

**Summer Training At
All India Institute Of Medical Science, New Delhi
&
University Of Chester, Chester (United Kingdom)
(April 9-June 1, 2012)**

Observational learning

**By
Prashant Sharma**

**Under the Guidance of
Dr. Vivek Lal**

**Post Graduate Diploma in Hospital and Health Management
2011-2013**



**Institute of Health Management Research,
Jaipur
2012**

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Certificate

This is to certify that **Dr. Prashant Sharma**, from Institute of Health Management Research- Jaipur, has undergone Summer Training at All India Institute of Medical Science (AIIMS), New Delhi and University of Chester, Chester, United Kingdom from 9th April 2012 to 1st June 2012.

The candidate himself carried out the project. His approach to the study has been sincere, scientific and analytical.

This summer training is partial fulfillment of the course requirement is recommended for the award of Post Graduate Diploma in Hospital and Health Management.

We wish him success in all his future endeavors.

Dr. P. R. Sodani

Dean (Academic and Students Affairs)

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C E R T I F I C A T E

This is to certify that

Dr. Prashant Sharma

has completed

Short Term Training

in the department of

Hospital Administration

at this Institute from

11th April 2012 to 2nd May 2012

✦ N.B.:-

This Certificate will not be used on
Letter Heads, Visiting Cards, Name
Plates etc. by the trainees.

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Sma

REGISTRAR





University of Chester

This is to certify that

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Certificate of Attendance

by Faculty of Health and Social Care

University of Chester, Parkgate Road, Chester, CH1 4BJ

for attending the Hospital Management/Public Health internship

from Monday 7th May 2012 to Friday 25th May 2012

Signed:

Ann Bryan

Associate Dean, Faculty of Health and Social Care

On behalf of University of Chester

May 2012

Acknowledgement

This report is a part of summer training at All India Institute Of Medical Science (AIIMS) and University of Chester .This report is based on the Observational learning of various departments visited.

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Hospital Profile

AIIMS is the premiere institute of the country, that has comprehensive facilities for teaching, research and patient-care.

It serves as a nucleus for nurturing excellence in all aspects of healthcare.

Established in the year 1956, AIIMS has been consistently ranked the top medical college in India to pursue an MBBS degree by India Today in annual surveys starting in 1997.

AIIMS has held the top slot for the last six years in a row, and has been ranked first for 11 out of the 12 years that India Today has conducted the survey.

AIIMS' excellence has to do with several factors - small class size, excellent library facilities, liberal clinically oriented teaching, research exposure and the ability to set its own curriculum.

Several surveys by The Week and Outlook magazines have named AIIMS the best hospital in India overall, as well as the best in several individual fields such as Cardiology, Neurology, Gastroenterology, Gynaecology and Ophthalmology, ahead of several specialised institutions.

The hospital has been able to maintain high standards of quality while seeing large numbers of patients (3.5 million in 2006) at very low cost to patients ₹10, many of whom live in extreme poverty.

Twenty-five clinical departments including four super specialty centres manage practically all types of disease conditions with support from pre- and Para-clinical departments. However, burn cases, dog-bite cases and patients suffering from infectious diseases are not entertained in the AIIMS Hospital. AIIMS also manages a 60-bedded hospital in the Comprehensive Rural Health Centre at Ballabgarh (Haryana) and provides health cover to about 2.5 lakhs population through the Centre for Community Medicine.

GENERAL OBSERVATIONS

Teaching Departments and Centres	= 50
Faculty members (Sanctioned 629)	= 434
Non-faculty staff (Sanctioned 9198)	=7832
No. of Undergraduate students	=673
No. of Postgraduate students	=1134
Medical graduates	=2321
Postgraduates	=7405
Nursing graduates	=1690

HOSPITAL SERVICES

	OPD	Admission	Surgery	Beds (Gen.)	Beds (Pvt.)
Main Hosp.	1510430	70176	75751	1486	125
Dr. R.P. Centre	229799*	30365	29534	280	21
Dr. BRA,IRCH	74080	26002	6177	167	15
C.T. Centre	148227	11227	3772	166	14
N.S. Centre	106681	4083	2951	166	14
C.C.M.	138894	6436	1712	50	—
JPNAT Centre	44456	5046	4307	203*	—

Average bed occupancy	= 80.7 %
Average period of hospital stay	= 5.5 days
Net death rate	= 2.7%
Infection rate (Crude)	= 8.69 %

(ref: 54th Aiims annual report 2009-10)

*Recent update

DEPARTMENTS

- Anaesthesiology
- Anatomy
- Biochemistry
- Biomedical Engineering
- Biophysics
- Biostatistics
- Biotechnology
- Centre for Community Medicine
- Dermatology and Venereology
- Endocrinology and Metabolism
- Forensic Medicine
- Gastroenterology and Human Nutrition
- Gastrointestinal Surgery
- Haematology
- Hospital Administration
- Laboratory Medicine
- Medicine
- Microbiology
- Nephrology
- Nuclear Medicine
- Nuclear Magnetic Resonance
- Obstetrics and Gynaecology
- Orthopaedics
- Otorhinolaryngology (ENT)
- Paediatrics
- Paediatric Surgery
- Pathology
- Pharmacology
- Physical medicine and Rehabilitation
- Physiology
- Psychiatry
- Radio-Diagnosis
- Reproductive Biology
- Surgical Disciplines
- Transplant Immunology and Immunogenetics
- Urology

CENTRES

- Cardiothoracic Sciences Centre
- National Drug Dependence Treatment Centre (NDDTC)
- Centre for Dental Education and Research
- Dr B. R. Ambedkar Institute Rotary Cancer Hospital
- Neurosciences Centre
- Dr R. P. Centre for Ophthalmic Sciences
- Jai Prakash Narayan Apex Trauma Centre

