INTERNSHIP TRAINING AT "SYNERGY INSTITUTE OF MEDICAL SCIENCES", DEHRADUN

BY Dr. SONAL AGARWAL PGDHHM 2012-2014



INTERNATIONAL INSTITUTE OF HEALTH MANAGEMENT RESEARCH NEW DELHI

INTERNSHIP TRAINING

AT

SYNERGY INSTITUTE OF MEDICAL SCIENCES, DEHRADUN

A REPORT ON

REAL TIME STUDY ON ADMISSION AND DISCHARGE PROCESS IN THE HOSPITAL (FEBRUARY 1st- APRIL 30th, 2014)

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POST- GRADUATE DIPLOMA IN HOSPITAL AND HEALTH MANAGEMENT NEW DELHI

2012-2014

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NEW DELHI





TO WHOM SO EVER IT MAY CONCERN

The Certificate is awarded to Dr. Sonal Agarwal. In recognition of having successfully completed her Internship in Synergy Institute of Medical Sciences on the

Title "Real Time Study on Admission and Discharge Process in the Hospital".

And has successfully completed her project on Title of the Project from 01^{st} Feb – 30^{th} April 2014 Synergy Institute of Medical Sciences, Dehradun.

She comes across as a committed, sincere & diligent person who has a strong drive & zeal for learning.

We wish her all the best for future endeavours.

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FEEDBACK FORM

Ar. Sonal Agarwal Name of the Student: Dissertation Organisation: Synergy Institute of Medical Science, Debradum. Operation Area of Dissertation: More than 90%. Attendance: Undustanding of overall operational activities. Real Ame Chudy of Admission & Discharge With Gap analycis. Unductanding of quality Indicators as per NABH. **Objectives achieved:** Admission and Discharge process. A Real time study. Understanding of Hospital Operation. Communication Skill. **Deliverables:** Strengths: Learning attitude To fours ou practical aspect of Hospital operation. 1 Suggestions for Improvement: Signature of the Officer-in-Charge/ Organisation Mentor (Dissertation) . Date: 30th April 2014 Place: Dehradun



CERTIFICATE FROM DISSERTATION ADVISORY COMMITTEE

This is to certify that **Dr. Sonal Agarwal**, a graduate student of the **Post-Graduate Diploma** in **Health and Hospital Management**, has worked under our guidance and supervision. She is submitting the dissertation titled "Real Time Study on Admission and Discharges in the Hospital", in partial fulfilment of the requirements for the award of the **Post-Graduate Diploma in Health and Hospital Management**.

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

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Certificate of Approval

The following dissertation titled "REAL TIME STUDY ON ADMISSION AND DISCHARGE PROCESS IN THE HOSPITAL" is hereby approved as a certified study in management carried out and presented in a manner satisfactorily to warrant its acceptance as a pre-requisite for the award of Post- Graduate Diploma in Hospital and Health Management for which it has been submitted. It is understood that by this approval the undersigned do not necessarily endorse or approve any statement made, opinion expressed or conclusion drawn therein but approve the dissertation only for the purpose it is submitted.

Dissertation Examination Committee for evaluation of dissertation.

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This is to certify that the dissertation titled "<u>REAL TIME STUDY ON ADMISSION AND</u> <u>DISCHARGE PROCESS IN THE HOSPITAL</u>" and submitted by (Name) <u>Dr. Sonal Agarwal</u> Enrollment No. <u>PG/012/087</u> under the supervision of <u>Ms. Suparna Pal</u> for award of Postgraduate Diploma in Hospital and Health Management of the Institute carried out during the period from <u>1st February 2014 to 30th April 2014</u> embodies my original work and has not formed the basis for the award of any degree, diploma associate ship, fellowship, titles in this or any other Institute or other similar institution of higher learning.

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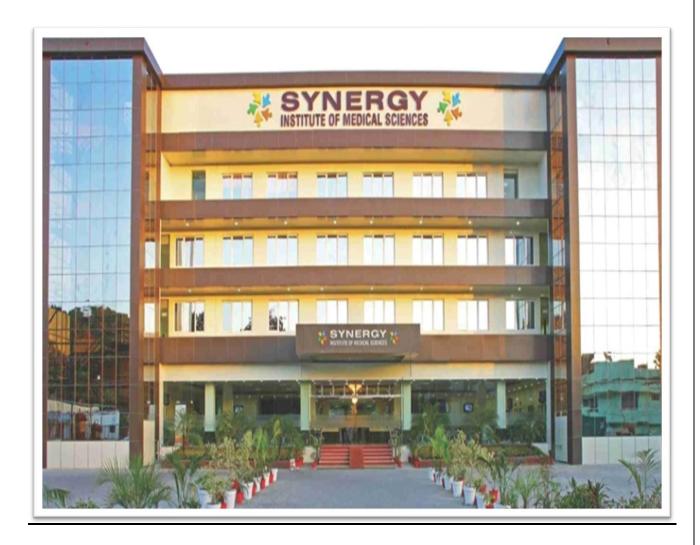
This is to certify that <u>Dr. Sonal Agarwal</u> student of Post Graduate Diploma in Hospital and Health Management (PGDHM) from International Institute of Health Management Research, New Delhi has undergone internship training at <u>Synergy Institute of Medical Sciences</u>, <u>Dehradun</u> from <u>1st February, 2014 to 30th April, 2014</u>.

The Candidate has successfully carried out the study designated to her during internship training and her approach to the study has been sincere, scientific and analytical. The Internship is in fulfilment of the course requirements. I wish her success in all her future endeavours.

Dean, Academics and Student Affairs IIHMR, New Delhi

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We believe that our people deserve the best of medical expertise and facilities in a patient friendly manner at their doorstep, in their own area and we solemnly promise that we are dedicated to bringing the best to our people, not just today, but by striving continue being the best through sustained improvement in pursuit of excellence.

<u>ABSTRACT</u>

Hospitals face an increasing demand for hospitalization, for medical staff due to the introduction of innovative technology in diagnostic and therapeutic procedures, for higher standards in clinical safety and, finally, an increasing patient demand for better quality services. Optimal bed management is a strategic aim in any hospital as the provision of an inpatient bed, together with the staff and supplies involved, accounts for much of its most complex and expensive activity. The way beds are managed affects the way other hospital departments perform since many are dependent on bed availability, such as emergency services, operating theatres, etc. At the same time, these other hospital departments have an impact on bed usage. Therefore, it is essential to have an efficient and correct bed management in order to improve service delivery.

The hospitalization process has three main stages: an admission, an inpatient period and a final stage with the discharge process. An inefficient bed management in any of the three stages of the hospitalization can cause a mismatch between demand and capacity. It has been proved that when bed demand exceeds capacity, patient admissions and scheduled surgical procedures can be delayed or cancelled. Traditionally, it has been assumed that the variability in the demand comes from the emergency patient. Interventions focused primarily on emergency departments have had limited success. However, repeated case studies have shown that elective admissions are often the major cause of variation as they are more unpredictable than the emergency admissions. In addition, the greatest variation is typically in the number of discharges. To have information about planned discharges 24-h in advance would allow a higher planning and an optimal bed assignment. Moreover, the discharge process should start at the point of admission in the case of planned admissions, as in some cases the estimated length of stay without a medical complication is known. Discharge planning allows for a better and quicker bed assignment in hospitals and the development of

nurses and other staff working in discharge coordinator roles. In this sense, it has been proved that multidisciplinary teams can improve the delivery of health services and patient care. All admissions and discharges of the hospital should be centrally managed and planned, as single-department solutions may create or worsen bottlenecks in other areas.

During the hospitalization process, patient flow is a strategic aim for the healthcare enterprise. Hospitals can combine process management with information technology to redesign patient flow for maximum efficiency and clinical outcomes.

AIM: The aim of this study was to evaluate the process flow in admissions and discharges in the hospital to bring out the reasons for delay which can be worked upon to reduce the delays.

