

Summer Training
At
Aditya Birla Memorial Hospital, Pune

From 10th May 2021 to 10th Jul 2021

A Report
By
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MBA 2020-22 Hospital And Health Management



Acknowledgement

I express my sincere gratitude to **Aditya Birla Memorial hospital, Pune** for giving this opportunity of summer training.

I would like to acknowledge my indebtedness and deep sense of gratitude to **Shrikant Suryawanshi (Deputy Manager- Operations)** for his kind co-operation and guidance in completion of this project.

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Abbreviations

OPD – Out Patient Department

OPV- Out Patient visit

HIS- Hospital Information System

ABMH- Aditya Birla Hospital

“NABH- National Accreditation Board for Hospital”

“CAP and NABL- National Accreditation Board for testing and Calibration Laboratories ”

“ISO- International Organization for Standardization”

“HACCP- Hazard Analysis Critical Control Point”

ICU-Intensive care unit

OTS- Operation Theatre

ENT-Ear, Nose, Throat

LAB- Laboratory

“PMS-Patient Management System”

“CIS- Clinical Information System”

Observational Learning

Section -1:

Introduction

Aditya Birla Memorial Hospital is accredited by the Joint Commission International, NABH, CAP and NABL. It is also a HACCP and ISO:22000:2005 Certified Hospitals.. The 500 bed tertiary care facility with 152 ICU Beds. 13 OTS, dedicated 22 day-care beds for chemotherapy and 47 Dialysis Units are sprawled over 16 acres of land and functions in a film-less and paperless digital environment, backed by cutting-edge medical technology and IT resources. With the finest talents in medicine, be it doctors, nurses, technicians, or management professionals, the quaternary healthcare centre provides the highest quality and cost-effective medical services. Quality affordable healthcare is the basic need of every citizen and we at Aditya Birla Memorial Hospital have always given utmost importance to quality, patient care and patient safety. The hospital recently launched a new advanced Neuro Critical Care & Stroke Unit, showcasing the best in technology including robotic surgery.

Aditya Birla Memorial Hospital recently invested Rs. 45 crores to upgrade the healthcare facility from tertiary to quaternary. About 80% of the investment has gone into equipment upgrades that will equip the hospital to use artificial intelligence, robotics and assist terminally ill patients. The investment is about 6-8 times the normal investment that the hospital undertakes on upgrades every year. The hospital has also transformed from hospital based services to Tele/Video Consultations and virtual care and portable point-of-care solutions. Digital health care has been encouraged. While there is no doubt that human intervention is crucial for emergency care and that it cannot be completely replaced by automation. In the long-term, a strategic variation toward automation and digital transformation is being worked upon to achieve a more accurate diagnosis and greater efficiency. Some alterations such as contact tracing and AI-based solutions (in the short-term) to discover early infections and controlling them are the objectives.

Aditya Birla Memorial hospital is committed to maintain the highest standard of care and respond to the needs of the community in a compassionate manner. At its core lies the concept of "Compassionate Quality Healthcare".



