped cardiac cath labs with facility to do coronary angioplasties, device closure for congenital heart defects and radiofrequency ablation procedures for arrhythmia treatment

Centre has four Modular operation Theatres and one emergency operation theatre for cardiac and thoracic surgical procedures These are fully equipped for performing cardio-thoracic surgeries in adults as well as children including newborns.

Centre has facilities for holter monitoring, TMT, 2D and 3D echocardiography, CT and MRI scans as well as nuclear medicine lab for diagnosing cardiac diseases

Centre is performing 1500 cardiac surgeries every year and one third of these being in children with congenital heart defects

The work load of the department has progressively increased over the year and at present, there are 22543 new cases in Cardiology clinic and 56355 follow up cases, more than 7000 cases of coronary angiography and cardiac catheterization and above 4000 cases of coronary interventions and 509 cases of Balloon valvuloplasty, Peripheral angioplasty, device closure, Coil emboilization and Endomyocardial Biopsy

Cardiology department deals with diseases and abnormalities of the heart. Its main activities include OPD services, Special Clinics, In-patient Services, Lab services and other Office Activities. Cardiology department have six Labs that performs a number of tests. Digital Angiographic CD is used in CATH Lab. Angio films and CDs are stored in CATH Lab for accessing patients on follow-up. Cardiology Department has two specialized wards called Coronary care unit (CCU)and Cardiac Thoracic Unit(CTU)

Cardiovascular and Thoracic Surgery Department deals with diseases relating to heart, lungs, blood vessels and its activities include OPD Services, Inpatient Services and lungs & Surgery and Office Activities. Cardiovascular and Thoracic Department conducts 20-25 open heart / closed heart surgery / Thoracic surgery per week. Patients are mainly referred from Cardiology and Pulmonary Medicine Department and Emergency.

STRUCTURE LAYOUT

LEVEL	BLOCK A	BLOCK B	BLOCK C	BLOCK D	BLOCK E
1	ECHO, ECG, STRESS PHYSIOTHERAPY	CARDIO THORACIC AND VASCULAR SURGERY OPD	CARDIOLOGY OPD	EMERGENCY	
2	CAFETERIA	LABORATORY AND BLOOD BANK	ADMINISTRATION	ACADEMIC SECTION	
3	GENERAL WARD CARDIOLOGY UNIT 1	GENERAL WARD CARDIOLOGY UNIT 2	FACULTY OFFICE	PRIVATE WARDS	CCU AND CATH LABS
4	GENERAL WARD CTVS	GENERAL WARD CTVS	FACULTY OFFICE	PRIVATE WARDS	CTVS OPERATION THEATRE

USP for ACC – Well equipped Heart transplant OT .

EMERGENCY DEPARTMENT – Established in 1997.

- 110 bed Emergency Complex with comprehensive life-saving medical services to the patients under one roof. It caters to medical and surgical emergencies round the clock
- Diagnostic facilities like X-ray/Ultrasound/ECG, CT Scan & MRI.
- Emergency labs for blood/urine investigations are available for casualty patients round the clock.
- The treating doctor can call any specialist/super-specialist, which is available on call for urgent consultation as and when required.
- Seven Emergency Operation Theatres working round-the-clock.
- Fourteen bed post-operative recovery ward.
- Facilities like Wheel chairs & Patient trolleys are available at the entrance.

- Telephone, public utilities like toilets, waiting area with Tea/Coffee/Snacks, fans, chairs etc. are available

LEVELS	FACILITIES
II	Triage area Emergency OPD (Medicine / General surgery / Neurosurgery /Urology / Plastic surgery) X ray Hematology labs Bone marrow labs ECG room Blood prepration unit Emergency 22 extended to Nehru Hospital level II
III	Emergency Wards General surgery ward – 2 Plastic surgery 1 Urology 1 Neurosurgery -2 Emergency Operation theatre – 7

USP FOR EMERGENCY DEPARTMENT- Emergency OT 24 hrs Services / Emergency OPD Services

ADVANCED TRAUMA CENTRE -

The centre provides immediate and specialized relief to trauma victims coming from the entire region

- It covers four main specialties i.e. Orthopedics, Neurosurgery, Plastic Surgery and General surgery round the clock
- 100 beds, 17 in ICU and diagnostic facilities like X-ray , CT Scan & MRI
- Five Emergency Operation Theatres working round-the-clock .
- Facility of Blood Bank.
  Facilities like Wheel chairs & Patient trolleys are available at the entrance .

- Telephone, public utilities like toilets, waiting area with Tea/Coffee/Snacks, fans, chairs etc. are available .
- Provision for disaster management area and disaster management cupboards which deals with disaster frequently .

LEVELS	FACILITIES
I	Blood bank Registration counter Diaster management area Fees section Caffeteria Chemist Shop ATC Stores
II	Reception Triage HDU Minor OT

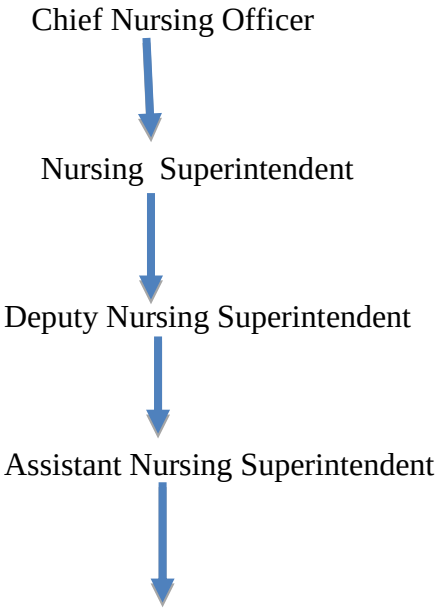
	X RAY CT Scan USG Labs Police assistant room Transplant coordinator room Console room Trolley bay area
III	ATC Operation theatre –5 OT Tables ATC ICU ABG Labs Pre operative & post operative wards
V	Private Wards Faculty Offices
VI	General wards - Plastic surgery ward - Burn unit ward - Neuro surgery ward - General surgery ward - Ortho ward - ENT Ward - Dental ward

USP FOR Advanced Trauma centre – Trauma Opertaion theatre services / Round the clock Orthopaedics / Neurologist / Neurosurgeon/ Plastic Surgeon / General Surgeon on duty .

NURSING SERVICES

The nursing department started in the PGI when first patient wasadmitted i.e. on 23rd June 1962 and first Nursing Superintendent was Miss McLennan.

ORGANIZATIONAL STRUCTURE



Sister Grade – I

Sister Grade – II

NURSING STRENGTH

SR. NO	DESIGNATION	STRENGTH
1	Chief Nursing Officer	Nil
2	Nursing superintendent	2
3	Deputy Nursing Superintendent	7
4	Assistant Nursing Superintendent	52
5	Sister Grade I	491
6	Sister Grade II	1739
	Total	2291

TRAINING PROGRAMMES

There are two educational programmes as part of In-service Education.

- Orientation Programme: Two days programme organized to orient & train newly joined nurses with the functioning of the hospital.

- Management Development Programme (MDP): Twelve days MDP is organized to sensitize the nurses for good management practices and behaviour.

Training Programmes are conducted from time to time to enhance and update the knowledge and skillsof nursing personnel. some of them are

- GFATM Workshop for Training of Nurses on HIV/ AIDS
- Training Programme in Hospital Acquired Infection
- CME on Hand Hygiene
- Prevention of Needle Stick Injury
- Surgical Site Infection
- Workshop on Bio-medical Waste Management etc.

Pharmacy

PGIMER pharmacy is entrusted with responsibility to procure , store and distribute drugs dreesings and related materials to various sections of PGIMER . It runs round the clock to ensure availability of drugs and dressings . It is also responsible for quality assurance so that

drugs and dressings procured are complaint to various norms and regulations related materials to various sections of PGIMER .