ACKNOWLEDGEMENT

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Sincerely

Dr. Sonal Agarwal

PGDHM Batch 2012-2014

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1. ACRONYMS

- AHU Air Handling Unit
- CME Continued Medical Educations
- CSSD Central Sterile Supply Department
- DEPT. Department
- DNS Deputy Nursing Superintendent
- DR Doctor
- DS Discharge summary
- ECG Electro-Cardio Gram
- F.A Finance Assistant
- GDA General Duty Assistant
- HOD Head of Department
- HR Human resource
- HRD Human Resource Department
- HRS Hours
- ICU Intensive Care Unit
- IPD In Patient Department
- LAB Laboratory
- MED Medicine
- MO Medical officer
- MRD Medical Record Department
- NABL National Accreditation Board for Laboratories
- OPD Outpatient department
- OT Operation Theatre
- PRO Patient Relation Officer
- PT. Patient
- RADIO Radiology
- RCA Root Cause Analysis

- RMO Resident Medical Officer
- RSO Radiation Safety Officer
- S/I Sister In- charge
- STD Standard
- STP Sewage Treatment Plant
- TMT Tread Mill Test
- TPA Third Party Administrators
- UHID Unique Hospital Identity
- USG Ultra Sonography

2. ORGANIZATION PROFILE

2.1 History

Synergy Institute of Medical Sciences, Dehradun, the most comprehensive super specialty hospital focusing on Neuro, Cardio, Gastro, Renal Sciences, Trauma and Critical Care is driven by the vision to establish one stop solution that provides medical services with focus on the patient needs, expectations, safety and state of the art technology for the people of the region and to address long awaited dire need for a world class quality healthcare institution for everyone.

The institution not only provides world class healthcare technologies under one roof, but also pledges to develop a healthier society. We stand committed to provide value added innovative, consistent and continuously improving health and medical care to sustain and further improve clinical outcomes, patient safety & patient satisfaction.

2.2 Infrastructure and Facilities

140 bedded multi super specialty hospital in Dehradun, focusing on medical and surgical super specialties of neuro sciences, cardiac sciences, gastro sciences, renal sciences, critical care, ortho-trauma , mother and child, ENT & ophthalmic and many more.

- 28 Full time senior consultants, 36 visiting consultants,
- 18 Full Time OPDs with seating capacity of 400 persons,
- 6 class 100- Modular OTs with laminar air flow-Hepa Filters,
- 55 fully equipped ICU beds-ICU, SICU, CCU, HDU, NICU, PICU,
- NABL-Accredited Advanced Pathology & Microbiology Labs,

- 1.5 Tesla Whole Body MRI With TIM & MVS, Multi Slice CT Scan, 4-D USG, DEXA, Mammography, 600 mA Digital X-Ray, World's best 3D –Echo and Colour Doppler, TMT, Holter, AVP,
- Full Flat Panel CATH LAB, Angioplasty, CABG, Valve Surgery,
- High End Endoscopic & Microscopic Neurosurgery, Stoke Unit, Comprehensive Epilepsy Unit, Advanced Neuro Lab,
- Dialysis, Lithotripsy, TURP, TRUSS, Uroflometry, Endourology,
- Advanced Gastrosurgery, Laparoscopic & Cancer Surgeries, Upper GI Endoscopy, Colonoscopy, ERCP Procedures,
- Arthroplasty, Arthroscopy and Joint Replacement Surgeries, Most Comprehensive Trauma Team, Level 3 Trauma Services. Tertiary Care Obstetrics, Gynecology & Infertility Services,
- Advanced Pediatrics & Neonatology, Level III NICU & PICU
- Bronchoscopy, Sleep Lab, Pulmonary Lab, Thoracoscopy,
- One Stop Solution For Complete Diabetes Management,
- Dermatology, Cosmetology & Reconstructive Plastic Surgery,
- Advanced Micro ENT Surgeries, Complete Ophthalmic Services, Physiotherapy, Wellness Centre, Various Counselling Services.

2.3 Logo History



The **term Synergy** comes from the Greek word **'syn-ergos'**, which means **'working together'**. Synergy means balanced, co-ordinated, synchronized joint work and cooperative action. When one plus one is more than two, synergy exists. Behind every phenomenon of universe there lies 'synergy'; life itself is synergy between matter and energy. Where 'I' is replaced by 'WE', Synergy exists. A hospital is 'synergy' between doctors, patients and technology for healthy life.

The Penta colour '**Synergy logo**' consisting of five pyramids with undulating boundaries, each with a distinct round head, symmetrically settled in a circular plane signify co-existence of five happy people dancing together in perfect harmony to celebrate life.

The SYNERGY logo not only illustrates five dimensions of core specialities; Cardio, Neuro, Gastro, Renal, Trauma and Critical care but also depicts synergetic co-existence of Doctors, Support Staff, Attendants and Visitors cooperating for a synergistic effect on Patient's health as a unified force.

2.4 Vision and Mission

Vision

We are committed to be a leading health care organization which bring patient centric, comprehensive healthcare of international standards by compassionate professionals, within reach of everyone and improving the health and well-being of the people and communities we serve through:

- Quality infrastructure.
- Clinical competency.
- Innovative affordability.
- Continuous education.
- Excellence in patient care.

Mission

- Outstanding patient advocacy and loyalty.
- Highest clinical quality, competency and patient safety.
- Contribution to continuous medical education & research.
- Exceptional employee satisfaction and workforce development.
- Excellent financial and operational management.

2.5 Floor-wise Department Planning

FLOORS

DEPARTMENTS

Third Floor	Intensive care unit
	Coronary care unit
	Intensive Surgical Unit
	CATH. Lab
Second Floor	OT block Private & semi-private rooms.
	NICU
	PICU
	Medical & surgical HDU
First Floor	Private & semi-private rooms.
	Dialysis
	Obs. & Gynae OT
	Labor room
Upper Ground Floor	Reception
	OPD-A
	Pharmacy
	Emergency
	Cafeteria
	Administrative Block
Lower Ground Floor	Radiology
	Pathology
	All other diagnostic services
	OPD-B
	Physical Therapy
	Billing

2.6 Departmental Overview

Medical Records Department: MRD contains all the records of OPDs and IPDs, maintaining patient files for 5yrs and files for medico-legal cases are maintained for a lifetime. The department also has a critical record area which contains death files, files related to indigent patients and the medico-legal cases.

Maintenance

This department	is responsible	for the maintenance	and upkeep	of the following:
-	-			

S.No.	Equipment	Capacity	Quantity
1	Transformer	1250 KV	1
2	D G set	500 KVA and	2
		320KVA	
3	UPS	2 each of 60 KVA	4
		and 2 each of 120	
		KVA	
4	Chiller Plant		1
5	Fire Engine		1
6	R.O Plant		3
7	Solar Panels (Water Heating)		
8	Smoke Detectors		

Laundry: Comes under the housekeeping department. Laundry is outsourced.

IT: This is department handles the Information Technology flow throughout the hospital. It is headed by the IT Manager. The functions of this department are to understand the flow of patients, staff, and supplies/equipments and then apply this knowledge to modify the HIMS accordingly so that documentation and record-keeping can be done at every level and

tracking of supplies and patients can be done effectively. The software used in this hospital is "Macshell".

CSSD: The department, divided into a sterile and an unsterile area, has a single entry for linens and instruments from OT and wards. Two autoclaves are fitted, Bovidick test is performed daily to check the machines working and regular documentation is done. The unidirectional flow is maintained.

Store: The supply is maintained to the IPD pharmacy and the OPD pharmacy. The materials that are directly sold to the patients are supplied from this store. The store manager keeps record of the items that are not to be sold to the patients but are in use in the patient ward, OTs and for hospital use. Stock Valuation Report is sent monthly to the HOD and monthly audit is done.

OPD: It comprises of the May I Help You Desk, Registration, Admissions, Billing, and Pharmacy store. The department consists of PROs and Front Desk executives.

Multi-speciality: OPDs for Cardiology, Dermatology, ENT, Endocrinology, Diabetology, Gynaecology and Obstetrics, Gastroenterology, Gastrointestinal Surgery, Nephrology and Urology, Neurology and Neurosurgery, Ophthalmology, Orthopedics, Paediatrics and Paediatric Surgery, Plastic Surgery, Psychiatry and Pulmonology. Oncology: It includes Surgical, Medical and Radiation Oncology Departments. Billing is done at the Multispecialty OPD for Radiology patients. Radiology and Radiotherapy are housed in separate sections. Radiation Safety Officers are stationed in both Radiology and Radiotherapy. A patient information desk is also available in the Oncology OPD.

Radio Imaging and Nuclear Medicine: The department consists of the HOD, doctors and technicians. Procedures carried out are mammography, ultrasound, X-ray and CT-scan. PET and bone scan are also carried out which are a part of Nuclear Medicine. The department is equipped with a Gamma Camera and Dexa. There is a Hot Lab for medical preparation of patients before investigation begins. Radiation safety guidelines of AERB and BARC are applicable here.