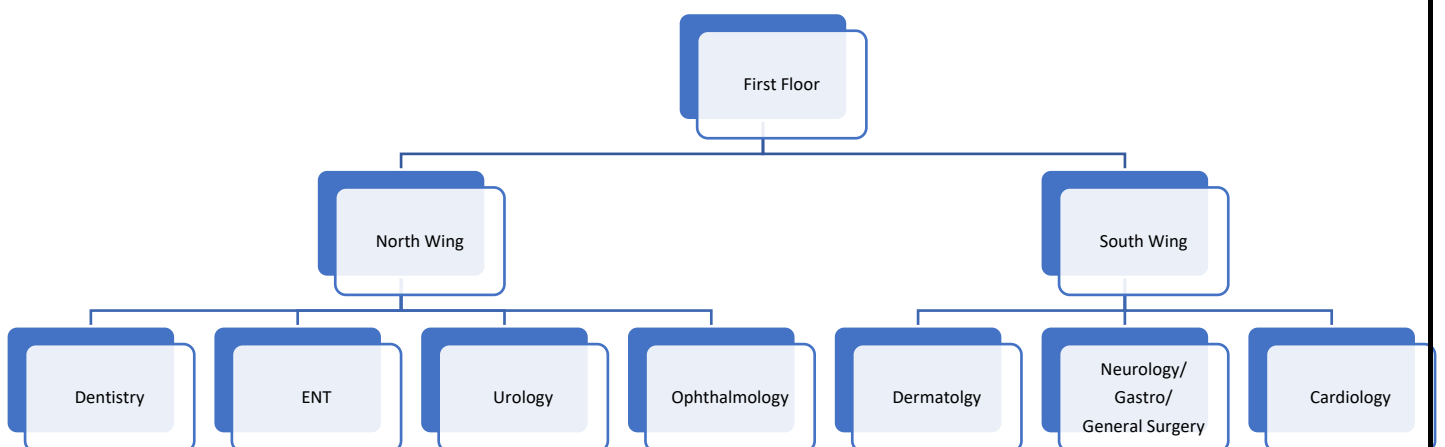
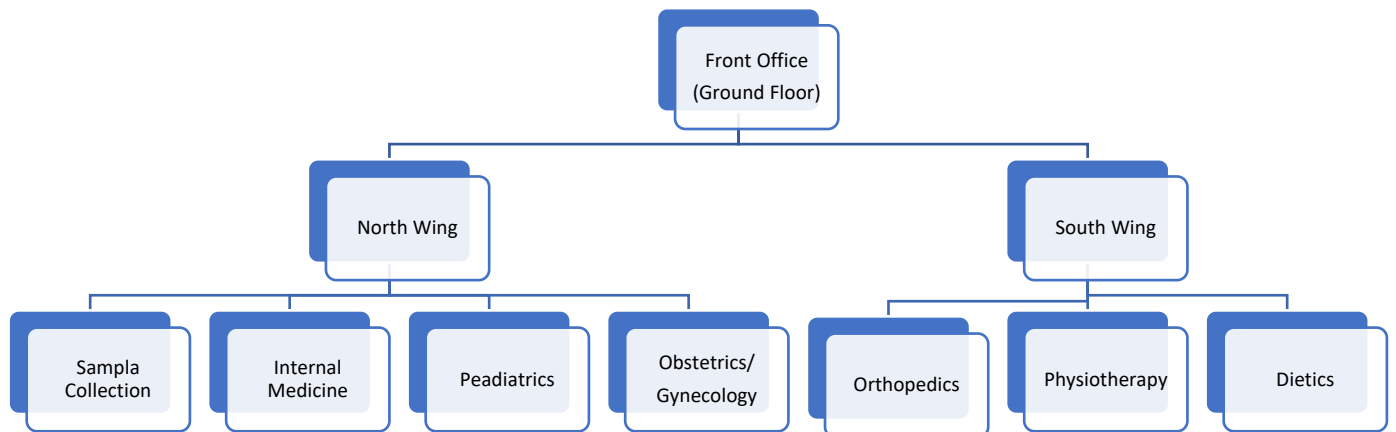
MISSION

The hospital is committed to maintain the highest standard of care and respond to the needs of the community in a compassionate manner. To provide state-of-the-art, high quality and cost-effective healthcare services and latest information to improve and maintain health for the well-being of the community. To unrelentingly pursue the creation of value for our customers, shareholders, employees and society at large. To foster a therapeutic relationship based on compassion that is felt, quality that is measurable and cost that is affordable. To become partners in health promotion with every section of society.

Vision

Excellence first and always

Overview of OPD Building



Front Office

For an outpatient, the hospital is an odd environment. He can be afraid and in need of reassurance and direction. In the outpatient section, a reception and inquiry counter is required for patients to get information such as the locations of various clinics, investigation areas, and registration procedures. For patient information and convenience, there is a separate corporate desk at the main reception. This should be prominently displayed at the hospital's entrance.

Wellness Centre

At the Aditya Birla Memorial Hospital, Wellness Assessment Centre, we undertake exhaustive investigation, testing and detailed analyses of patients and their family history, in order to provide comprehensive reports and recommend appropriate treatment for a healthy life. Our teams of highly trained physicians, aided by our sophisticated NABH accredited laboratory and state-of-the-art machinery, identify the minutest signs of disease and help terminate them at the onset.

Lab Investigations

The Aditya Birla Memorial Hospital laboratory is a NABL accredited medical diagnostic laboratory that offers a full range of laboratory services, following strict norms and international guideline for laboratory procedures. The department of laboratory services is the first in India to use the pneumatic chute for transporting samples from sample collection to processing laboratory, in order to avoid contamination, save time.

Departments

Experienced and expertise Doctors are available according to various Departments like Ophthalmology, Oncology, Orthopaedics, Paediatrics, Physiotherapy, Plastic Surgery, Psychiatric, Pulmonary Medicine, Rheumatology, Urology, Cardiology, Neurology, Dermatology, Endocrinology, Gastro Intestinal Surgery, General Surgery, Gynaecology, Internal Medicine and Dentistry.