Main pharmacy of institute is located on the ground floor in Nehru Hospital near MS office. Additionally there are pharmacies in Advanced Pediatric Center, Advanced Cardiac center and OPD building

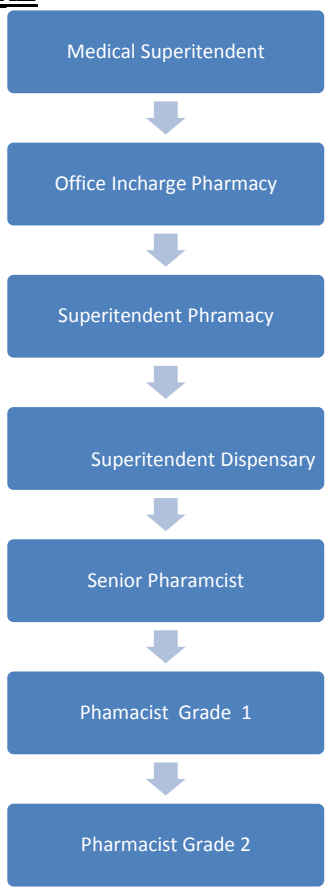
Bulk pharmacy store situated under APC

3 Substores – Nehru store near MS office

Pharmacy store divided into two sections

1) Main store I –deals with cotton ,bandages , gauge pieces , IV Fluids and spirits
2) Main store II – deals with capsule , injections , Tablets etc

ORGANISATION STRUCTURE



Manpower

S no	Designation	Person deployed
1	Superintendent pharmacy	0
2	Superintendent dispensary	1

3	Senior pharmacist	1
4	Pharmacist Grade 1	0
5	Pharmacist Grade 2	30

PGI DRUG COMMITTEE

1	Prof Savita Kumari Dept of Internal Medicine	Chairperson
2	Prof Amita Chakarvorty Dept of Pharmacology	Member
3	Prof Ajit Awasthi Dept of Psychatry	Member
4	Prof Vivek Lal, Dept of Neurology	Member
5	Prof Amita Trehan , Dept of Paedtrics	Member
6	Prof Pankaj Malhotra Deptt of Internal Medicine	Member
7	Dr Subrata Podder , Deptt of Anaethesia	Member
8	Purchase Officer	Member
9	Dispensary Supertendent	Convenor

USP For pharmacy – AMRIT Pharmacy / Generic stores / Jan ashudi kendre for reasonable pricing pharmacy store

INSPECTION COMMITTEE

There is also Inspection committee for Audit the pharmacy .

Inspection committee inspects incoming material as per supply orders in respect of:

- Quantity
- Quality as per specifications
- Shelf Life (It should not have passed more than 1/6th of total shelf life)
- To ensure maintenance of Cold chain during transportation of thermolabile Drugs

1	Prof Samir Malhotra Dept of Pharmacology	Chiarman
2	Dr Rajiv Kumar , CMO Staff Clinic	Member
3	Rep . Finicial Advisor	Member
4	Nursing Superintendent	Member
5	Superintendent dispensary	Convenor

PGI FORMULARY-

This formulary has been prepared for the convenience of prescribing Doctors. This lists the approved drugs. Efforts are made to ensure the availability of these drugs in the PGI Pharmacy depending upon their consumption pattern. The drugs have been listed by their generic names, both alphabetically and according to the use in different diseases.

PGIMER have AMRIT Stores / Generic Pharmacy store to promote medicine at low cost. There is poor free and private grant cell for dealing with poor patients.

5 AMRIT stores are present at PGIMER complex .
AMRIT – means Affordable Medicine and Reliable Implants .

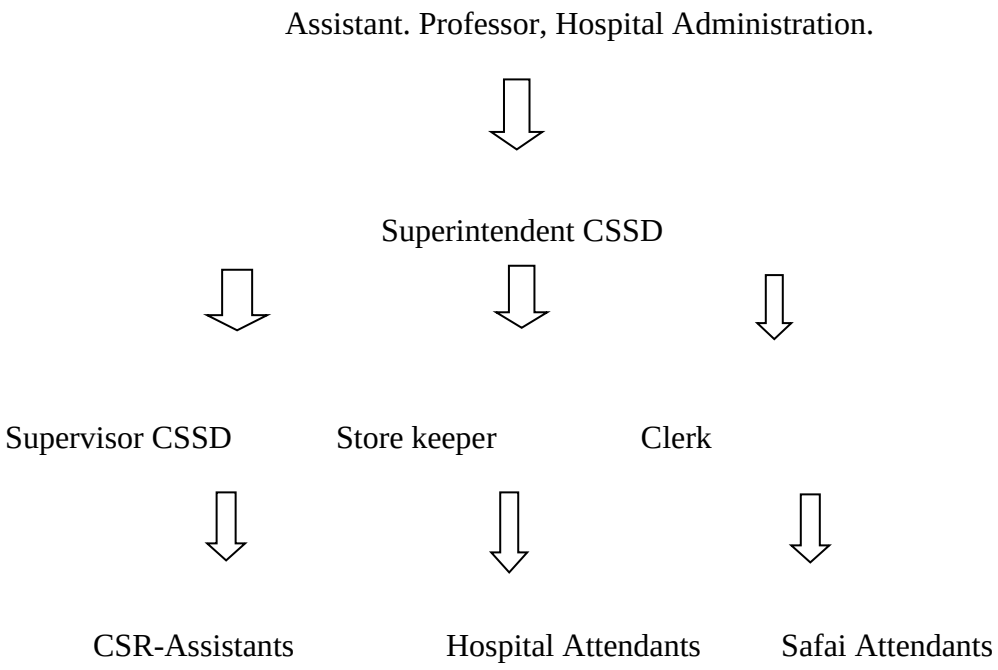
CENTRAL STERILE SUPPLY DEPARTMENT

Objective of CSSD- to ensure supply of sterilized material to the hospital.

Functions of CSSD

1. Provide supplies of sterile instruments sets and all other sterile items used in patient care.
2. Maintain effectiveness of cleaning, disinfection and sterilization process.
3. Monitor and ensure controls necessary to prevent cross infection
4. Maintain supplies & equipment inventory.
5. Stay updated with development within field
6. The department also provides training to some senior nurses, BSC O.T students, nursing students and sponsored candidates from other hospitals under in service programs.

Organogram



Staff pattern

Staff category	Numbers of person
Superintendent	1
Supervisor	2
Store keeper	1

CSR	19 (R) +13 (C)
HA	27
SA	5

Layout

The CSSD is divided into five functional Sections:

- Receiving counter
- Decontamination area
- Packing area
- Sterilizing and cooling area
- Dispatch area

One-way traffic flow

Dirty receiving area on one hand

Segregation area

Washing area (Manual washing area/ Washer)

Packing area (gloves section / vial section / instrument section / gauge piece section)

Autoclave area which consist of 5 machines (1 machine is 500 litres took one and half hour /

2 machine of 1000 litres took one and half hour &

rest 2 machine of 3000 litre which tooks one and half hour)

ETO machine area

Sterile area which is on other side

Quality Control

Three types of Indicators used during infection control for Autoclave machine

- Physical Indicators – steam penetration (time, pressure, temperature)
- Chemical Indicators – class I – Autoclave tape
  class II – Bowie-Dick test
  class V – Integrating indicators
  class VI – Emulating Indicators
- Biological Indicators – Bacteria spores of GeobaccillusStearothermophi.

MEDICAL RECORD DEPARTMENT

Department was taken care for Registration and maintain of outdoor / indoor and special clinic records of this institute around the clock at Nehru hospital , APC , ACC , ATC , AEC & ACC .

FUNCTIONS

- Prepares hospital statistics
- Dealing with receipt and disposal of summons
- Carrying out the work related to Medical Disability Board.
- Dealing with receipt and disposal of filling up of Insurance claim forms/Medico-legal cases.
- Issue of files to doctors for research, study, medico-legal purposes.
- Issuance of Medical Record under RTI Act.
- Counter signature of Reimbursement of Medical Bills.
- Deposing of Expert witness by the doctors of the Institute through Video conferencing(Tele-evidence w.e.f March;2014).
- Issuance of Birth and Death Certificate occurred in the Institute.

OBJECTIVES OF DEPARTMENT

To provide prompt service to the doctors and patients / attendants by providingMedical Record in quick and efficient manner.

Hierarchy of department :

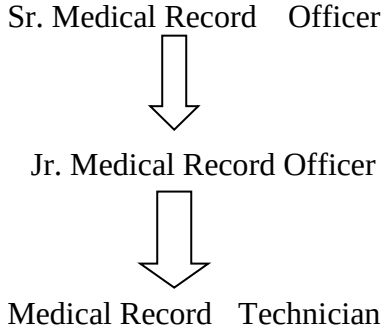
Medical Superintendent

⇩

Officer Incharge, Medical Records Department,

(Faculty from Hospital Administration)

⇩



SECTIONS / SUBSECTIONS AND THEIR TASKS

Out Patient area

Main function of this section is to register a patient as an outdoor in the general OPD and special clinics. After registration, outdoor files of the patients are serial and filedaccordingly. Reimbursement of Medical bills is also being carried out by this section. Apart from this, issuance of Investigation Reports, correction of demographic details of patient, change in the category of patients like Poor free, Leprosy free, prisoners, etc. is also being dealt by this section

In patient area

I. Incomplete area

- Receiving of inpatient files: This area is responsible for receiving indoor treatment files of the patients discharged from the Institute as per midnight census prepared by the Nursing staff in the respective ward.
- Assembling: Files received from the various ward of the Institute are arranged in the prescribed order and are punched accordingly.
- Coding**:** These files are coded according to International Classification of Diseases prescribed by the WHO
- Indexing**:** Thereafter the same are indexed as per diagnostic code for making disease-wise information of indoor patients. Thereafter files are forwarded to the complete area for filling.