Radiotherapy: AERB guidelines for radiation safety are applicable in this department. It consists of the HOD, Radiation Safety Officers and technicians.

Emergency: There are six beds and four trolleys in the Emergency, along with two Crash Carts (one for emergency and one in the procedure room).

ICU: Surgical and Medical ICUs are equipped with state-of-the-art monitoring and life support systems for patients in critical condition, and are supported by specially trained, attentive and efficient staff. There is provision for Isolation room as well.

Marketing Department: This department looks after the Hospital Promotion domain. Headed by the Manager (Marketing), it is focussed towards increasing patient footfall through referrals, TPAs, Corporate empanelment, empanelment with PSUs, empanelment with government institutes etc. This department is also responsible for organizing events such as CMEs, free health check-up camps.

Pathology Laboratory: The CHARAK PATHOLOGY has the following subsections: Haematology, Biochemistry, Microbiology, Histopathology and Cytology labs, Frozen Section cutting room, FNAC room and the Grossing Room. The labs are NABL accreditated.

3. FOCUS STUDY

3.1 General objective:

To study the patient Admission and Discharge process in Synergy Institute of Medical Sciences, Dehradun to reduce the delays in the admissions and discharges.

3.2 Specific Objectives:

- 1. To analyze the steps involved in the admission and discharge process and to find out the average discharge and admission time.
- 2. To root out the significant reasons of delay.
- 3. To recommend steps to reduce the delays.

3.3 Hypothesis:

- 1. Discharge is delayed beyond expected time-line.
- 2. Delay in discharge is due to delay in receiving the discharge summary.

<u>3.4 Purpose of the study:</u>

The main aim of the study is to find out the problems with the admission and discharge planning and to identify the areas of improvement and to develop recommendations in accordance with the organization for strengthening and improving the quality of services delivered.

3.5 Scope of the study:

The scope of this study is to analyze the steps involved in the admission and discharge of the patient of Synergy Institute of Medical Sciences and to improve the process by providing solutions and recommendations.

4. METHODOLOGY

Data collection method

- Primary data was obtained through:
 - 1. Time motion study
 - 2. Direct observations of the discharges process and recording of the critical activities.
 - 3. Interactions with doctors, team leaders, nurses, billing, and other concerned staff involved in the discharge process.
- Secondary data was obtained through Macshell (Hospital Information Management System)

Data Collection Tool

• Manually followed the admission and discharge process.

Sample Size

• 80 admissions and 100 discharges

Sampling method

• Non probability convenience sampling

Study design

• Descriptive cross sectional study

Study duration:

• From 1st February to 30th April, 2014

Data analysis:

• Data is analyzed using excel software

The study is divided in following stages:

- Study of the admission and discharge process in the I.P. Department in 'Synergy Institute of Medical Sciences'.
- Survey to study the steps in patient's admission and discharge from the hospital, comparing with expected time-lines and the expected improvement in the process.
- Compilation of the data and data analysis.
- Finding the bottlenecks in admission and discharge process, planning and proposing the recommendations.

5. <u>RATIONALE OF STUDY</u>

- Prolonged waiting time in patient admission and discharge process leading to patient dissatisfaction.
- Frequent argument between Patient and staff at billing desk.

6. EXECUTIVE SUMMARY

Admission to an acute hospital may be planned (*elective*) or may be required as a matter of urgency (*emergency*). Elective admissions are those which occur as a consequence of referral (to hospital by a general practitioner, medical consultant, a visit to the hospital outpatient department or a planned transfer from another hospital. Some patients may confound these definitions eg: patients requiring chemotherapy who may be both urgent and planned.

The key elements include:

• Strategic and timely service planning (e.g. regular annual review).

• Uniformity of structures and processes (i.e. following national guidelines where they exist).

• Linked protocols and pathways (e.g. shared between primary and secondary care and based

on international best practice, so that objective measures of performance are readily

available).

Strategic planning for all service areas should provide demonstrable evidence of coherent assessment, evaluation and planning, taking account of the health care needs of the population. The proposed structural reforms should be developed in the context of the links required between service areas to ensure smooth and timely movement of patients from one care setting to the next. This will require connectivity at national, regional, and local levels; and between all stakeholders.

Admissions and Discharge

Strategic objectives :

The key strategic objectives underpinning an effective and coherent admissions and discharge policy for emergency and elective patients are:

• The provision of an integrated personal health and social services system resulting in seamless patient centred care at all times.

• The utilisation of resources to maximise clinical and organisational effectiveness and outcomes.

• The establishment of fully integrated networks of acute care which are accessible to each person.

• The provision of levels of local access to acute care whilst at the same time ensuring high quality clinical care.

• The acquisition of clinical admissions data to assist service planning and monitoring.

What are the Principles Underpinning Best Practice in Hospital Admissions?

A number of principles should underpin the development of an effective emergency and elective admissions and discharge planning function. These include:

• The provision of patient centred services, which are accessible to the population without compromising safety, quality and clinical standards, to the right people in the right location and at the right time.

• Patients should be consulted and included in all decisions about their care.

• Clinical practice and care should be based on the most up to date evidence.

• Co-operation and clinical networking between hospitals and between care groups are essential to optimise outcomes, particularly where complex care issues are involved.

• A service based on good clinical governance (i.e. founded on continuous quality improvement, staff development, risk management and audit).

• Acute hospital services should be organised into three parallel streams of care interdependent of each other. This involves a division of acute hospital services into emergency, elective and out patients department/day care.

• The pivotal role of the Primary Care Teams should be emphasised.

• Early induction training of healthcare professionals in relation to the principles set out above.

Effective management of hospital beds and associated resources :

The effective management of hospital beds and associated resources is vital if the growing demand placed on hospital resources is to be met. Recognised impediments to patient "flow" in hospitals include:

- Difficulties in gaining access to inpatient beds (i.e. insufficient bed capacity).
- The resulting congestion within Emergency Departments (EDs).
- Inappropriate retention of patients in hospital beds.

The active management of admissions and discharges should ensure that:

- Beds are available for emergency admissions.
- Beds are available for elective patients; this assists in keeping waiting lists down.
- The quality and appropriateness of patient care is high.
- Patients get the care they require when they are discharged from hospital.
- Scarce financial resources are not wasted and value for money is achieved.

Quality and safety :

To ensure that all patients admitted to hospital receive the high quality and safe service to which they are entitled, resources must be efficiently and effectively utilised. Services are organised so that patients, depending on their needs, can move smoothly between emergency care and the best and most appropriate inpatient care, primary care and continuing care. Effective quality assurance and safe care are essential rights of all users of the health services. Achieving the standards will ensure that all hospitals are providing such care.

Emergency admissions :

An emergency hospital admission is defined as one that is not planned and which results from trauma (injury) or acute illness which cannot be treated on an outpatient basis. In order to manage the balance between elective and emergency admissions, the factors below have been identified as effective in improving the management of admissions and general patient flow in the Emergency Department (ED):

• Where there is a mix of elective and emergency admission in hospitals, occupancy levels should allow for flexibility in dealing with the natural ebb and flow of illness and injury in the community. Thus, a level of about 85% hospital bed occupancy is desirable.

• Having a senior medical presence in the emergency department at all times. Only appropriately assessed patients should be placed in a hospital bed options for outpatient, day care and primary care (including home care and ambulatory practice) should be maximised.

• Investment to support adequate provision of primary and community care so as to:

- reduce avoidable attendances at the ED
- > support early discharge from hospitals where appropriate.

Elective admissions:

Achieving the correct balance between the competing demands for hospital beds by elective and emergency cases of varying complexity is likely to remain a considerable challenge for the future. In order to improve the experience of patients waiting for elective admission, the following priorities have been identified:

• Local clinical consensus on the ratio of emergency admissions to planned elective procedures.

• Measures to review and monitor criteria for hospital admission and for lengths of stay.

• Greater emphasis on ensuring that in admitting elective patients, consideration is given to the length of time they have been waiting since the decision to admit was taken – taking account of their clinical needs.

• Greater standardisation of waiting list administration with consistent monitoring of cancellations, suspensions and removal from lists without treatment.

• Emphasis on planning discharge from day of admission.

• The adoption of a whole systems approach to bed management.

• The appointment of a manager or clinician with sufficient authority and support to balance and monitor the competing demands of emergency and elective pressures ensuring all bed and theatre resources are fully utilised.