Significant Departments and Units at Main AIIMS Hospital

- ✓ OPD (RajkumariAmritKaur)
- ✓ EHS OPD
- ✓ Blood Bank
- ✓ CSSD
- ✓ Laundry
- ✓ Mortuary
- ✓ Emergency
 - Medicine ward
 - Surgical ward
- ✓ Dept. of Hospital administration
- ✓ Wards
 - General
 - Orthopaedic
 - Psychiatry
 - Skin & Veneral disease ward
 - Maternity
 - Gynae&Obs ward
 - EHS beds

'AB' Wing

- ✓ Ground floor : Orthopaedic ward
- ✓ 1st floor : Orthopaedic ward
- ✓ 2nd floor : Gastro & Liver Unit, Day care & renal lab
- ✓ 3rd floor : Gynae&Obs ward
- ✓ 4th floor : Nephrology & Dialysis
- ✓ 5th floor : Paediatric surgery
- ✓ 6th floor : Endocrinology & EHS Beds
- ✓ 7th floor : Gastrointestinal surgery, KTP & PAR
- ✓ 8th floor : Recovery & ICU

'C' Wing

- ✓ Ground floor : MS Office & Hospital administration
- ✓ 1st floor : Psychiatry ward
- ✓ 2nd floor : Medicine & Haematology
- ✓ 3rd floor : Labour room & NICU (Neonatal ICU)
- ✓ 4th floor : Urology ward
- ✓ 5th floor : Paediatric medicine
- ✓ 6th floor : Emergency ward
- ✓ 7th floor : Surgical ward
- ✓ 8th floor : Minor OT (7-12)

'D' Wing

Ground floor: Blood bank

1st floor: Skin & Venereal disease

2nd floor: Medicine ward

3rd floor: Maternity ward

4th floor: ENT ward

5th floor: Paediatric ward

6th floor: Emergency ward

7th floor: Surgical ward

8th floor: Main OT (1-6)

MANIFOLD

- **Manifold**: A device for connecting one or more gas cylinders to the central piping system for a specific gas
- **Medical gases**: Any gaseous substance meeting medical purity standards and has application in a medical environment
- **AGSS**(Anaesthetic Gas Scavenging System): Excavate the remanant anaesthetic gases

Gases Used

- Liquid Oxygen
- Nitrous Oxide
- Nitrogen
- Compressed Air
- AGSS
- Vacuum

Use of Gases

- ✓ Oxygen – Ventilators and Anaesthesia
- ✓ Nitrous Oxide – Anaesthesia

Cylinders

Oxygen	– Black cylinder with white top
Nitrous Oxide	– Blue cylinder
Carbon Dioxide	–Black cylinder with Grey top
Nitrogen	– Black cylinder with silver top

- Main oxygen supply is through oxygen tank outside the manifold room with capacity of about 12000 litres.
- Liquid oxygen is stored in oxygen tank.
- Oxygen cylinders are now used as a backup or emergency measure
- They are used only to check their functionality.

Nitrous Oxide

- Used as anaesthetic
- Primary supply is through the cylinders

Compressed air

- Mechanism
- A compressor is present that generates continuous pressure.
- Used to clear Field View during surgery
- Alarm systems present
- Emergency release valves present

Medical Vacuum

- Not a medical gas but an essential part of Manifold
- Used in Surgeries, ICU and recovery
- Source – Two Vacuum pumps

<u>Gas</u>	<u>Flow rate</u>	<u>Pressure</u>
Oxygen	40	4 bars
Nitrous Oxide	15	4 bars
Medical Air	50	4 bars
Surgical Air	250	7 bars
Vacuum		.53 bar

Colour of Pipes

Yellow with white -	Oxygen
Yellow with Blue –	Nitrous Oxide
Sky Blue with White and Black –	Medical Air
Sky Blue and Black -	Vacuum Pipe

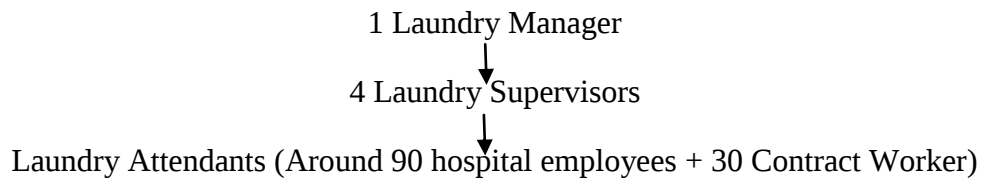
LAUNDRY

- Semi outsourced/ Partially outsourced.
 - Collection, Sorting, Washing and Hydro Extraction done by the contract workers.
 - Drying, Ironing, Folding and Distribution done by the hospital employees.
 - The equipments and machines belong to the hospital.
 - The annual maintenance of machines is the responsibility of the company that has contract with the hospital for maintenance of the machines.
-
- ✓ 1st entry point 2 vans and a truck are used for supply.
 - ✓ The soiled/ Infected Linen are sorted by a worker (Worker wears necessary rubber gloves, mask and plastic apron).
 - ✓ Sorted linen sent for Sluicing, Washing & Hydro Extraction.
 - ✓ Washing is done on 1st floor of the building in 12 machines of 100 kg and 50 kg capacity.
 - ✓ Steam required for washing done at 70⁰ C for 45 mins.
 - ✓ 1st step rinsing is done around 2 to 3 times with plain water.
 - ✓ 2nd step wash with detergents and drain.
 - ✓ 10% sodium hypochlorite added washing is done.
 - ✓ After washing, linens are checked for stains. If stains are found, then they are washed again.
 - ✓ After washing is done, linen is sent to Hydro extractor to squeeze out water. (Total 9 hydro extractors)
 - ✓ After water is removed, clothes are sent for drying in dryers on 1st floor (Total 6 dryers).
 - ✓ There, the hospital employees take over.
 - ✓ After that the linen moved for press.
 - calendaring machine present which irons the linen.
 - steam presses present.
 - ✓ After ironing, Folding is done.
 - ✓ The laundry is then sent to the exit point from where the delivery van takes the linen to the hospital.

One boiler room is present where 2 electrical boilers are used alternatively.

Another Diesel Boiler room is under construction.

Staffing



Blood Bank

It is the dept. that deals with the collection, testing, processing (including component separation), storage, prescription & issue of blood & its products for safe transfusion to the patients as requisitioned by the physicians.