II. Complete Area

This area is responsible for serialling and filing of inpatient record as per admission number and for retrieval of the same as and when required

III. Miscellaneous work

1. Filling up of MLC / LIC forms / Duplicate discharge summary
2. Issue of files / record
3. Receipt and disposal of summons
4. Medical Disability
5. Correspondence

6. Stationery Store
7. Hospital Statistic
8. Poor free information

Human Resource Deployment

The Medical Records Department has deployed 56 Medical Record Technicians through an outsource. The said staff has been deployed at various counters in the OPD / IPD and emergency counters of the Institute

USP For MRD – Registrar on duty for death and birth registration / Tele evidence facility

DIETITICS

Department of Dietetics at PGIMER has been functioning ever since the inception of Nehru Hospital in 1963, located on 4th Floor and 5th Floor, Block-C, PGIMER. The department of Dietetics, PGIMER is a vital organization that carries multiple responsibilities related to patient's nutritional needs for better medical outcomes.

OBJECTIVES

The main objective of the department of Dietetics is to provide normal and therapeutic diets/feeds as well as clinical services to the patients.

- Meal services are provided to all indoor patients of Nehru Hospital, Advanced PediatricCenter (APC Advanced Eye Center (AEC), Advanced Cardiac Center (ACC) and Drug De-addiction Center (DDTC)
- Department also runs Diet Clinic daily in New OPD, APC and ACC

FUNCTIONS

1. Administrative: Establishment, procurement, storage, accounts, record.
2. Educative: Dietary instructions, cooking demonstration and follow up chart.
3. Therapeutics: Clinical Services, Food processing, production and meal service management.

CLINICAL SERVICES

Daily ward rounds are taken by the dieticians in their respective wards and diet is prescribed/implemented in consultation with the doctors. Individual diet counselling along with diet chart is provided to indoor as well as outdoor patients.

Diet Counselling for Out-door Patients

MEAL SERVICES

Meal services are provided to general as well as private ward patients. In general ward tea and breakfast services are decentralized and lunch and dinner are centralized, whereas all meal services are centralized in private wards. The therapeutic section caters to patients who are on special feeds and diets. There are approximately 600 normal diets. The cost for general diet is Rs. 35/- per day and Rs. 150/- per day for private ward patients.

MEAL TIMINGS

	PRIVATE WARD	GENERAL WARD
Morning Tea	7:00 a.m. to 7:30 a.m	
Breakfast	7:30 a.m. to 8:30 a.m	8:00 a.m. to 9:00 a.m
Mid-Morning	10:30 a.m. to 11:00 a.m	10:30 a.m. to 11:00 a.m
Lunch	12:30 p.m. to 1:30 p.m	12:30 p.m. to 1:30 p.m
Evening Tea	4:00 p.m. to 5:00 p.m	4:00 p.m. to 5:00 p.m
Dinner	7:30 p.m. to 8:30 p.m	7:30 p.m. to 8:30 p.m

FOOD PREPARATION

- Diet Schedule- A standard diet schedule is followed for normal and therapeutic diets and feeds.
- Recipe Standardization – According to the diet schedule various recipes are standardized using specific amounts of ingredients.
- Portion Control – This is according to the standard diet schedule and supervised by dieticians

FEEDBACK

In General as well as private wards the feedback forms are given to the patients on a regular basis

The total Expenditure During the last fiscal year 2016-2017 was Rs 4, 50,00000.

STORAGE

The items are procured and verified by the Dietician in charge stores before taken on stock books. Perishable articles like milk, curd, fruits, and vegetables are procured and used daily. Only a few days stock of cheese, butter, eggs, meat and poultry is maintained in the cold room. Atta is procured bimonthly. Stock books for all the items are maintained separately. All receipts and issues are entered daily. Separate stores are being maintained for equipment that includes cooking gadgets, utensils serviettes, machinery, food trolleys and linen items. Services items like crockery, cutlery and linen are procured annually.

QUALITY CHECK

Quality is checked by a committee of three members for dry rations, fruits, vegetables. Chicken & eggs are checked by dieticians. Milk quality is checked every day with the help of Lactometer by the dietician. Perishable items such as fruits, vegetables and eggs are stored in a cold room whereas chicken and paneer are stored in deep freezer, thus maintaining their quality. Dry rations are stored in a spacious store room which is regularly cleaned and given the anti-rodent & anti cockroach treatment routinely.

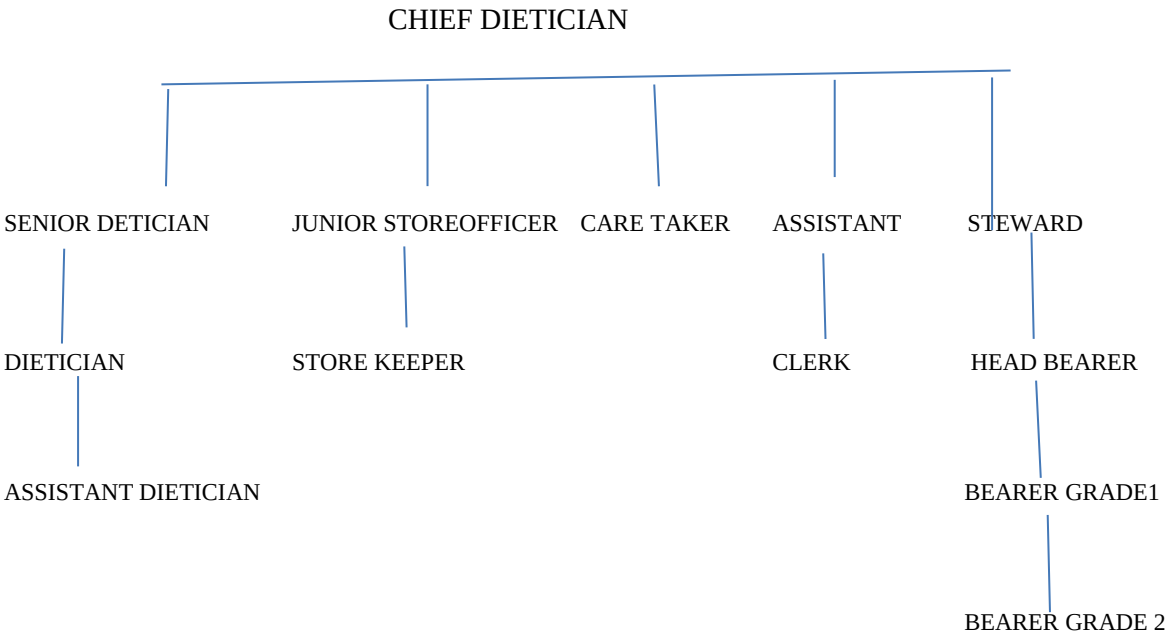
Medical checkup -Routine medical examinations is done for food handlers once in a year and suitable treatment are given to them.

Personal hygiene – Regular checking of hair, nail, dress are done by the dieticians for maintaining good personal hygiene of food handlers and are taught them about the cleanliness and hygienic food preparation and services on regular basis.

EQUIPMENTS

This department has all ultramodern facilities like Fully Automatic Chapatti Making Machine, Walk in cold room, Dough kneading machine, potato peelers, Vegetable cutting machine, bulk cookers and Body fat analyzer for research purposes.

ORGANOGRAM



MANIFOLDS

The institute is providing high quality care to the patients of all age group from all over India, as well as Emergency services round the clock to the seriously ill patients with highly specialized medical and surgical services. Hence a large number of patients while they are on treatment at PGI require oxygen in Operation theatres, wards, Anaesthesia rooms and ICU wards etc.