Discharge planning :

Discharge from hospital is a process, not an isolated event. It involves the development and implementation of a plan to facilitate the transfer of an individual from hospital to an alternative setting where appropriate. Components of the system (family, carers, hospitals,

primary care providers, community services and social services) must work together. Activity and performance standards should be frequently monitored and there should be openness to innovative solutions. This will ensure that the whole systems approach to admissions and discharges is positively reflected in the patient's experience. All hospitals should have their own operational policies for discharge planning. Staff should to be involved in the development and regular review of these policies. As with admissions, the standard of discharge management impacts on hospital efficiency, quality and safety of patient care.

Good discharge management is vital to ensure:

• Patient satisfaction;

• Bed availability for emergency and elective admissions; and

• Quality of patient care remains high.

Several key priorities in effective discharge and transfer of care have been identified.

These include:

• The engagement and active participation of the individual and their carer as partners with clinical staff.

• Staff co-operating within a framework of integrated multidisciplinary and multiagency teamwork to manage all aspects of the discharge process. The process of discharge planning may be co-ordinated by a named person who has responsibility for co-ordinating all stages of the "patient journey".

• Effective use is made of transitional and intermediate care services, so that existing acute hospital capacity is used appropriately and individuals achieve their optimal health outcome.

• Specialised expertise and/or support services for special needs cases e.g. the homeless and ethnic minorities.

7. <u>REVIEW OF LITERATURE</u>

Historical background

1. The professional practice component of discharge planning goes beyond the mere application of the organization's procedures. It involves attention to the particulars of

each case in light of the organization's principles. It also requires the ability to understand operations and how to intervene effectively within the organization (Marcus 1987). "The optimally successful discharge is one that meets the goals, needs, and objectives of as many of the parties concerned as possible, to the greatest extent possible." To understand the process, identify the various interests, understand their objectives and determine their measures of success. The discharge planner mediates between the individual's needs and the system's policies. The discharge planner should know and understand the health care system, appreciate its impact on the patient and family, and negotiate plans that work optimally for all. Clinical and organizational issues are inseparable.

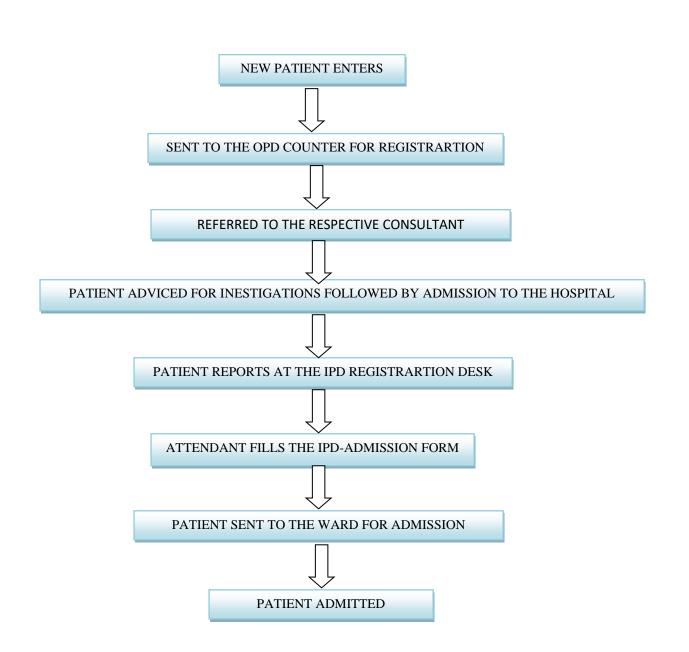
- 2. In a Cochrane Database Systematic Review of discharge planning from hospital to home, Sheppard et al (2003) report than nearly 30 per cent of all hospital discharges are delayed for non-medical reasons. The causes of such delay, reported by the U.S. Department of Health in 2003, include inadequate assessment resulting in, e.g., poor knowledge of the patient's social circumstances; poor organization, e.g., late booking of transport; and poor communication between the hospital and providers of services in the community. The review failed to detect a significant impact on length of stay or readmission rates for elderly patients with a medical condition for discharge planning compared to usual care. Some trials found higher patient satisfaction to be associated with discharge planning. The impact of discharge planning on health outcomes is uncertain. One study found hospital total costs were significantly lower with discharge planning for patients with a medical condition at two weeks), but no different for surgical patients. Another found lower costs for laboratory services for patients receiving discharge planning.
- 3. Discharge planning is a process that facilitates each patient's continuity of care following an episode of hospitalization. It involves a multidisciplinary approach to assessing, coordinating and providing for patients needs in conjunction with the patient, career, hospital and community service provider (including treating medical practitioner and general practitioner), to facilitate the patient's discharge from hospital and return to the community the processes required for effective discharge planning.

- There should be an organization led commitment to manage all hospital beds.
- Resources such as a discharge co-coordinator to ensure delays are minimized and extensive patient and family involvement in decision making processes.
- Referrals to physiotherapy, occupational therapy should be identified as early as possible with access to aids and appliances as appropriate
- Discharge documentation should be audited to ensure compliance with hospital protocols.
- 4. The average delay for 3,111 patients awaiting discharge from acute to sub-acute care in 80 North Carolina acute care general hospitals during May 1999 was 16.7 days. A comparable Michigan study identified a rate of 6.5 days. Delayed discharges are believed to compromise the quality of patient care, reflect a lack of efficiency and effectiveness within the continuum of care as well as a lack of service coordination. One study associated discharge anomalies with hospitals being disadvantaged, i.e., larger, urban, not-for-profit facilities located in southern or mid Atlantic states and affiliated with the Council of Teaching Hospitals. The authors of the study note heavy-care patients no longer requiring acute care but with needs exceeding the capacity of nursing homes are occupying hospital beds for long periods of time relative to traditional acute stays (Falcone et al 1991)

- ^{5.} In a project titled "Barriers to effective discharge planning: a qualitative study investigating the perspectives of frontline healthcare professionals" studies have shown that effective discharge planning is one of the key factors related to the quality of inpatient care and unnecessary hospital readmission. The perception and understanding of hospital discharge by health professionals is important in developing effective discharge planning.
- 6. In "Discharge from Hospital Literature Review" Prepared for the discharge Planning and ALC Policy Task Team November 2006: Discharge planning is critical to ensuring rapid, safe and smooth transition from hospital to another care environment; it involves the social work functions of high risk screening, social work assessment, counselling, locating and arranging resources, consultation/collaboration, patient and family education, patient advocacy and chart documentation; it is a complex activity requiring a wide range of clinical and organizational skills to address needs of patient, family and health care system and to promote the optimum functioning of patients, families and support systems. Delay factors may be internal (waiting for discharge summaries; waiting for declaration of chronicity; transfer between nursing units; lack of documentation of discharge plan); external (lack/delay of access to rehabilitation, convalescence, palliative care, home care resources, long term care facility); and psychosocial (waiting for family adjustment to illness, waiting for patient function to improve, unrealistic expectations of patient/family, social isolation of patient, inadequate support at home, lack of concrete medical aids, transportation for treatments, financial, family burden prevents discharge home).
- 7. In a study titled "Effective Discharge Begins at Admission A Patient Flow Logistics Coordination Model "Health care is characterized by fragmentation — among disciplines, among departments, among organizations, and among geographic locales — while those it serves depend on coordinated effort. The system propagates waste of time, resources, and good will." Nowhere is there a more classic display of interdependent components lacking 'system aim' than in discharge planning and placement.

8. ADMISSION PROCESS IN THE HOSPITAL

8.1 ADMISSION PROCESS FLOW



8.2 General Key Findings

Admissions :

Admissions through IPD and admissions through Emergency.

Admissions that take place after OPD registration and on consultation with the consultant are direct or planned admissions through IPD and those that are admitted through emergency for eg: RTA, are admissions through emergency. Planned admissions are those that happen in cases where treatments, surgeries and procedures are planned in advance. For planned admissions, patients can register their case at Indoor Registration Counter near the In-patient Services entrance along with their doctor's admitting note. Before getting admitted, it would be prudent to get an estimated cost of treatment from the treating doctor. Patients opting for a treatment package are requested to deposit full amount on admission.