Blood bank should be located at the ground floor near the emergency & OT and the area should have good hygiene & sanitation to have an infection – free environment.

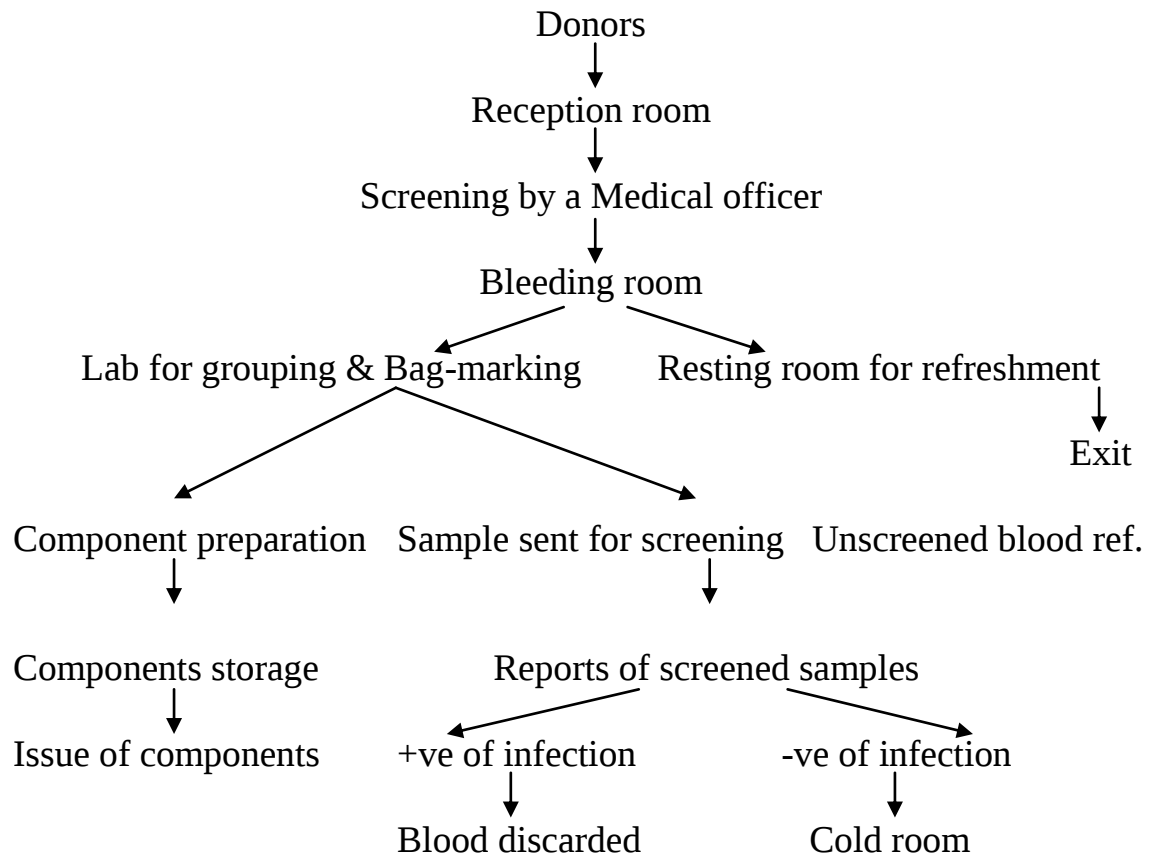
In Aiims, the Blood bank is located at the Ground floor of the D – Wing.

Entrance – guarded by a security man who also gives the form for blood donation.

Average donors daily = 150 donors

Donors are of 2 types – Voluntary & Relatives.

Work Flow of Blood Bank



Registration room

Waiting area – 1 Doctor + 1 Attendant

Doctor conducts physical examination for anaemia, jaundice or any infectious disease. CuSo₄ (of 12.5 gravity) Test for Hb is done.

Then the eligible donor is registered on computer system. After clearance the donor proceeds to the bleeding room.

In bleeding room, there are 8 couches for donors where blood is procured in 350 (for females) & 450 ml (for males) bags & samples are sent to screening room for testing of blood.

There 3 samples are taken

1. Grouping
2. ELISA (HIV test)
3. NAT lab

The Debanchi quarto machine (ELISA machine) is capable to test 88 samples at a time & takes around three & a half hrs to complete the test. From here the samples are sent to Nucleic Acid Test (NAT) lab to confirm the test –ve samples.

Then the blood is sent to the Component room for processing and division into various components such as FPP (Frozen Plasma Precipitate), Cryoprecipitate, Platelet rich Plasma / Platelets, Packed RBCs.

Component room is that area of blood bank where some blood components are kept at optimum temperatures and suitable environment for future use.

Processes in component room:-

Blood bag comes from the bleeding room. This blood is put in bucket & is weighed. Then the blood is centrifuged to separate the components in the bag.

There are 2 types of movements in centrifuge – Hard spin & Light spin.

From the whole blood, plasma is separated 1st, then the platelets, and later the RBCs.

Storage criteria

- ✓ Platelet storage is of 2 types –
 - 1st five days stored at 20⁰ – 24⁰ C for instant use.
 - Fresh frozen plasma (FFP) is & stored at -20⁰ C for a year.
- ✓ 4-Cryoprecipitate is kept for 1 yr at -20⁰ C.
- ✓ The RBC life span is 42 days and is kept at 2⁰ – 8⁰ C.

RBC is stored in a bag that includes 80 ml SAGM -2solution for the preservation of RBCs collected from human blood. Each 100 ml SAGM-2 solution contains:-

NaCl IP	– 0.877 gm
Adenine IP	- 0.030 gm
Dextrose Anhydrous	- 0.90 gm
(equivalent to Dextrose monohydrate IP)	

Mannitol IP	-0.52gm
Water (for injection) IP	– 100 ml

Colour coding for different blood groups:-

A	= Yellow
B	= Red
O	= Blue
AB	= White

“Aphaeresis room”

There are 3 couches. It is meant for Single donor platelet (SDP) donor. 5-10 donors donate every day. One procedure takes 35 – 40 mins. Time schedule = 9:30 am – 5:00 pm (Sunday closed).