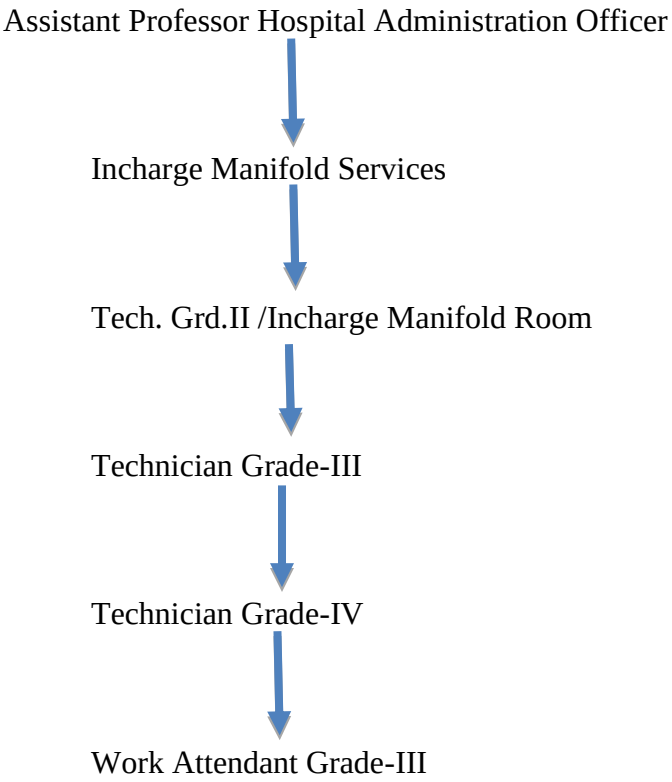
OBJECTIVES

The services include providing medical gases like oxygen, nitrous oxide compressed air and suction through the centralized pipe line system to the wards, operation theatres and ICU etc. These gases are supplied from manifold plant, installed in each centre round the clock.

LOCATION OF PLANT

- Nehru Hospital
- Adv. Paed. Centre
- Adv. Eye Centre
- Adv. Cardiac Centre
- Adv. Trauma Centre
- New OPD

ORGANOGRAM



LIQUID OXYGEN TANKS

- Nehru Hospital 7,000lts capacity
- Adv. Trauma Centre 12,000 lts capacity
- Adv. Paed Centre 7,000 lts capacity.
- Adv. Cardiac Centre 10,000 lts capacity.

Medical liquid oxygen station consisting of vacuum insulated evaporizer system tank, having above said capacities including AV coils, automatic regulatory system, D. P gauge for liquid level indication, bursting discs, safety valves, pressure gauge, and alarm system are operated by the technicians /operators, on duty, round the clock. Each manifold plant has auto control panel of cylinders to maintain oxygen supply through cylinders.

NITROUS OXIDE CONTROL PANEL Every Manifold plant has Nitrous oxide control panel to supply for operations theatres through central pipe line system.

COMPRESSED AIR SUPPLY Air compressor machines are available to provide compressed air supply to wards and operation theatres from each manifold plant as per location round the clock.

VACCUM SYSTEM Vacuum pumps are available (2 each) in every plant to provide suction facilities to the wards and operation theatres from plant, through central pipe line system round the clock.

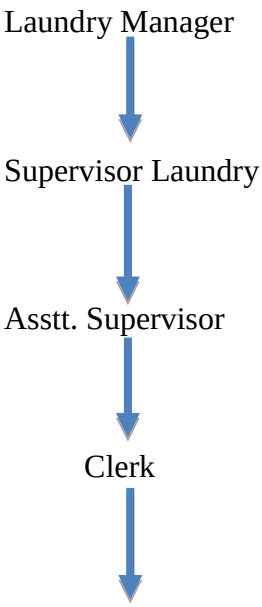
LAUNDRY

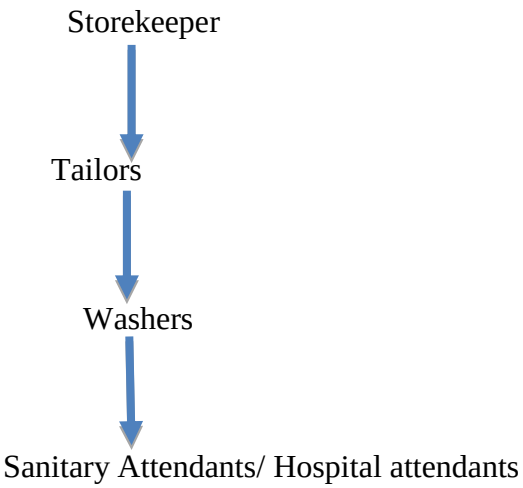
It provides clean and quality washed linen after collectingdirty/soiled linen from all hospital areas i.e. Operation theatre's, the Indoor wards, Outpatientdept., Intensive Care units of Nehru hospital, Advanced Pediatricscenter, Advanced Eye center& Advanced Cardiac center. Laundry works 365 days in a year in orderto ensure uninterrupted timely supply of the washed linen.

OBJECTIVES

- Provide adequate quantity of the right quality linen at theright time at right place to indoor patients, operation theatres and the other patient care areas ofthe hospital.
- Prevent cross infections

ORGANIZATIONAL STRUCTURE





MANPOWER

SR NO.	DESIGNATION	STRENGTH
1	Laundry Manager	1
2	Laundry supervisor	1
3	Assistant Supervisor	1
4	Clerk	1
5	Storekeeper	1
6	Washer men	30
7	Tailor	3
8	Sanitary Attendant	7
9	Hospital Attendant	30

Laundry of the Institute has two distinct wings namely

- LINEN BANK
- LAUNDRY PLANT

FUNCTIONS

Linen Bank
1 Linen store & Condemnation of linen
2 Collection & Distribution of linen
3 Transportation of linen from bank to plant

Laundry plant
1 Laundry processing
2 Mending work of linen

LAUNDRY PROCESSING

1. Collection of dirty linen

Advance PediatricsCenter	Door to Door collection & Distribution
Emergency Area	Door to Door collection & Distribution
Nehru Hospital	Door to Door collection & Distribution
Advance Eye Center	Door to Door collection & Distribution
Main Operation Theater	Door step collection
OPD Block	Spot Collection
Main Operation Theater	Door step collection
Advance Cardiac Center	Door to Door collection &distribution

2. Unloading and Sorting of Linen

    - Unloading of linen truck
    - Sorting of linen into soiled, dirty and stained linen
    - Weighing of linen

3. Washing

    - Pre-wash: for removal of stains
    - Chemical wash: with detergent, soda ash, bleaching powder, neel.
    - Rinsing: draining of chemical with hot water
    - Unloading of linen
    - Time taken- 60- 65 mins

4. Hydro Extraction

    - It removes moisture from the linen
    - Speed 600-700 rpm
    - Three machines available

5. Drying

    - Sun Drying
    - Tumbler Drying
    - Calendar Drying

6. Ironing and Folding of linens

EQUIPMENTS

SR NO	EQUIPMENTS	QUANTITY
1	Boilers	2
2	Washing machine- low spin 60kg	2

3	Washing machine-Low spin 120 kg	1
4	Washing machine-High spin 60 kg	2
5	Washing machine-High spin 120kg	1
6	Hydroextractor	3
7	Tumbler	4
8	Calendar machine	1
9	Bed press	3
10	Hand press	1
11	Sewing machine	9

SECURITY

The security services of the hospital are monitored 24X7 hours from main Security Control Room which is situated Nehru hospital near registration counters. CCTV cameras are installed in the Institute covering all the main entry and exit points of every building of the PGI, public counters and main gates of hospital.

FUNCTIONS

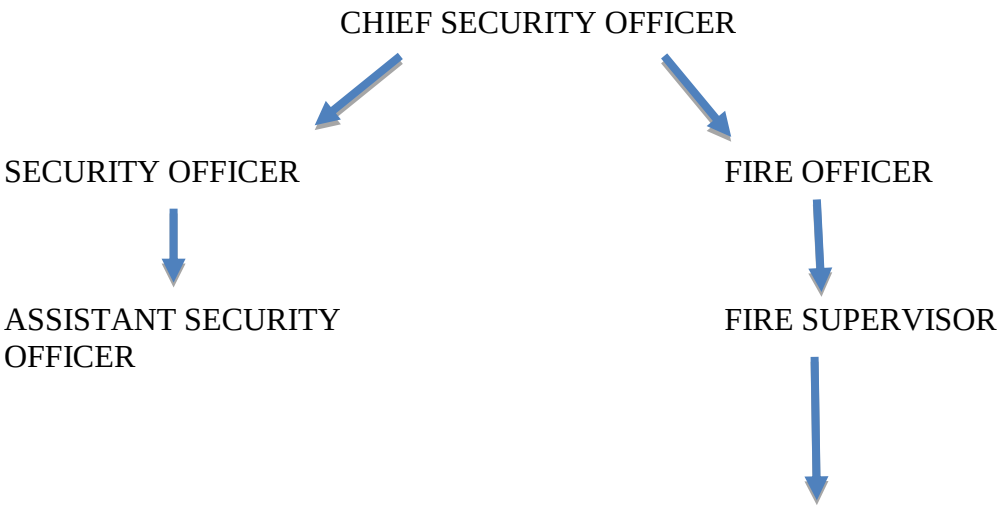
- Provides the security and fire safety services through trained staff.
- Supervises the parking arrangements for smooth and uninterruptedtraffic.