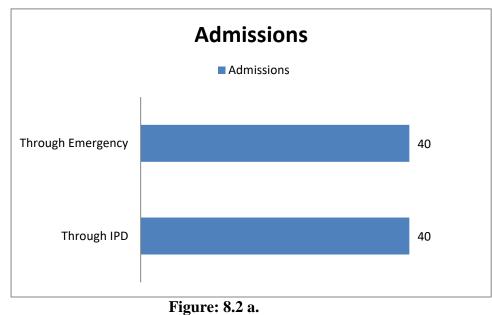
Salient Features of the Accident & Emergency Unit :

- 24-hr Emergency Service with Trauma care based on advanced TLS.
- Separate entrance with resuscitation room equipped for emergency care with ventilators, defibrillators, central lines for gases, crash cart & procedure room.
- Highly trained trauma team of doctors, nurses & paramedics.
- Equipped to deal with mass casualties.
- Consultants like General, Orthopaedic, Plastic, Neuro & Vascular surgeons available 24 hours.
- Back-up support: Emergency Operating Theatre with C-Arm, CT Scan, Blood Bank, Radiology, Pathology, Pharmacy and I.C.U.
- Code Blue service in patient of Cardio-Respiratory Collapse within the hospital.

Patients admitted in an emergency may be kept under observation in the Accident & Emergency area for some time and then shifted to the designated ward for further treatment.

Through IPD = 40

Through Emergency = 40



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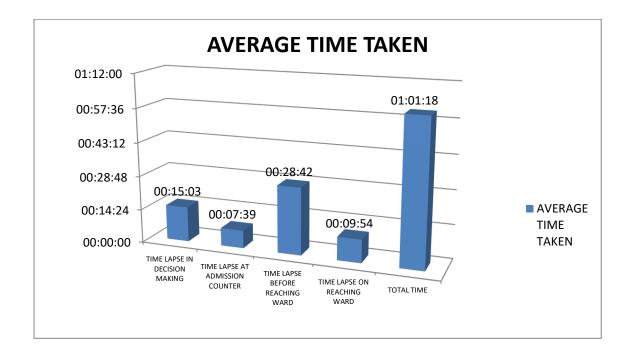
Analysis:

It is clearly depicted from the bar graph that 50% admissions are through IPD, and 50% are through emergency, which may be a matter of concern as the patients admitted through emergency are critical in condition.

The admission process has been segregated into 4 phases as follows:

- Time lapse in decision making
- Time lapse at admission counter
- Time lapse before reaching the ward
- Time lapse on reaching the ward

Figure: 8.2 b. shows the graphical presentation of the average time taken in various phases of admission procedure in the hospital.



8.3 CATEGORICAL PRESENTATION

Figure: 8.3 a. shows the comparison of average time taken to complete various phases of admission in different areas of hospital.

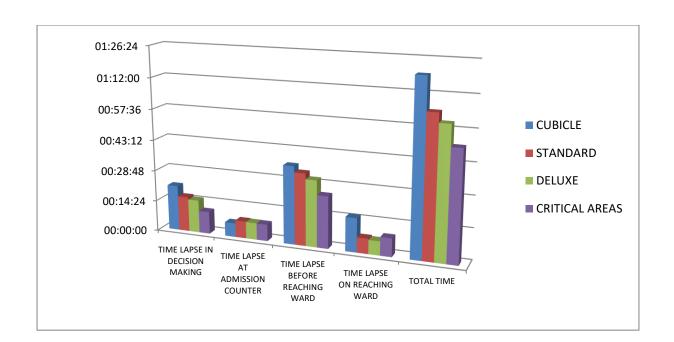


Figure: 8.3 b. indicates the percentage division of time invested in different phases of admission in the general ward i.e. the cubicles.

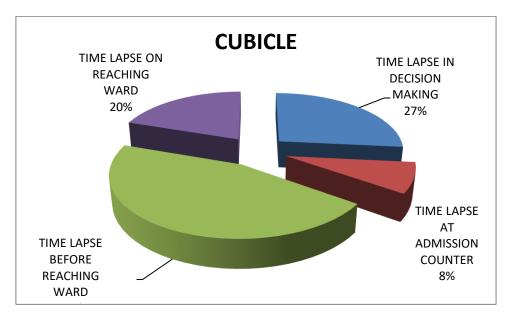


Figure: 8.3 c..indicates the percentage division of time invested in different phases of admission in the standard ward.

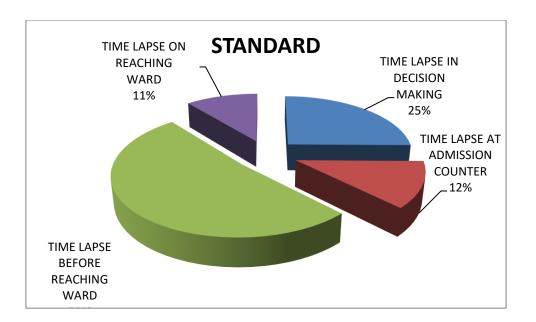


Figure: 8.3 d. indicates the percentage division of time invested in different phases of admission in the Deluxe ward.

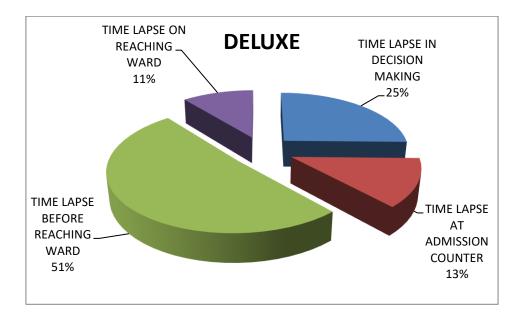
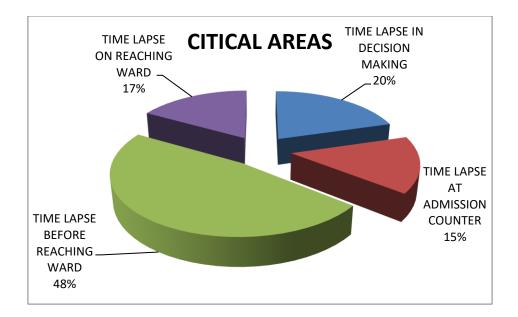


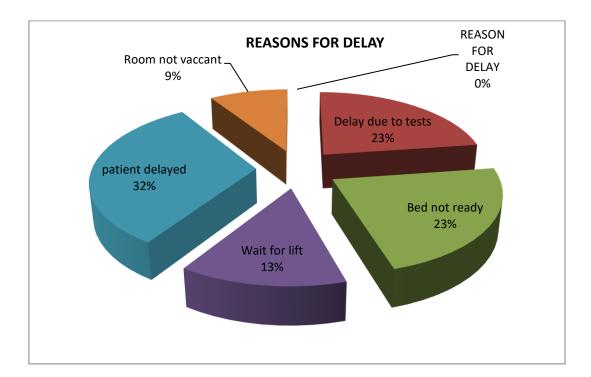
Figure: 8.3 e. indicates the percentage division of time invested in different phases of admission in the Critical areas like ICU, CE, NCCU.



8.4 REASONS FOR DELAY

Figure: 8.4 a .indicates various reasons for delay in completion of admission. It is clearly shown that maximum delay i.e. 32% arises due to patient, which is mainly the time taken in

making up the mind for admission. 23% delays are due to the investigations which are mandatory to be conducted. 23% delays are when the patient bed is not ready either because the next patient has just vacated or the staff is negligent. 13% delays occur when the patient has to wait for the lift and rest 9% arises when no room is vacant for patients' admission.



8.5 DISCUSSION

Among the 80 samples taken, 50% admissions were captured through the emergency and rest 50% were direct admissions from the IPD.

The hospital further divides the admission process into 4 different phases: Time lapse in decision making, time lapse at admission counter, time lapse before reaching the ward and time lapse on reaching the ward. The average time for admissions was found out to be 1hr 1min and 18 sec. Maximum delay was found out to be done by patient before reaching the ward for admission. The different reasons were found in the different phases of the admission:

- a) Room not vacant
- b) Bed not ready
- c) Delay due to tests
- d) Patient delayed in making decision
- e) Wait for the lift

All these were the major reasons for delay, out of which delay due to tests and decision making by the patient accounted for maximum delays. Some delays involved patient waiting for their allotted bed to get ready, as either the patient had just emptied the room or the staff was not efficient enough to prepare the bed for next patient.

8.6 RECOMMENDATIONS

a. The patients counselling for admission should be done promptly so that the patient takes immediate decision.