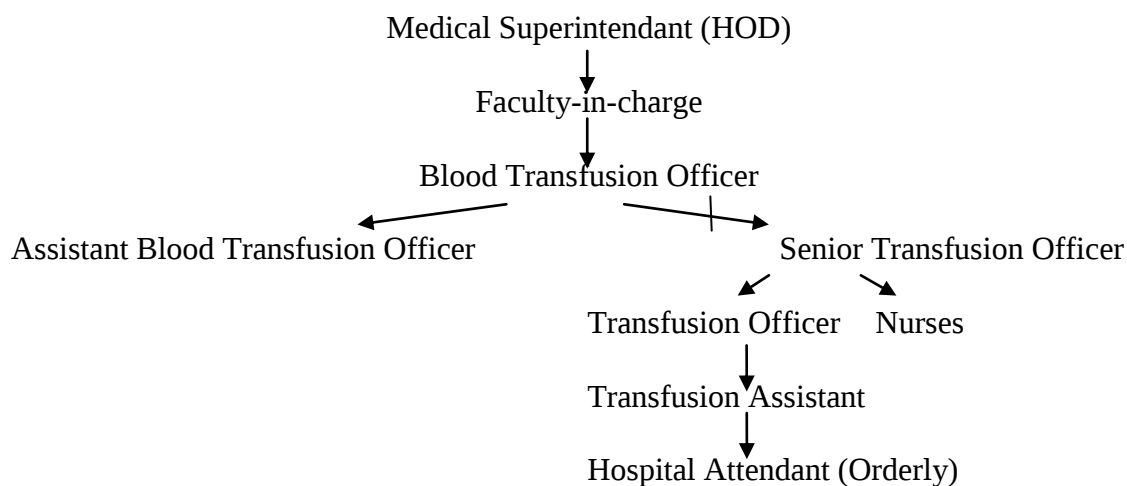
Storage room

Here the blood is stored that is collected both from the blood bank as well as the camps. 100-125 blood bags are collected in a day by the camps.

The blood collected from camps comes to the storage room directly & not to the component room. Here it is tested for different blood groups and cross matching is also done.

Just adjacent to the storage room is the Blood Dispensing Unit from where the blood is issued.

Staffing pattern



Oncology

Dr. B.R. Ambedkar Institute Rotary Cancer Hospital (Dr. BRAIRCH)

- One of the Speciality centres of AIIMS primarily concentrating on cancer patients.
- It started functioning in 1983-84 with 35 beds & infrastructure of 2 floors& was converted into a 182 bedded, 7 floor building on 5th Oct, 2003.
- Current bed capacity = 182 (167 Gen. + 15 Pvt.)
- Location = Within AIIMS campus, adjacent to CN centre & near Hostel #7.
- General Beds:-
 - Day care unit beds = 22
 - Intensive care unit beds =6
 - Palliative care unit beds =6
 - Rest are in Medical Radiation and Surgical Oncology
 - Minor OT
- Specialities include :-
 - Surgical oncology
 - Medical oncology
 - Radiation oncology
 - Lab oncology (tumor pathology)
 - Medical Physics
 - Radiodiagnosis
 - Anesthesiology
 - Preventive and community oncology
- Total OPD attendance =74,080
 - New cases = 8,893
 - Old cases =65,587
- Total Admissions =26,002
 - Regular =5222
 - Day care =20780
- Surgeries = 6177
 - Major =632
 - Minor =5545
- Bed occupancy rate 80.7 %
- Average length of stay = 5.5 days
- Net death rate =2.7 %
- Crude infection rate =8.69 %

Hospital Layout and Facilities

- Basement floor
 - Medical record section – Records of last 20 yrs kept
 - Stores
 - Medical
 - Surgical
 - General
 - Cell Irradiation Room
- Ground floor
 - Day care room
 - Bolus Chemotherapy
 - Wheel chair & trolley bay
 - Board room for multidisciplinary clinics
 - May I Help You / Enquiry counter at the reception
 - OPD registration - Old cases & new cases counters & Delhi Cancer Registry
 - Main waiting area – adjacent to registration
 - Treatment room

Layout of Ground floor

- Consultation rooms –
 - Sub-waiting consultation room
 - Dressing room
 - Sample collection
- PCU (Day care admissions + overnight)
- Ultra SonoGraphy room
- Digital X-ray
- MSSO Office
- Radiotherapy
- Server room
- Admin office – Dr. S Satpathy (Administrative & stores officer)
- Accounts
- Delhi Cancer registry
- Sanitation office
- Driver room
- Manifold room

Multidisciplinary Organ based clinics

Morning OPDs

New cases = 8:30 am – 11:00 am

Old cases = 8:30 am – 11:30 am

Afternoon OPDs

New cases 1:00 pm – 3:00 pm

Old cases 1:00 pm– 3:30 pm

Radiotherapy Unit

Layout of Radiotherapy dept. :-

- Radiotherapy dept
- X-ray simulator
- CT /CT simulator with console
- Radio therapist room
- Medical physicist
- Conference room
- Treatment planning room
- Co teletherapy – 1
- HDR Radiotherapy – 1
- Linear accelerator – 2

RT at 1st floor

Selectron OT – 1

- LDR RT
- PDR RT

SelectronOT : Insertion of applicators for brachytherapy

Mould preparations / shielding block / immobilization devices preparation room / compensator.