EQUIPMENTS

- Security cameras – 156
- Analogue non-digital camera – 41
- PTZ camera- 12
- Box camera- 7
- LED 55’inches- 10

Storage capacity is 132 TB and after 30 days the video recording is deleted automatically.

ORGANOGRAM



SECURITY SUPERVISOR

FIRE GUARD

SECURITY GUARD

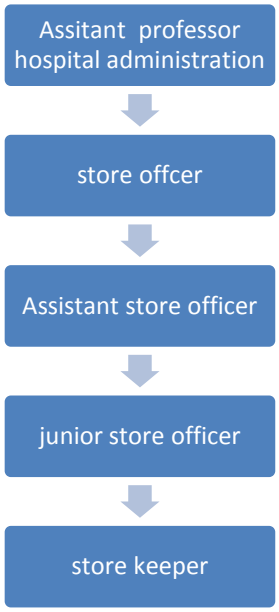
PGIMER have also deals with employee safety regarding guiving TLD Batches for staff , and regular medical checkups

For Child abduction PGIMER provide similar batches to mother and child and also get footprints impression of child one very first step on mother (patient) file to ensure the no swapping or child abduction

CENTRAL STORE

The Central Stores is located in “C” Block of Nehru Hospital, PGIMER. The main function Of Central Store is to store and provide materials to all the clinical and non clinical areas of the hospital required for their smooth functioning

Organogram



Sections of Store

1. Surgical store
2. Linen store
3. Chemical store / glasswaree / furniture store
4. Sanitation store
5. Stationary store
6. Receipt store
7. Import store
8. Condemnation / Auction store
9. Sample
10. Tailoring store

Workflow steps

1) Receive the material against supply order
2) Put up before the inspection committees for inspection of receiving material.
3) After approval of committees , the material is issued to sub stores for further distribution to the concerned wards / OT ‘s & depts.
4) Rejected materials are returned to firms for replacement as per approved sample
5) Verified invoices as send to account branch for payment

Inspection Committee

Every incoming material is accepted in the Central Store only after approval by a Inspection committee. The committee verifies the received material with respect to:-

1. Quantity
2. Quality as per specification

GAMMA KNIFE CENTRE:

Situated at ground floor adjacent to Nehru Hospital .PGIMER have Gamma Knife Machine provision in northern region which covers Punjab Harayana , J & K & Himachal Pradesh .Gamma knife surgery also called as Sterotactic Radiosurgery . Even though it is called surgery , a gamma knife procedure does not involve actual surgery , nor the gamma knife is a knife at all , it is invasive in nature . Each Gamma Knife Centre consist of

- The radiation unit
- Patient couch
- The Beam Focusing technology
- Electric bed system
- Control console room
- Planning Computer system
- Preoperative ward
- MRI room

Manpower

1	Senior nursing officer	1 for 8 hrs shift
2	Nursing officer	1 for 8 hrs shift
3	Gamma knife Trechnician	1 for 8 hrs shift
4	Neurosurgeon	1 round the clock
5	Radiologist	1 round the clock
6	Medical Physicist	1 round the clock

Patient criteria:Whose is having Malignant Tumour , Ateriovenous Malformations ,Trigeminal Neuralgia & Cavernous sinus.

Work Flow : Patient was admitted day prior to Gamma knife procedure for work up in hospital. -→ next day morning stereotactic frame was inserted by Duty Resident on patient head to make immobile under local anaesthesia if patient had vascular disease then go for DSA testing first and if patient had big lesion in previous MRI scan then go for again MRI under 1.5 tesla machine for make more resolution ----→Images can be taken into CD from there and treatment planned is made by using these images because of accurate deliverable positions -----→ Patient lies on the table of gamma knife and while the frame is fixed to appropriate collimator and then Medical physicist / Neurosurgeon /Radiotherapy consultant after discussion and consenting make the treatment plan viable which include shot size , shot locations , shot weight & number of shots –intially 201 -→ The door to the treatment units open , The patient advanced into shielded vault. The area where all the beams intersect is treated with high dose of radiation ---→ patient should be admitted for some time for observation because of some side effects of drugs …

Safety precautions for staff : TLD batches should be sent every 3 monthly for assessing radiation frequency effects on staff … if test should be significant then change the duty of staff from particular department

Equipments

Gamma centre consist of 1 Gamma knife machine & 1 MRI machine which is 0.5 tesla in range

PROJECT –

COMPLIANCE OF CRASH CONTENT USE AT NEHRU HOSPITAL IN POST GRADUATE INSTITUE OF MEDICAL EDUCATION & RESEARCH CHANDIGARH

INTRODUCTION

Crash Cart is meant for storing and transporting vital equipments and drugs which may be required during emergencies" . The first crash cart was created in 1962 at Bethany Medical Centre in Kansas city , Kansas home to first cardiac care unit in country . The crash cart was originally designed and patented at Pennsylvania hospital in by Joel . J Noble . The main function of crash cart is to provide mobile unit that used in medical emergencies or life threatening situations This mobility is the best advantage of this concept is that treatment comes to patient whenever required. The size and design of crash cart depend upon number of emergencies a hospital manages . The location of crash cart is centrally located wherever the oxygen and suctioning equipments are available .

Hospitals that have separate wards or treatment areas should consider maintaining multiple crash carts to cover all areas .Crash carts should include emergency medications, intravenous catheters and fluids, and a defibrillator. Carts should be fully stocked at all times, and each drawer should be labeled. All staff members should know what is in the cart and where to find each item list common supplies in crash cart . The arrangement of equipment in crash carts should be standardized throughout the institution. Crash carts should be checked daily and monthly against checklists to ensure that they are fully stocked at all times. When an item from the cart is used, it should be replaced immediately after the emergency. A daily check would include ensuring that the cart has all the necessary supplies in the proper place and that all its electronic equipment is fully charged. A monthly check would include checking drug expiration dates as well as sterilization dates for endotracheal tubes if they are reused.

There are certain guidelines and policy are for arrangement of crash cart trolley which may be used in certain emergency situation to save someone's life for life threatening situations.

LITERATURE REVIEW:

Susanna . T Walker , Stephen J Brett , Anthony McKay , Rajesh Aggarwal ,Charles Vincet did a study named – Resus : station : The use of Clinical simulations in randomized cross over study to evaluate a novel resuscitation trolley in which proved that : Inadequately designed equipment has been implicated in poor efficiency and critical incidents associated with resuscitation. A novel resuscitation trolley (Resus:Station) was designed and evaluated for impact on team efficiency, user opinion, and teamwork, compared with the standard trolley,in simulated cardiac arrest scenarios. Methods: Fifteen experienced cardiac arrest teams were recruited (45 participants). Teams performed recorded resuscitation simulations using new and conventional trolleys, with order of use randomized. After each simulation, efficiency ("time to drugs", un-locatable equipment, unnecessary drawer opening) and team performance (OSCAR) were assessed from the video recordings and participants were asked to complete questionnaires scoring various aspects of the trolley on a Likert scale .Results: Time to locate the drugs was significantly faster ($p = 0.001$) when using the Resus: Station (mean 5.19 s (SD 3.34)) than when using the standard trolley (26.81 s (SD16.05)). There were no reports of missing equipment when using the Resus:Station. However, during four of the fifteen study sessions using the standard trolley participants were unable to find equipment, with an average of 6.75 unnecessary drawer openings per simulation. User feedback results clearly indicated a highly significant preference for the newly designed Resus: Station for all aspects Teams performed equally well for all dimensions of team performance using both trolleys, despite it being their

first exposure to the Resus: Station. Conclusion: We conclude that in this simulated environment, the new design of trolley is safe to use, and has the potential to improve efficiency at a resuscitation attempt.