- b. Separate lifts should be assigned for carrying patients and separate for the staff to use.
 This would reduce the waiting time of the patient outside the lift.
- c. Effective training should be given to the staff to make them realize the importance of making bed ready for the next patient after the earlier patient has discharged.
- d. To avoid unnecessary delays at the admission counter, only one attendant from patients' side should be present at the desk to complete the formalities.
- e. Information about the current status of the rooms must be efficiently communicated amongst the staff members at the admission counter and the wards.

<u>9. DISCHARGE PROCESS IN THE</u> <u>HOSPITAL</u>

Introduction

Discharge from the hospital is a point at which a patient leaves the hospital and either returns home or is transferred to another facility such as one for rehabilitation or to a nursing home. Discharge involves the medical instructions that the patient will need to fully recover. Discharge planning is a service that considers the patient's needs after the hospital stay, and may involve several different services such as visiting nursing care, physical therapy, and home blood drawing.

Discharging patients from the hospital is a complex process that is fraught with challenges. Hospitalization is often a short-term event, so ideally the determination of the patient's discharge plan begins upon their admission to a hospital.

Based upon their presenting condition, physician order set, severity of illness or injury (SI), and the intensity of services required (IS) a resource plan of care and discharge plan can be identified up front for each patient. Information that could affect the discharge plan is noted in the patient's medical record so that it is taken into account when discharge is being scheduled.

The key principles of effective discharge planning

- Start planning before or on admission.
- Identify whether the patient has simple or complex needs.
- Develop a clinical management plan within 24 hours of admission.
- Coordinate the discharge or transfer process.
- Set an expected date of discharge within 48 hours of admission.
- Review clinical management plan daily.

Nursing responsibilities for discharge

Whilst the responsibility for deciding whether a patient is clinically fit for discharge rests ultimately with the primary Consultant, the responsibility for cocoordinating a smooth discharge process, that meets with the patient's needs, rests with nursing staff.

2. Every discharge should be treated as unique to the individual patient it concerns, but the following points should be considered:

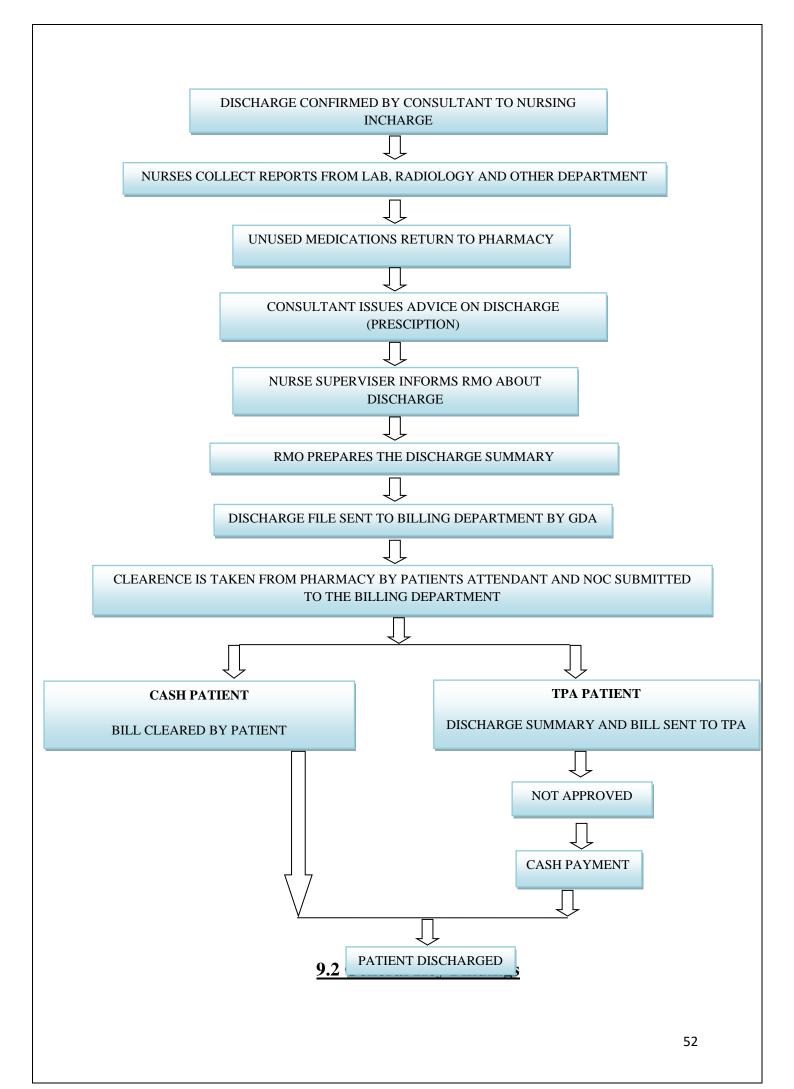
- (a) As soon as possible after the admission, a full assessment of the patient's potential discharge needs should be undertaken.
- (b) Every patient should have a named nurse who is responsible for facilitating their discharge. He / she should ensure that the nursing team is aware of the activities required to be undertaken to complete a smooth discharge.
- © Good communication is vital. The patient must be integral to their discharge planning and should be fully involved and informed of planning and progress throughout the whole process.

Responsibilities of hospital pharmacy department

The role of the pharmacy department is to provide discharge medications and advice, where applicable, for all patients being discharged. The following points should be considered when planning the patient's discharge:

- 1) Nursing staff should ensure that the patient and if required appropriate relatives/ attendants are given a full explanation of the medications that have been given for discharge (including the purpose of the drugs, why they have been prescribed and the dose to be taken and when). The services of the pharmacist should be utilized if there are any doubts regarding discharge medications.
- 2) The amount of tablets/medicines to be dispensed to the individual patient on their discharge will be decided by the consultant.

9.1 DISCHARGE PROCESS FLOW



Discharges:

Planned and Unplanned

Discharges which are confirmed a day before the actual discharge are planned discharges and vice versa.

Total discharges (Planned + Unplanned) =100

Planned = 40

Unplanned =60

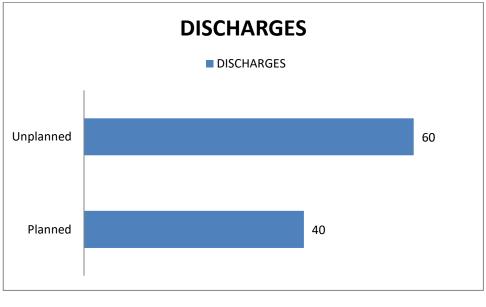


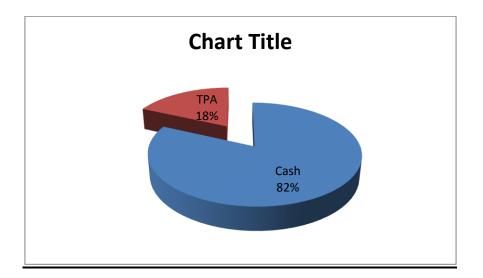
Figure: 9.2 a.

Analysis:

It is clearly depicted from the bar graph that only 40% discharges are planned, rest 60% are unplanned, these discharges are matter of concern as these might be one of the reasons for delay because whole discharge process has to be carried out on same day of discharge.

Mode of payment

Figure: 9.2 b.shows that 82% availing the services of hospital are cash patients and 18% are insured.

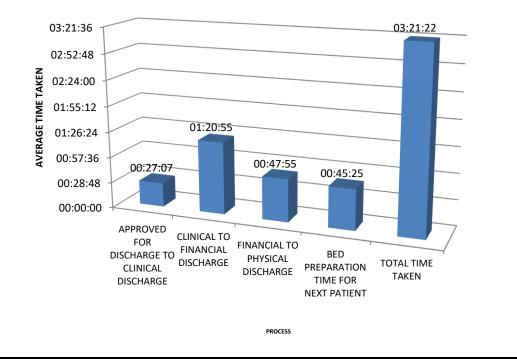


The mode of payment is an important factor in the discharge process, as the time taken for discharge of TPA patients is more than the cash patients. A clearance from the insurance company is required in the process which takes time. After confirmation of decision for discharge, the insurance company is sent intimation for clearance from the billing department of the hospital, through mail. After receiving a revert from the company, discharge slip of the patient is made.

Table shows the deviation of average timings in various processes from the standard parameter.