1st floor

- ✓ Radiotherapy Ward
- ✓ Haematology lab
- ✓ Oncology lab
- ✓ Minor OT
- ✓ Aphaeresis: SDP, Stem cell harvest
- ✓ Surgical Oncology – 20 beds
 - 1-12 =Beds for use
 - 13-18 =Cubicle given to Physiotherapy dept.
 - 19-20 =Not utilised

2nd floor

- ✓ Day care (chemotherapy)
- ✓ Medical Radiation Oncology ward
 - Radiation Oncology = 6 beds
 - Medical Oncology = 20 beds
- ✓ Faculty offices

3rd floor

- ✓ Private wards
 - 15 rooms – (5 beds each for Medical, Radiation & Surgical Oncology)
- ✓ 2 Deluxe rooms
- ✓ Aiims staff cafe

4th floor

- ✓ Medical Oncology Lab
 - Flow Cytometry
 - PCR
 - Stem cell research(Cryopreservation of stem cells)
 - Routine Cytogenetics
 - Tissue culture lab - research
 - Molecular oncology
 - RT-PCR (polymerase chain reaction)
 - ELISA Test for Fungal Infections
 - CD 34

5th floor

- ✓ Surgical Oncology Ward
- ✓ Fully equipped ICU
 - 6 bedded 4+ 2 (septic)

6th floor

- ✓ 3 OT suites

7th floor

- ✓ BMT ward
 - 9 beds :- Single room with attached WC
 - Autologous & Allogenic BMT (Bone Marrow Transplant)
- ✓ Medical Oncology Ward
 - 18 beds
 - Treatment room
 - Stores
 - Pantry

Key Findings

- No Casualty – Cases are referred from AIIMS main hospital.
- MSSO – Kidscan, Cancer sahyog, Cancer foundation & Indian Ostomy Assn.
- In Medical Record Department every entry was computerized.
- All the discharge records are kept for 10 years in the basement.
- Medico Legal Cases are kept with MRD officer.
- There was a Chemotherapy room in Room no. 15 only for the OPD cases which are referred by the doctor. After this the patient is sent to the daycare unit.
- In private wards admission were in two categories: A and B
- Payments General 200 Rs at time of admission
- B class payment 1100 Rs per day.
- A class payment 1700 Rs per day.
- Dietary Charge
 - 100 Rs per day Advance payment at the time of admission.
 - Billing cycle on weekly basis.

Hospital Personnel

- Faculty
- Technical staff
- Nursing staff
- Residents
- Ministerial staff
- Store staff
- Group A,B
- Group D
- Outsourced data entry operator
- Outsourced sanitation staff

Dr. Rajendra Prasad Eye Centre, AIIMS

- Estbd in 1967, as a National Centre for ophthalmic sciences.
- There are 14 clinical sub-specialities of ophthalmology complementing by depts. of Community ophthalmology, Ocular pathology, Ocular Biochemistry, Ocular pharmacology and Ocular microbiology.
- In a day, 1400 patients are handled & 70 surgeries are done on average.
- Total 7 seven floors
- 302 beds
- 36 beds in each ward
- 1,2,3,4 wards
 - In each ward there is 1 ANS, 2 Nurses in-charge & 8 staff nurses.
- EHS community – 28 beds
- 2,3- private wards – 11 beds
- OPD time :- 9:00 am – 1:00 pm (after 2:00 pm, specialty clinics commence)
- OPD strength

OPD	New cases	○ Old cases	○ Total
○ General OPD	○ 122016	○ 79623	○ 201639
○ Emergency	○ 9515	○ 18645	○ 28160
○ Total Cases	○ 131531	○ 95268	○ 229799

- Round the clock Ocular Emergency Service (15 beds for casualty cases + attached OT)
 - 1 JR (junior resident)
 - 1 SR (senior resident)
 - 1 Consultant

Ground floor

- OPD (10 Registration Counters)
 - New cases
 - Old cases
 - EHS patients
 - Physically challenged patients
 - Reimbursement forms & Medical certificate
- Anterior segment room
- Orthoptic section
- Consultants' rooms
- MSSO
- MRD (Medical Records Dept.)
- Casualty
- Minor OT
- Radiology
 - X-ray (Pre – anaesthetic Check-up)
 - CT Scan

1st floor

- Research lab
- MS (Medical Superintendent) Office
- Investigations Department
 - Oculoplasty lab
 - Retinoblastoma clinic
 - Ultra-sonographic lab
 - Neuro-ophthalmology lab
- Retina Clinic
- Cornea Clinic
- Laser room
 - FFA
 - IOCL
 - NDI
- Contact lens
- Ultra-sonography
- Wards
 - 1A -Squint + Glaucoma + Cataract
 - 1B -Oculoplasty&Retinoblastic

2nd floor

- Wards
 - 2A & 2B – Corneal Ulcer + Cataract + Keretoplastic Glaucoma

3rd floor

- Wards
 - 3A & 3B – Retina + Cataract + Vetro-retinal surgery ward

4th floor

- Wards
 - 4A - Misc + Casualty ward
 - 4B - Community + EHS (28 beds) + Private ward 2 & 3 (11 beds)

5th floor

- Day care
- Operation Theatre

6th floor

- Pharmacology Research Lab
- Biochemistry Research Lab
- Glaucoma Research Lab

7th Floor

- Pathology Lab
- Micro Biology Lab

Other points:-

Elevators

- Total elevators = 4 with lift operators
- 1 lift for Faculty & staff only
- All are stretcher accessible elevators

Sanitation

Outsourced to BVG

Total 30 employees including sanitation in-charge

Security

Contracted to Good Year

A guard is always present on every floor (7 floors)

Cardiothoracic& Neurosciences Centre,AIIMS

Provide state-of-the-art cardiac&neurological care to patients from all over the country at affordable cost.

- ✓ Ground floor
 - Registration counters, OPD and lab services, blood bank, CT scan
 - Enquiry –manned by a receptionist functioning round the clock
- ✓ Floors 1 to 6 : Each ward has 34 beds
- ✓ NS3 & NS6 are under renovation
- ✓ CT2 has CCU(16 adult + 16 paediatric beds)
- ✓ First floor - Operating rooms & ICUs
- ✓ CTVS OTs, NS ICUs A B C & CTVS ICUs A B on 1st floor
- ✓ Basement : Medical records, Establishment & Engineering services section

Cardio Thoracic Centre (CTC)

The Centre has 180 beds exclusively for cardiology and Cardiovascular Surgery with all the ancillary facilities required for comprehensive care for all cardiovascular disorders. In 1986 the Centre became fully independent and functional from the new 7 floor building.