B Lofgren , CB Larsen , ML Rasmussen , F L Henriksen & N H Krarup did a study named limited knowledge of crash call number among hospital staff – A call for standardization in case of In-hospital cardiac arrest carries a poor prognosis. Any delay in activating the resuscitation team may jeopardize survival. Hospital staff often works at multiple sites and a lack of a uniform crash call number may contribute to delayed activation of the resuscitation team. The aim of this study was to quantify crash call numbers in Danish hospitals, and to determine the knowledge of the crash call number among hospital staff Methods : All public Danish hospitals were contacted by telephone to quantify the crash call numbers. To investigate the knowledge of the crash call number two university hospitals and five county hospitals were randomly chosen and questionnaires were distributed to the staff. The questionnaire included questions on occupation, knowledge of crash call number and how that knowledge was obtained. Furthermore, the staff was asked to disclose employments at other hospitals within the last year and their respective crash call numbers. Results : At 74 hospitals 41 different crash call numbers were used. The most prevalent numbers were “2222” (n= 12), “4444” (n= 2), “7000” (n= 2) and “2011” (n= 2).Based on 648 questionnaires (response rate 78%) the overall knowledge of the crash call number was 49.5% (Physicians: 48% (n= 179); nursing personal: 58% (n= 201); servicepersonal:52%(n=168);miscellaneous: 31% (n= 100)). The primary source of knowledge was introduction to the hospital (36%), boards or labels on phones (23%) and participation in an emergency situation (12%). A minor part of the staff (18%) had 1–3 employments at other hospitals within the previous year Recollection of the crash call numbers at these hospitals were 21%, 2% and 4%, respectively. Conclusion: We demonstrate a pronounced diversity in the crash call numbers. The knowledge of the crash call number is limited among hospital staff. A standardized crash call number may strengthen knowledge and improve activation of the resuscitation team.

Dr Namrata Makkar did study named Study of compliance of crash carts to standards in the emergency of a tertiary care teaching hospital in which proved that the successful management of cardiopulmonary emergencies revolves around the optimum utilization of the golden hour, so that the patient gets the best possible advantage at survival. Aim of the study was to perform gap analysis of crash carts in the emergency of a tertiary care teaching hospital by comparing the salient parameters with standards listed by Resuscitation Council UK (for equipment) and National Accreditation Board of Hospitals and health care providers (for management of medication). Further, to assess the improvement in compliance with the simple intervention of educating staff regarding protocols. Methods: A descriptive, quantitative, observational study, supplemented in the second phase by an intervention to increase awareness of staff in achieving standardization, followed further by assessing the level of improvement in compliance to standards in terms of content, labeling, documentation and functionality of the contents of the carts Results: The root causes of non-adherence to standardization were design of the area and of the cart, amount of workload which led to

neglect of labelling, documentation protocols resulting in decreased accountability and inefficient monitoring. This impacted the adequate provision of content and functionality of the items in the crash carts. Human factor engineering in the form of customization of crash carts for cognitive ergonomic design, clarity and awareness of guidelines among the nursing staff i.e. _first responder' went a long way in improving compliance to standards. Conclusions Human factor engineering supplemented by usage of sub-trolleys, along with increasing sensitivity and awareness to standard protocols, can help achieve maximum compliance in terms of the effective functioning of crash carts in the emergency

AIM:

To Observe and study of crash cart's content at Nehru Hospital in Post Graduate Institute of Medical Education and Research Chandigarh

OBJECTIVE

1) To Observe availability of crash cart's content in wards and ICU'S of Nehru Hospital of P.G.I.M.E.R Chandigarh

-To Assess any deficiency in contents .

Methodology

Study Design – Cross Sectional Observational study

Study Area – Wards and ICU'S of Nehru Hospital of P.G.I.M.E.R Chandigarh

Study Duration – 8 weeks (April – May 2018)

Data Collection method – Direct Observation with pretested checklist taken from another tertiary care hospital (JIPMER)

Sample Size – 56 crash carts

Data tool – checklist (https://goo.gl/forms/vK28xI40pdwMD4Ar1)

Results were analyzed with 0= no compliance, 1= partial compliance & 2 full compliance

Data procedure – Once the checklist filled, data taken into excel sheet and after evaluation taken as graphs

CRASH CART CHECKLIST

1	WARD	
2	AREA	

3) CRASH CART

a) Old

b) New

4) CONDITION OF CRASH CART

a) Good

b) Needs repair

c) unrepairable

5) CRASH CART TOP

SNO	ITEMS	NON COMPLIANCE	PARTIAL COMPLIANCE	FULLY COMPLIANCE
1	Normal saline 500 ml (2 no's)	0	1	2
2	Ringer lactate 500ml (2nos)	0	1	2
3	Dextrose 500 ml (2 no's)	0	1	2
4	Normal saline 100 ml 2 no's)	0	1	2
5	Dextrose 25% 100ml (2 no's)	0	1	2

6) Colored boxes

1	Vein flow (18,20,22- 2 no 's each)	0	1	2
2	ECG Pregel (10 no 's)	0	1	2
3	3 way adapters (5 no 's)	0	1	2
4	Venturi (2 no s each)	0	1	2
5	Plaster (5 pieces)	0	1	2
6	Syringes (5cc, 10 cc & needles 20 g & 26 g (3 no each)	0	1	2

7) SIDE

1	Filled oxygen cylinder with FA Valve (1 no)	0	1	2
2	Oxygen tubing with face mask(1 no)	0	1	2

8) MIDDLE SHELF

1	Defibrillator with paddles ()	0	1	2
2	Jelly	0	1	2
3	Tissue paper with clean gauge (1 box)	0	1	2

9)MEDICATION DRAWER- I

1	Inj. Atropine (0.6 mg)- 5 amp	0	1	2
2	Inj. Calcium Gluconate (10ml) 5 amp	0	1	2
3	Inj. NaHCO3 – 10 amp	0	1	2
4	Inj. Amiodarone (200 mg) – 5 amp	0	1	2
5	Inj. Hydrocortisone -5 vials	0	1	2
6	Inj. Adrenaline 1 mg -10 amp	0	1	2
7	Inj. Nor Adrenaline -5 amp	0	1	2

Medication Drawer -II

1	Inj. Adenosine- 5 amp	0	1	2
2	Inj. Deriphyllin – 5 amp	0	1	2
3	Inj. Phenytoin sodium – 5 amp	0	1	2
4	Inj. AVIL - 5 amp	0	1	2
5	Inj. Lignocaine - 1 vial	0	1	2
6	Inj. Midazolam (1 vial)	0	1	2
7	Inj. Frusemide – 5 amp	0	1	2
8	Inj. Dopamine – 5 amp	0	1	2
9	Inj. Nitroglycrine- 5 amp	0	1	2

DRAWER III

1	Laryngoscope paed (1no)	0	1	2
2	Ventilation mask 2 no's	0	1	2
3	Nebulisation mask – 2 no's	0	1	2
4	Airway OPA(3,4,5)- 2 each	0	1	2
5	Batteries for paed& adult scope- 2 no 's each	0	1	2

DRAWER IV

1	Syringes 1cc , 2cc,5cc,10cc – 5 each	0	1	2
2	Syringes 20 cc/ 50cc – 2 each	0	1	2
3	Needles 18-26g – 3 each	0	1	2
4	Cotton balls & bandage (1 box)	0	1	2

DRAWER-V

1	Suction Cath (12-16) – 3 each	0	1	2
2	Ryle's tube (12-16)-3 each	0	1	2
3	Gloves 6.5,7,7.5(2 p each)	0	1	2
4	IV Set / Dial flow (5 no 's)	0	1	2
5	Pressure Monitoring line -5 no's	0	1	2

DRAWER VI

1	TORCH LIGHT (1 no)	0	1	2
2	Stethoscope (1 no)	0	1	2
3	Any dept specific item	0	1	2

BOTTOM SHELF

1	Ambu mask & reservoir bag (1 no)	0	1	2
2	ET Tube 6.5,7,7.5,8- 2 each	0	1	2
3	Xylocaine jelly – 1 no	0	1	2
4	Syringe 10 cc – 1 each	0	1	2
5	Bougie & stylet – 1 each	0	1	2
	Laryngeal mask airway – 1 each	0	1	2
7	Laryngoscope adult with blades (1 no)	0	1	2
8	Plaster for ET & RT	0	1	2

BOTTOM SHELF

1	Pressure bag- 1 no	0	1	2
2	Torniquet – 1 no	0	1	2
3	Oxygen cylinder key – 1 no	0	1	2
4	Scissor – 1 no	0	1	2

Crash cart analysis done in two ways :

1) CONTENT ANALYSIS
2) AREA WISE ANALYSIS

1) CONTENT ANALYSIS – content of crash cart trolley classify into different groups

a) Availability of Emergency drugs (E& D)

b) Airway & Breathing Equipments (A& B)

c) Fluid and Circulation Equipments (F& C)