Figure: 9.2 c. shows the graphical presentation of the average time taken in various processes of discharge in the hospital

S.No	Activities	Average timings	Standard parameters(in mins)
1.	APPROVED FOR DISCHARGE TO CLINICAL DISCHARGE	27 min 7 sec	5
2.	CLINICAL TO FINANCIAL DISCHARGE	80min 55 sec	35-60
3.	FINANCIAL TO PHYSICAL DISCHARGE	47min 5 sec	20-25
4.	Total	155 min 57 sec	60-90



9.3 CATEGORICAL PRESENTATION

Table: indicates the average time taken to complete various phases of discharge from various areas of hospital.

PHASES OF DISCHARGES	CUBICLE	STANDARD	DELUXE	ICU, CCU, CE
Approved For Discharge To Clinical Discharge	00:26:04	00:19:10	01:20:00	00:30:00
Clinical To Financial Discharge	01:26:56	01:07:10	01:20:00	01:16:30
Financial To Physical Discharge	01:07:43	00:56:43	00:20:00	00:43:30
Bed Preparation Time For Next Patient	00:49:17	00:48:53	00:30:00	00:42:36
Total Time Taken	03:50:00	03:11:56	03:30:00	03:12:36

Figure: 9.3 a.shows the comparison of average time taken to complete various phases of discharge from different areas of hospital.

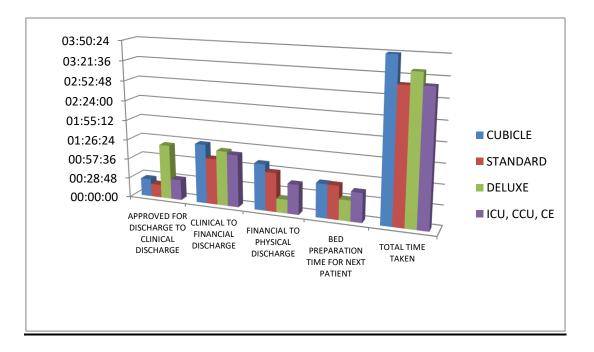


Figure: 9.3 b.indicates the percentage division of time invested in different phases of discharge from the general ward i.e. the cubicles.

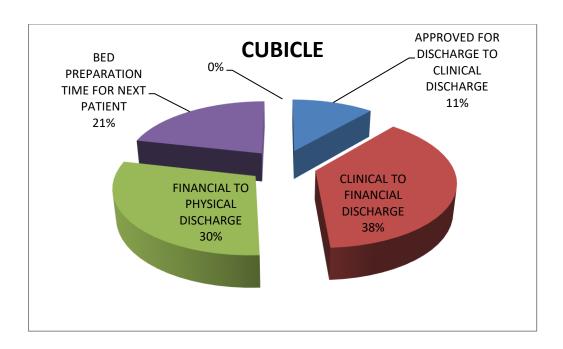


Figure: 9.3 c indicates the percentage division of time invested in different phases of discharge from the Standard wards.

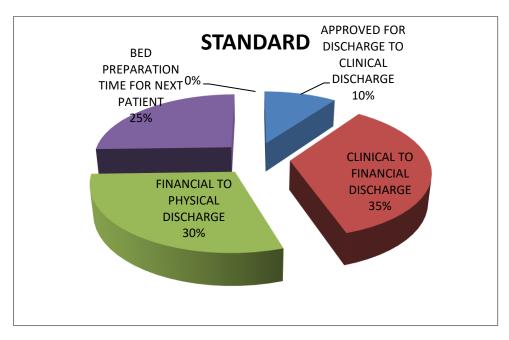


Figure: 9.3 d. indicates the percentage division of time invested in different phases of discharge from the Deluxe wards.

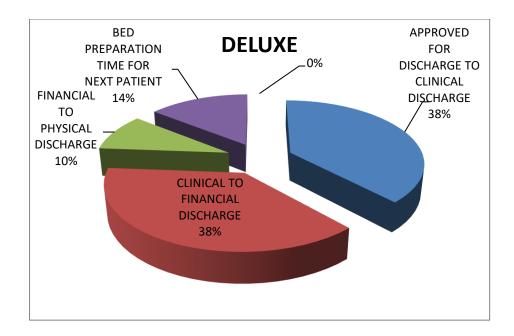
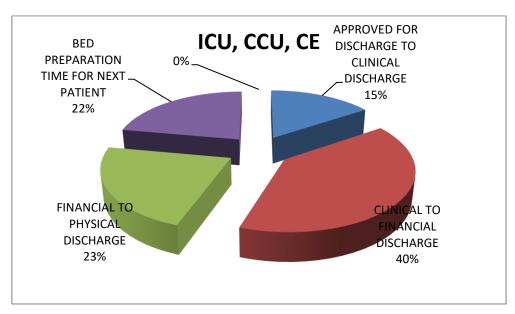
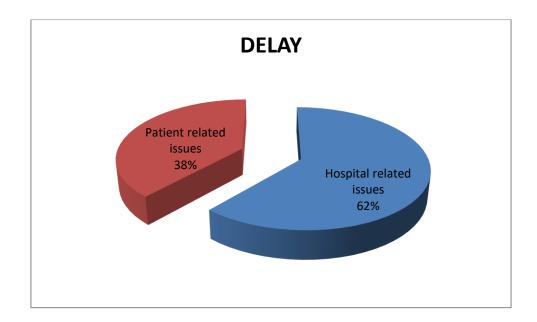


Figure: 9.3 e. indicates the percentage division of time invested in different phases of discharge from the critical areas i.e. ICU, CCU and CE.



9.4 REASONS FOR DELAY

Figure: 9.4 a.indicates that 62% delays were due to hospital related issues and 38% were due to patient related issues.



HOSPITAL RELATED ISSUES

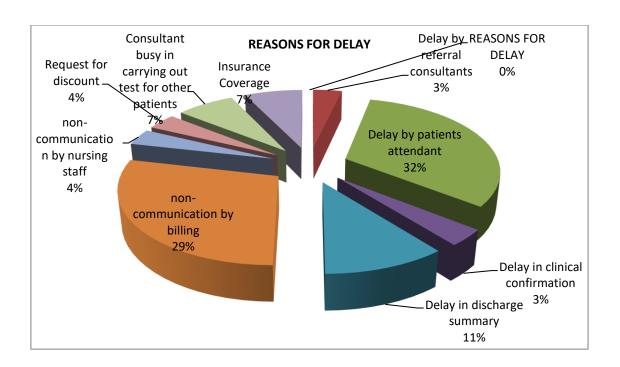
- Delay by referral consultants
- > Delay in clinical confirmation
- Delay in discharge summary
- Non-communication by billing department
- Non-communication by nursing staff
- Shortage of nursing staff
- Consultant busy in carrying out tests of other patients

PATIENT RELATED ISSUES

- Delay by patients attendant
- Request for discount

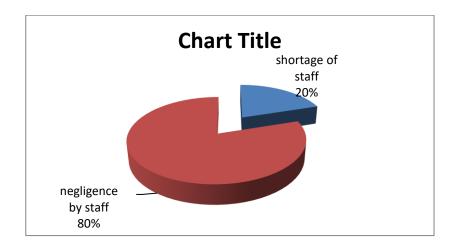
DETAILED ANALYSIS FOR THE REASONS

Figure: 9.5 a shows the detailed presentation of various reasons for delay in discharges in the hospital. 32% delay was done by the patients' attendant and 29% by the billing department.



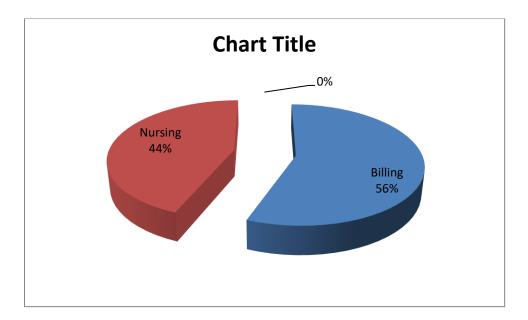
A. Hospital Related Issues: The various hospital related issues were:

Figure: 9.5 b shows that 20% delays were due to shortage of staff and 80% due to negligence by the staff.



- 1. **Shortage of Staff**: Shortage of staff in the nursing department when staff on the leave or when there was workload.
- 2. **Staff Negligence**: The delays due to negligence of the different staff of various departments (80%) were billing, nurses, front office.