The department has 102 beds exclusively for cardiovascular Surgery.

There are seven operating rooms fully equipped for any cardiovascular surgical procedure. The office of the faculty is on the 7th floor.

OPD attendance:	> 1.1 lakhs annually
Indoor admissions:	>10,000 patients annually
Surgical procedures:	>7000 annually
Cardiac diagnostic procedures:	> 20,000 annually

Departments in CTC:

- Cardiology
 - Cardiac Anesthesiology
 - Cardiac Pathology
 - Cardiac Radiology
 - Cardio Thoracic & Vascular Surgery
 - Cardiac Biochemistry
-
- ✓ **Specialty clinics**
 - Arrhythmia/pacemaker clinic-Wednesday morning
 - Hypertension clinic- Thursday morning
 - Coronary/prosthetic valve clinic-Thursday afternoon
 - Heart transplant/Heart Muscle-Thursday afternoon

Package charges for cardiac surgeries:

<u>Procedures</u>	<u>Rate (in Rs.)</u>
○ Conduit repair/ Rev. repair	65,000 - 82,000
○ CABG	60,000 - 80,000
○ CABG+1 ABP	85,000 - 1,05,000
○ Heart Transplant	1,00,000

The Neurosciences Center

- Departments
 - Neurology
 - Neurosurgery
 - Neuro Anesthesiology
 - Neuro Pathology
 - Neuro Biochemistry
 - Neuro Radiology
- Department has Laser, Ultrasound, Intra-operative MRI, Gamma Knife and Image Guidance System facilities
- Over 850 patients have been treated with Gamma Knife Radio surgery , which started functioning in 1997
- Clinico-pathological research on head injury, neuro-tuberculosis, glioma, pituitary tumors, peripheral nerve and brachial plexus injury & intracranial aneurysms are being pursued.
- Neurosurgical operations:
- Neurology
 - There are 75 beds including neurointensive care.
 - Clinical care and research activities in the sub-specialities of Movement Disorders, Neuroinfections and immunology, Stroke, Intractable epilepsy, Neuro-muscular Disorders, Sleep, Headache, Dementia.
- **Special clinics**
 - Pain clinic
 - Movement Disorder Clinic
 - Headache clinic
 - Dementia clinic
 - Stroke clinic
 - Sleep disorders clinic
 - Neuromuscular clinic
 - Neuropsychiatry clinic
 - Ataxia clinic

- CN Tower
 - Private rooms : 63 total
 - Seven floors new building , connected to CNC at 1st floor & 3rd floor
 - 1st to 6th floor—private wards (each floor has 11 rooms)
 - 2nd& 4th floor for cardiac patients only
 - 5th& 6th floor for Neuro patients only
 - 7th floor houses four Neurology OTs
- Nursing Personnel
 - CT center
 - 377 (sanctioned 419) includes staff strength of CN tower
 - Bed strength =180
 - NS center
 - 311 (sanctioned 405)
 - Bed strength =180

Medical records are stored in the basement of CNC.

ORBO (Organ Retrieval Banking Organization)

- ✓ National Facility & Nodal Centre
- ✓ Objectives
 - Encouragement of organ donation
 - Fair and equitable distribution of human organs
 - Optimum utilization of human organs
- ✓ Functions
 - Donor registration
 - Co-ordination from Procurement of Organs to transplantation.
 - Networking with other hospitals.
 - Delhi, Other metropolitan cities and later internationally.
 - Dissemination of information to all hospitals, organizations and individuals.
 - Public education and awareness regarding organ donation.
 - Promotion of organ donation and transplantation.
 - Research & other related functions.

Jai Prakash Narayan Apex Trauma Centre, AIIMS

- No. of beds 203
- No. of Floors 7

Floors layout:

Basement

- Hospital maintenance
- CSSD (Central Sterile Service Department)
- Laundry
- Dietary services (outsourced)
- Security
- Mortuary
- Forensic medicine.
- Medical Record Office
- Training section for ‘Advanced Techniques related to Trauma Management’

Ground Floor

- Duty Officer Room (behind the reception)
- Casualty Ward
- The patients are allotted beds on the basis of Severity
- Radio diagnosis lab (near the Casualty Ward)
- Zoning (acc to severity)
 - Green Zone – Not Severe
 - Yellow Zone – Moderately Severity
 - Red zone - High severity

First Floor

- Disaster Ward (20 Gen + 6 ICU beds)

3rd – 7th floor

- Surgery Wards With capacity of 30 beds each.

Key Features

- All the wards on all the floor have access to main OT through a 'Stretcher Assessable Elevator'.
- Ramp Access on all the Floors (aids in mobility & fire exit).
- Separate door for ambulance.
- Provision of life support services
- Disaster ward has automatic door opening system

Presentations at Department of Hospital Administration AIIMS

Department of Hospital Administration, AIIMS

- It is the first Department of Hospital Administration in country.
- The course in Hospital Administration was formally approved in 1963-64 & a fully fledged Department of Hospital Administration was started in 1966 under the pioneer ship of Brig (Dr.) Gaiind, the then Medical Superintendent.
- The present MHA (Master in Hospital Administration) course was officially started in February 1966.

Functions of Department of Hospital Administration

- To oversee the functioning of AIIMS Hospital
- Provided consultancy to MCI for standardization of syllabus for Masters in Hospital Administration
- Provide consultancy for project Management & Newer Healthcare Facility Planning
- Consultancy in Healthcare Human Resources Management
- Helping state governments for developing contingency planning for Mass Casualties. Eg: Punjab, Karnataka, Mizoram, J&K
- Hospital Planning , Designing and Equipment Planning
- Healthcare Financing & Insurance Product Development
- Think-Tank for National Healthcare Policy Guidelines
- Students from International Universities like Stanford visit annually to study the health delivery model & development in healthcare system.
- Consultancies to neighbouring countries like Bhutan, Nepal, Seychelles, Lao etc.