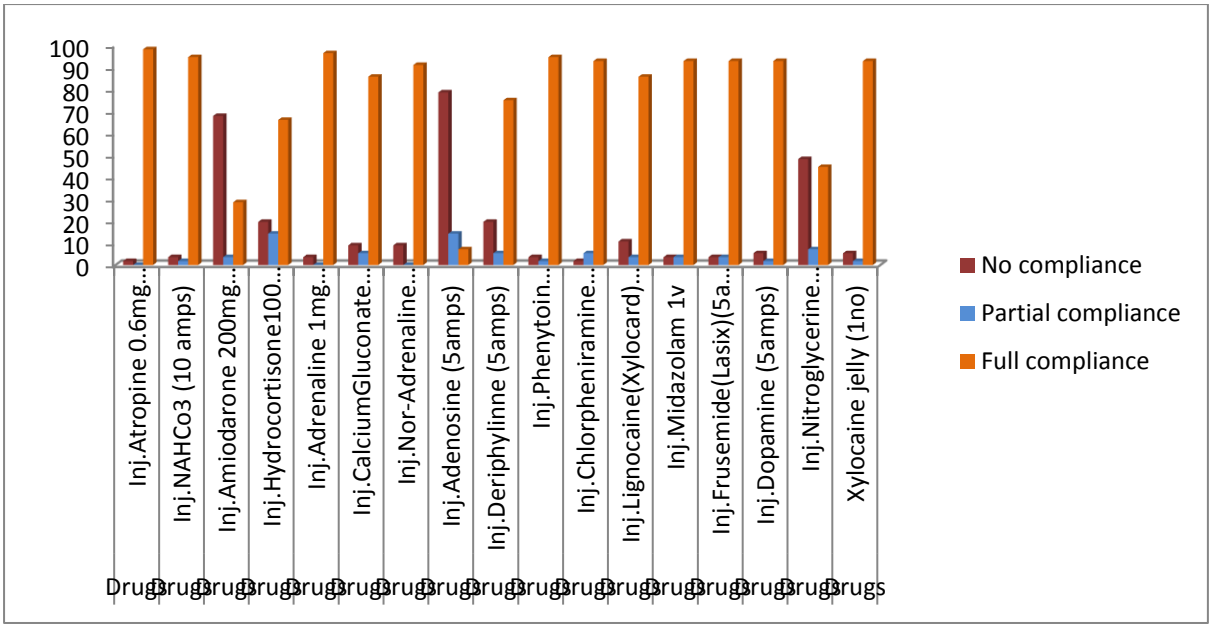
d) Hardware

e) Others

Classification	No compliance	Partial compliance	Full compliance
Availability of Emergency drugs	19%	5%	78%
Airway & Breathing Equipments	23%	10%	67%
Distribution of fluid & Circulations	19%	11%	17%
Hardware Equipments	16%	5%	79%
Others	27%	4%	69%

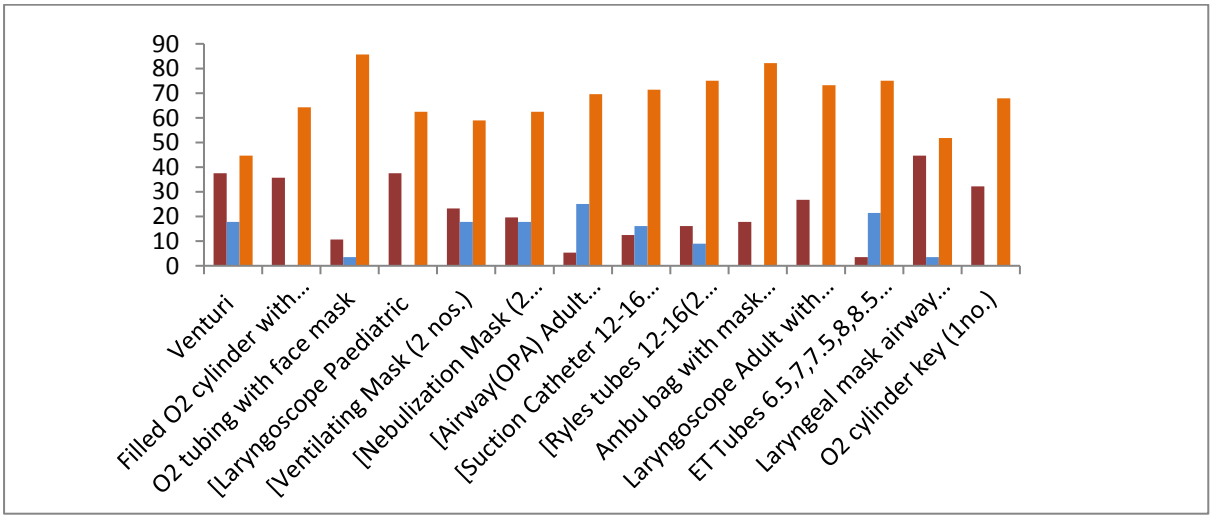
a) **Availability of Emergency drugs**

In the below graph of Emergency drugs content in crash cart have poor compliance of some of the drugs like Nitroglycerine , Amiodarone & Adenosine . Though these medications are most important during cardiopulmonary emergencies but on duty staff nurses assume that these medications are only use in cardiac unit

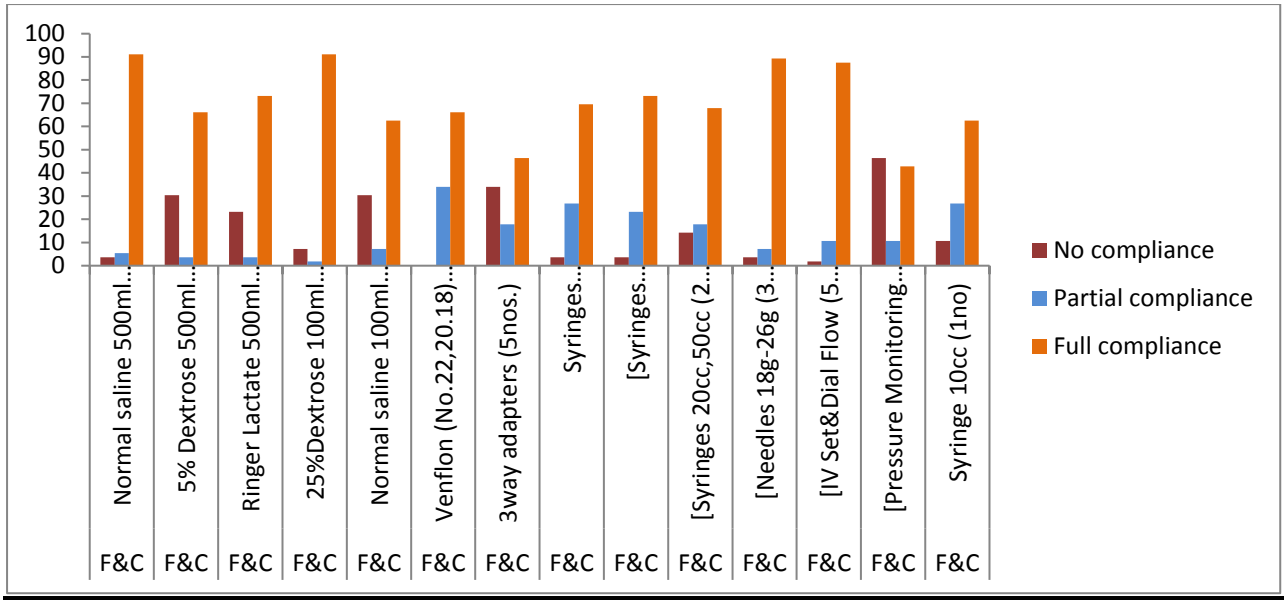


a) Airway & Breathing Equipments

In the above graph there is poor compliance in some contents which is major issue in such big organization like 35% in oxygen filled cylinders , 37% in venturi mask &44% in Laryngeal air way mask .