Figure: 9.5 c indicates that billing department was responsible for 50 % delays, nurses for 40% delays and front office were responsible for 10% delays.



a) Billing Department : The different negligence done by the billing staff was:

- 1. Bill not adjusted properly in cases of advance deposit and different kinds of charges like room, lab charges, various investigations, etc.
- 2. Inadequate follow up with patients relatives for clearance of the bills by telephonic calling or not generating interim bills at proper time.
- **b**) **Nurses**: Nurses delayed the entry of bill no. in the register or delayed the instruction of discharge to the GDA to carry out room emptying procedures.

B. Patient Related Issues: which accounted for 38% of delays. The various reasons were:

- 1. Patient's relative arrived at the billing counter late from the time they were informed responsible for 20% of the patient related issues delays.
- 2. Patient relative queries at the billing counter about bill adjustment. Packages, different rates, discounts etc responsible for 40% of the patient related issues delays.
- 3. Patient took some time for the arrangement of the remaining money in case of huge outstanding responsible for 30% of the patient related issues delays.
- 4. Other patient related issues accounted for 10% delays which were as follows:
- Patient waiting for vehicle to be picked up from the hospital
- Patient insisting to leave after taking meal
- Patient waiting to take consultation from other doctors voluntarily
- Patient delaying submission of paid copy at the nursing station due to miscellaneous reasons
- Patients' attendant went for purchasing medicines from the pharmacy.

C. Doctors' Related Reasons for Delay:

- a) Discharge summary not prepared: Delay from the ward doctor side. They were busy in other patients like dressings, on rounds with the senior consultant, etc.
- b) Discharge summary edited: Very often discharge summary is edited and reprinted due to errors (drug and dose changes by the consultants after seeing he last reports or changes in patient condition.

9.5 DISCUSSION:

Among the 100 samples taken, 46% discharges were within the time frame whereas 54% were delayed with the average standard time. The average standard time of discharge was 60

-90 minutes, but the study showed 155.57 minutes i.e. discharges was late by 65.57-95.57 minutes.

The hospital further divides the discharge process into 3 different phases and set an average standard time for each of the phase for all cases. For various cases, marked for discharge to clinical discharge was 5 minutes, clinical to financial discharge was 35-60 minutes and financial to physical discharge was 20-25 minutes while there was delay in each step by 22.5, 20.55-45.55 and 22.5- 27.5 minutes respectively, and the total average time taken was 155.57 minutes in which there was delay of 65.57-95.57 minutes. There were different reasons for the delay of discharge process. The different reasons were found in the different phases of the discharge:

- 1) Only 40% discharges are planned, it's the main reason for delay.
- 2) Consultants come for the round after 10 am.
- 3) Delayed DS summary preparation.
- 4) All affairs are not running parallel and there is lack of coordination in different departments because sometimes status of patient is unknown (whether cash or TPA; planned or unplanned).
- 5) Patient usually becomes restless on seeing final bill, leads to their unwelcomed queries resulting in delay in discharge.
- 6) Another important matter of concern is late DS preparation as it includes many steps:
 - a) Doctors which are not involved in the treatment if are asked to write summary, they have to go through entire notes which causes delay.
 - b) Sometimes DS is prepared late.
 - c) Sometimes it is prepared and corrected but final copy is typed late.
 - d) Sometimes everything is ready, but couldn't still be served to patient because nursing staff is very busy and they send the file late to the finance desk.
 - e) Sometimes the staffs tends to try and accumulate 2 or 3 discharges simultaneously so delay occurs in completing notes of all and then sending down the files.

Other reasons:

- a) Due to rush at the finance counter, discharge file sent late for the department (Radio, Lab, OT, Pharmacy) clearance. Department staff is busy with other procedures when file comes for clearance causing delay in discharge.
- **b**) All the reports (Lab, Radiology and Pharmacy) are not available which are required to send to TPA for the cashless.
- c) Photocopies of the report took time.

9.6 RECOMMENDATIONS

 To avoid miscommunication and lack of coordination among the staff regarding discharge, one of the Duty Manager can be assigned the role of a discharge coordinator during morning shift (because maximum discharges happened in morning shift) or the patient care coordinator can also be assigned the responsibility in handling discharges. 2. A list of planned discharges should be sent to respective departments/ staff after the consultants round in the evening. All probable discharges should be communicated to departments to avoid clashing of services to be provided during the discharge.

- 3. The summary drafts are made very often and changed again and again. So the summary should be updated daily by the respective RMOs in the system to avoid wastage of stationary and on the time of consultant's round one day prior to discharge, thorough draft should be checked by the consultant and the suggested changes should be updated in the system. The final summary should be printed in the morning per probable list of discharges conveyed and signed by the RMOs in the morning and handed over to the nursing staff. This summary should be explained to patient/ relatives without waiting for discharge slip to come. After explaining the summary, the summary should be kept in the discharge folder so that nurse can hand it over to patient at the time of reports hand over.
- 4. The nurse in-charge should take responsibility and coordinating of the below mentioned things:
 - a) Consultant visits should be updated timely after the consultant visits on the floors. The visits should be entered in the system by the shift in-charge and checked by the nurse in-charge.
 - b) Nurse in-charge should coordinate with the billing staff and the investigations should be checked with reports received of the tests.
 - c) Collection of all the reports of the patients a day prior to the discharge entry of all the consumables at the end of the day monitored by the nurse in-charge.
- 5. Cardiac rehabilitation and other counselling (diabetic/ dietic/ physiotherapy) should be completed one day prior to discharge or the patient should be counselled timely with priority basis of discharge list communicated by the nursing staff.
- 6. Laboratory staff should start preparing al the reports of discharge patients communicated by the nursing staff one day prior to final discharge. All the processed reports should be kept ready and handed over to respective nursing station by 7:30 in the morning.

- 7. To avoid house-keeping disturbances to nurses, house keeping supervisors should be instructed to be on the designated floors so that they can handle all house-keeping related issues of the patients. This will make nurses to focus on their core activities and reduce the overwork.
- 8. In case, all the formalities are completed and patient is just waiting for transportation, patient can be requested to sit in relatives' lounge. This will enable prompt readiness of the room for the next patient.
- 9. House-keeping supervisor should take care that discharges are not delayed due to shortage of GDAs, as nurses either wait for them or have to do their work of getting wheel chair, collection of reports, providing clothes, making beds etc.

10. Beyond the daily main meetings headed by MS, there should be meetings at lower level among all the HODs of the respective department for the mutual understanding, cooperation and solving various issues.

11. A separate counter for preparation and dispatch of discharge slip and reports should be made, so as to prevent chaos at the nursing station. This would even help the RMOs to type the summaries without being interfered.

CONCLUSION

The admission and discharge process at Synergy Institute of Medical Sciences is an interdisciplinary, collaborative process across the continuum of care. It is a clinical priority for all health care team members. Although, the use of HIMS (Macshell) are in process of

streamlining the admission and discharge process but still the discharges in the hospital are being delayed beyond expected time-line i.e. 12 pm for morning discharges for cash patients.

Out of 40 planned discharges followed in the study, only 12% cash patients were discharged after 11am. Some of the major reasons of delay were; late physician round, late discharge summary preparation.

Hospital bed demands sometimes exceed capacity, long time taken for discharge process leads to unnecessary bed occupancy, thus affecting both, the existing patients to be discharged and the new admissions in the hospital.

Mismatch between demand and supply of beds promotes delays and bottlenecks in the process. Therefore, it is essential to have an efficient and correct bed management in order to improve service delivery.

Long time taken for discharge process leads to unnecessary bed occupancy, thus affecting both, the existing patients to be discharged and the new admissions in the hospital.

Streamlining the admission and discharge process time is very important to reduce the waiting time thereby, increasing the customer satisfaction financial performance, hospital capacity and productivity.

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<u>11. ANNEXURE- 1</u>

S.no.	PATIENT NAME	IPD NO.	CONSULTANT	WARD/BED NO.	DECISION BY CONSULTANT	TIME OF ARRIVAL AT ADMISSION COUNTER	TIME OF LEAVING COUNTER	TIME OF REACHING WARD	TIME OF BED OCCUPANCY	OBSERVATION

12.<u>ANNEXURE- 2</u>

s.no.	Patient name	IPD no.	Consultant	Ward bed no.	Planned time for	discharge	Consultant approval	Discharge ticket	preparation time	File completion time	File reached at billing	Billing report ready by	Bill paid by	Patient moved by	Bed ready for next	Reasons for delay