ACTS applicable to Hospitals

- Hospitals are complex organizations, and governed by a plethora of legislations. “Health” being a state subject, various states have passed laws for hospitals/establishments /nursing homes.
- The Clinical Establishment Act (2010) has been passed by central Govt. Knowledge of salient acts is essential for management of hospitals.
- Legislation (Law): is a system of rules usually enforced through a set of institutions. Law affects everyday life and society in a variety of ways.
- Statutory: refers to laws which are passed by legislature(Central/State)
- Regulatory: refers to administrative laws which are passed by Government/agency, and have an element of penalty involved
- Statute: is a formal, written law of a country or state, written and enacted by its legislative authority, and perhaps then ratified by the highest executive in Government, and then finally published. Sometimes, these are also called the “black letter law”
- Secondary legislation: other methods are statutory instruments/orders and bye laws
- Guidelines generally refer to documents used to streamline processes according to a set routine. These are required for governance, not mandatory
- Rules: are generally parts of laws, but sometimes can be an extension/annexure to acts for clarification/explanation.
- Regulations:
 - (i) are rules made by government/ administration by interpreting the statute(s)
 - (ii) Secondary legislations which are intended to implement primary legislations in an appropriate manner

Principle of Hospital Planning

Objective of Hospital Planning & Designing:

To create a patient focused, patient cantered architecture by offering an atmosphere of Safety, Security, cleanliness and physical comfort

All hospitals which are successful are based upon a triad of:

- Good planning
- Good design and construction
- Good administration

Planning is generally measured in terms of:

- Patient care
- Efficiency
- Community Services

Steps in Hospital Planning

- Project report
- Master plan
- Architect's brief
- Design of hospital
- Construction
- Commissioning

General Observation at University Of Chester

Kisiizi – Chester Project

- Role of Chester University is to help a small hospital in Uganda, Africa in delivering better medical services by teaching the staff there both theory and practice.
- Funds for the project are delivered by WHO.
- Responsibility of training and education of the staff lies with the Countess of Chester hospital.
- Project is for 5 years and will end this year in September.
- It is a privately run Community – based hospital run by the church in Uganda within its premises.
- Major Departments include: Male & Female Surgeries, Paediatrics, Maternity and Mental health.
- 3 Clinicians or Academic trainees from Countess of Chester Hospital go every 6 months to do intensive work with the staff there.

Vital stats:

- Africa has 24 % of World's health burden, but only has 3 % of world's health workers.
- In rural Uganda, only 3.3 doctors & 16 nurses serve 100,000 populations.

IMR = 76 / 1000 live births

Under 5 MR = 167 / 1000 live births

MMR = 435 / 1,00,000

Life expectancy: 50.4 years

MoH Uganda 2009

A few doctors from UK are there on their goodwill.

Earlier they didn't have much measures of infection control. But after the start of the project they started making soaps and keep hand gels. They also started maintaining a Hospital Waste Management System.

Administrative issues:

- Lack of facilities, infrastructure and resources.
- Shortage of Beds (according to the population served). Eg Maternity ward has 30 beds only but the occupancy is of 70. Patients lie on floors.
- There are some medical health centres in different areas but they lack IPD facilities. That's the reason there is increased burden on this hospital to admit the patients.
- Poverty and poor economic conditions.
- Population scattered over vast geographical areas
- Lack of transportation facilities and poor public roads access.
- Cultural problems
- People do not ask question or challenge an opinion to avoid being perceived rude. This seriously hinders learning process, so the staff follows order rather than developing their own understanding over any matter.
- People are less confident and do not work properly on their own in the absence of trainers.

Disease Burden

- Malnutrition, Infectious diseases E.g. –Malaria, Tuberculosis
- Alcoholism, occupational injuries and road accidents are major concerns.
- Changes
- Rather than training the kissizi hospital staff on English line the emphasis is to develop skills in the hospital staff considering their cultural background that would be suitable for them.
- After training there has been substantial improvement in the infection control management and waste management.
- The staffs have now started asking question indicating positive development towards better learning.
- Handover care has improved.
- Now drug rounds are done.

Health Protection Agency (HPA)

Is a result of Health Protection & Safety Act in 2004

Topics discussed:

- Introduction to HPA by Prof Qutub Syed, Regional Director
- Healthcare Governance in NHS by Ruth Philp, Nurse Consultant in HPA
- Mid Staffordshire NHS Foundation Trust Inquiry by Rita Huyton, Senior Health Protection Nurse Practitioner
- Leadership in Corporate & Clinical Governance by Dr Sam Ghebrehewet, Local Director, Cheshire & Merseyside HPU

4 main areas of Work:

- Infections
- Chemical & Radiation threats
- Emergency planning
- Local & Regional services

It deals with the Healthcare acquired infections, Chemical (environment) exposure, Radiation hazards, Bio-terrorism (eg. Smallpox & Anthrax), Education (Advice & managing situation), Reclamation of contaminated lands.

Governance:

- ✓ Independent board / agency
- ✓ Executive body
- ✓ Senior management team
- ✓ Regional Management team

Altogether it has:

- ✓ 9 regional centres UK.
- ✓ 3800 employees
- ✓ 2200 Scientific & technical
- ✓ 250 Medical
- ✓ 200 Nursing
- ✓ Funding in 2010/11
- ✓ Total expenditure £ 340.7 million

Department of Health (grant in aid) = 57 % (£ 194.2 million)

Non-grant in aid sources = 43 5% (£ 146.5 million)

It comprises of Expert Surveillance Teams and Epidemiologists for expert guidance eg. In case of an infection outbreak at hospital, they give suggestions in limiting and controlling the spread of infection. They also advice the NHS & General public, Hospital clinicians, GPs (eg in case of an animal bite that may lead to spread of an infectious disease).

They gather data which is then provided to local authorities, government, GPs & Private practitioners.