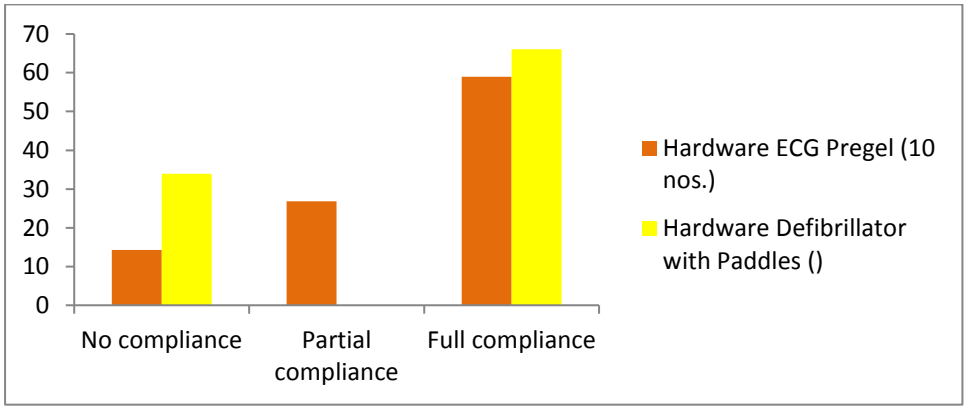
b) Fluid & Circulations Equipments



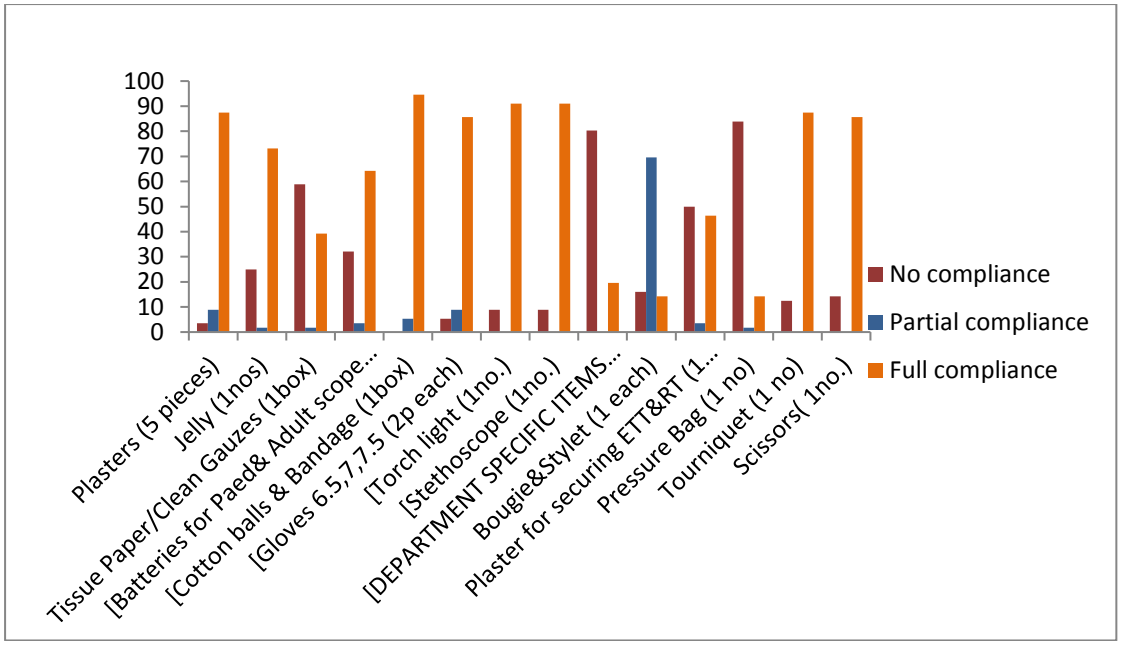
In above graph there is 46% poor compliance in pressure monitoring lines , 33% - 3 way adapters & 30 % in Normal saline 100 ml Fluid .

c) Hardware Equipments :

Hard ware equipments include ECG Pregel and Defibrillator. In the below graph shown there is no partial compliance of Defibrillator but ECG Pregel have partial compliance of 26% . But there is 33% poor compliance in defibrillator with paddles which is big worry for this big Institution



e)**Other equipments** :In this classification there are some equipments like scissors, Stethoscope , Tourniquet , batteries , jelly , plasters etc which are may be least used during emergencies but they are major part of crash cart trolley



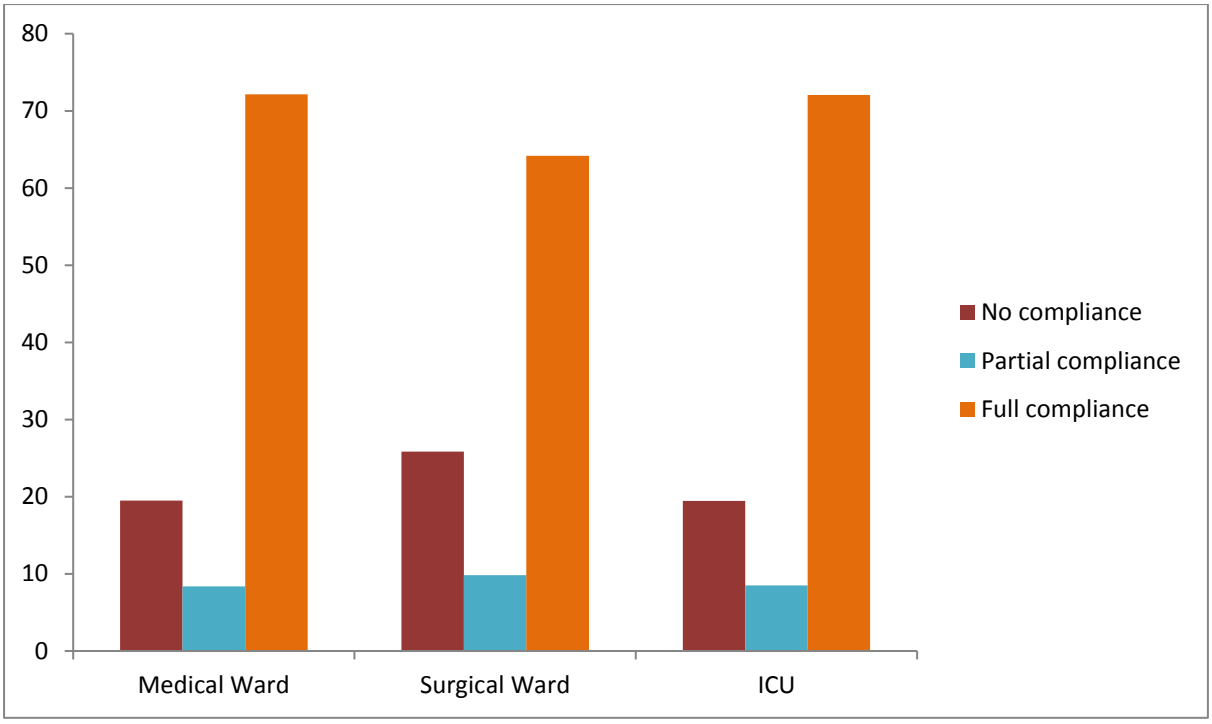
In the above graph shown poor compliance in some equipments 83% poor compliance in pressure bags which is used for fluid replacement during emergencies . There are some department specific items which shown poor compliance in that area i.e 80% which is huge number for PGI

2- AREA WISE ANALYSIS :

Nehru hospital area is divided under three types of areas . There are 56 wards which majorily divided under these groups

a- Medical wards
b- Surgical wards
c- Intensive care unit

Areas	Full compliance	Partial compliance	No compliance
Medical wards	72.13%	8.36%	19.51%
Surgical wards	64.19%	9.84%	25.85%
ICU'S	72.06%	8.48%	19.46%
Total average compliance	74%	6%	20%



The above one is graphical percentage of area wise compliance of Nehru hospital . which shows ICU'S are compliance than Medical wards and Medical wards are better than surgical wards .

CONCLUSION

Total crash cart observed = 56

- 30 Crash carts are new and in good condition
- 26 crash carts are old one and out of 26 – 4 are in good condition , 2 needs repair & 20 are unrepairable need s to be replaced
- On Area wise compliance - Total average % compliance of NH
- 74% - Full compliance
- 6% Partial Compliance
- 20 % No Compliance
- ICU 's are more compliance than Medical wards and Medical wards are better than Surgical Wards
- Among Emergency Drugs –some of Cardiac medications (Inj. Adenosine / Inj Amiodarone & Inj NTG have poor compliance which may use in SVT's and Arrhythmias. In deficiency of these drugs we may loose patients
- Defibrillator shows poor compliance some need to repair and require regular checking whether its functional or not on daily basis
- Though PGI is centrally supplied but Filled oxygen cylinders have poor compliance which is big worry for such a big running hospital

SUGGESTIONS

1) A standard checklist with total number of contents in standard quantity should be made and followed strictly
2) Regular cross checks/ audits should be done to check the quantity, expiry , near expiry and uniformity
3) Mandatory Training session for Nursing staff / Doctors should be included in the Induction programs
4) A policy regarding maintenance of crash carts and their refilling should be made and followed .
5) Responsibility of maintaining crash carts should be assigned to a person

References

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