Issues faced by HPA include:

- Recent spread of Whooping cough (ptosis) that appeared in young adults even after been vaccinated against it in early childhood. This indicates need of a Booster dose for Whooping cough.
- There has also been report of 260 new cases of Measles in Liverpool last week. Most of these were not against Measles as there had been a misnomer of MMR vaccine being unsafe and leading to autism and some bowel disorders.
- Additional immunization against pneumococcal infection is an expensive affair.
- Despite WHO's advice to UK, Ireland & Scandavian countries to include Hepatitis B vaccination in the childhood schedule, it was ignored as Government believed that the money could better be used somewhere else. It signifies an area of conflict between Public health & Government.

Main goals of HPA

- Complete eradication of measles & polio from the world.
- HPA is a credible organisation, that has trained & skilled staff, is politically aware, administers stewardess. It believes in arguing a case based on facts and keeps producing more awareness.
- HPA is given a budget for research and development too.
- HPA deals mainly with Health protection, Promotion and Improvement.

Visit to Blackheath Medical Centre, Leasowe

2 doctors surgeries in morning who check approx. 12 patients each. 6 patients on an average seen by a doctor in the afternoon. Doctors also come to do GP training for max 6 months.

Timings:

6:30 pm – 8:00 pm – GP Services (GPs based at hospital)

1:30 pm – 4:00 pm – Doctors do Administrative work (writing letters) and visit homes of patients who can't come to the clinic by themselves (debilitated, geriatric pts, cancer pts, etc.)

- GPs give prescriptions & may also ask for investigations (blood & radiological). Blood samples may be drawn at clinic and sent to a local hospital.
- Prior appointment is mandatory for a patient by calling on telephone in case of acute illness.
- 2000 patients registered to this clinic. Patients registered to a particular GP must go to that GP only.
- Unregistered patients may be relatives to the registered persons who may be seen and given registration temporarily for 2 weeks.
- Nurses come only during surgery time. They also do Review of Blood pressure and Blood sugar, Immunization & vaccination, Smears, Smoking clinics, dressings, etc.
- Arrow park hospital is the nearest hospital.
- Patients are never charged at any NHS clinic or hospital, as they are charged tax by the National Health Insurance which provides them a health cover.
- Emergency cover on weekends.
- Average time taken in checking a patient by a GP (Turn around time): 10 mins in morning and 15 mins in the evening.
- Home based care visits = Avg. 1 a day.
- Patients' case histories and medical records are recorded on a computer. Old patients' records are also computerised for the convenience. Every patient is provided with a specific NHS number. So their history of medical events and medication can be accessed throughout the country at any NHS clinic or hospital. The software is known as EMIS software.

Issues:

- Physiotherapy and Counselling services are the areas of concern in NHS.
- Waiting list for appointment of physiotherapy can be as long as 6 months.
- Recently Health & Social care bill by NHS is going to be produced which eliminates roles of PCTs and gives funding rights to GPs totally as CCGs. CCGs may also consist of nurses and finance professionals.
- QOF (Quality Outcomes Framework) coined by
- NICE (National Institute for Clinical Excellence)
- This committee meets twice a year to discuss issues related to quality in clinical setups.
- Local hospitals gain about £ 22 million per year from PCTs.
- Private hospitals tend to go for elective surgeries and insured patients.
- <1 % referrals to private hospitals / consultants from this unit.
- Private GPs mainly are the specialists in Dermatology, ENT, Ophthalmology, Orthopaedics, Psychiatry.
- GYPSI – GP with Special Interest.
- It is the Primary care centre that has a personal medical services contract with PCT.

Simply Endo Clinic

- A specialist dental clinic with theory and practical training of learning dentists.
- In 2003 SimplyEndo started and in 2007 it got affiliated by the University of Chester.
- It's an innovative approach to provide MSc degrees in Endodontics to those dentists who don't have to sacrifice their clinical practice which they would have otherwise done if they had taken admission to any other university.
- The programme for dentistry in UK is:
- Graduation = 5 + 1 (Internship) years
- Specialist programme (Clinical) = 3 years
- MSc Programme (Academic) = 3 years
- MSc has advantage of referrals.
- Staff comprises of 3 members in administration at different levels and 4 teachers (dentists).
- Charges for RCT procedure per tooth = £ 720
- Referral = £ 150

Human resource Department

Recruiting

Recruiting of employees is a very expensive procedure as on an average that is equivalent to 40% of an employee's annual salary.

But managers usually do not give enough time on recruiting.

During recruitment two aspects are considered

1. Technical competencies
 2. Behavioral competencies
- Technical competencies are basically the skills and knowledge and experience an individual has needed for a set of task
 - Behavioural competencies are the personality traits of an individual that may help him cope with certain situations during work or allow an individual to fit into an organization. These are Motivation level, Believes, Values, Attitude.
 - If a person has good behavioral competencies but is lacking in technical competencies then the skill gap can be filled by training.
 - But if a person may be lacking in behavioral competencies it would be difficult to train a person because the behavior can only be slightly modified but cannot be changed completely.
 - During an Interview it is difficult to judge a person and chances of getting a proper candidate from an interview is four out of 10.
 - Another method for selecting a candidate can be assessment through assessment centers which include psychometric tests, questioners, record evidence, classify and accessing one competence more than one times. It has a very high accuracy of 7 out of 10 recruitments going right.

Motivation

A new motivation theory has emerged called 'Self Determination Theory'. It says that the employees are not motivated by increase in salary or monetary incentives they are motivated by mainly three factors which are -

1. Autonomy
2. Mastery
3. Relatedness

Autonomy

If one tries to exert excessive control on the employees then the employees may only do tasks fairly they would not be motivated to give a better performance and so there would not be any improvement in organization's overall performance.

Mastery

It emphasizes on the innate need of an individual to be curious and master certain skills and improve one self

So the manager may need to know at which level of mastery an individual is and motivate that person by giving a challenging task now that individual should be given carefully as to difficult a task demotivates people and a very easy task also demotivates people so manager should carefully understand the level of an individual and give a task that suits one's capabilities.

Relatedness

It refers of the ability of an individual to connect oneself with one's organization or how and individual identifies one's role in the big picture of an organization.

Emotional Intelligence

A manager should have a higher level of emotional intelligence to develop trust in the employees and to motivate them.