Objectives

OPD offers: – Consultation, investigation, procedures, specialty services.

- Clinics for preventive and promotional health care: Diabetic, antenatal, post-natal, and under five.
- A rehabilitation service (physiotherapy, occupational therapy, etc.)
- The provision of health education and counselling

Objectives of Training

- Learn more about the responsibilities and functions that a health-care administrator performs on a regular basis.
- In order to meet the learning contract's objectives, participate in a variety of activities and projects at the internship workplace.
- Implement, execute, and report on administrative project as described in the time allotted.

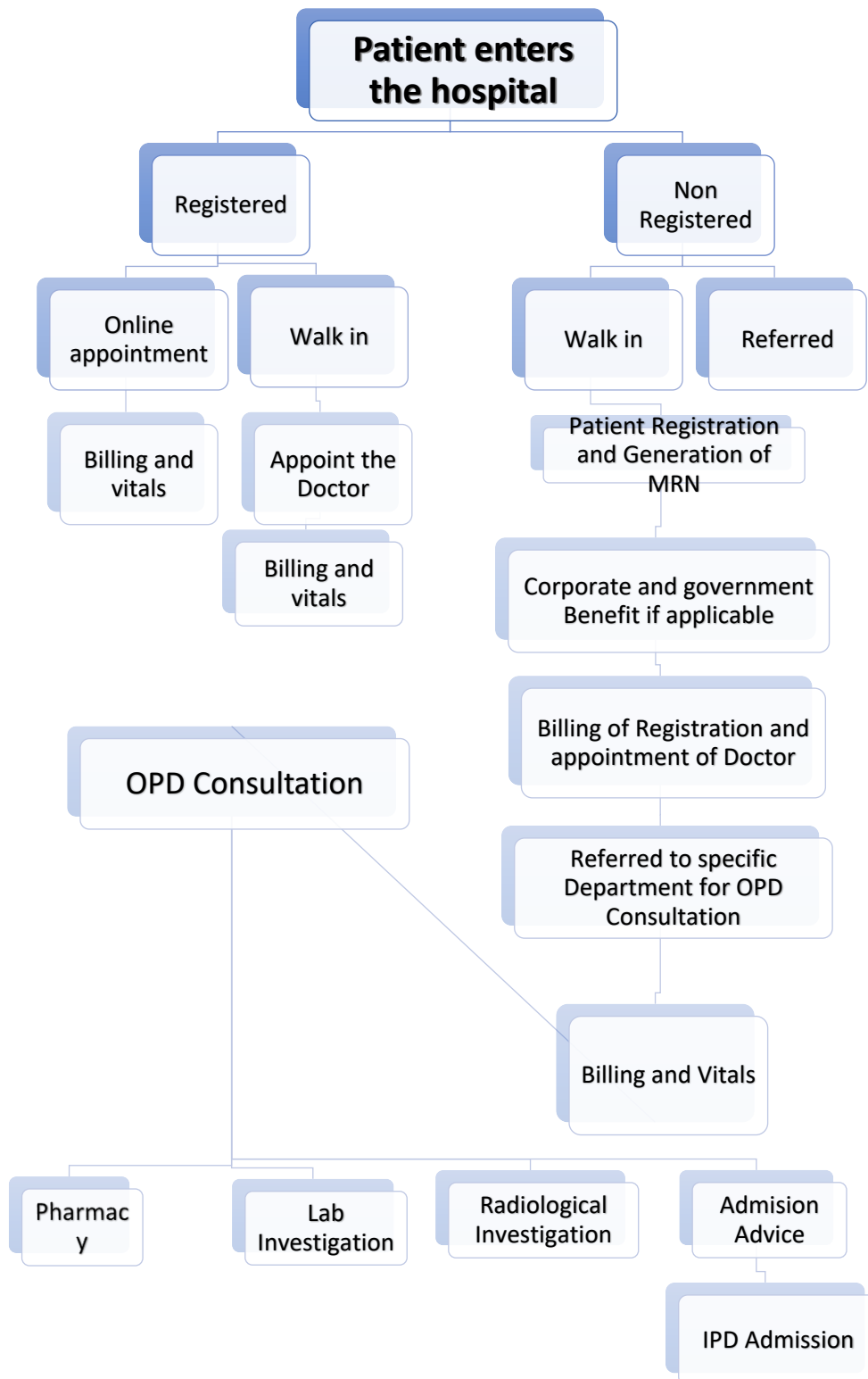
Section -2:

Mode of Collection of Data

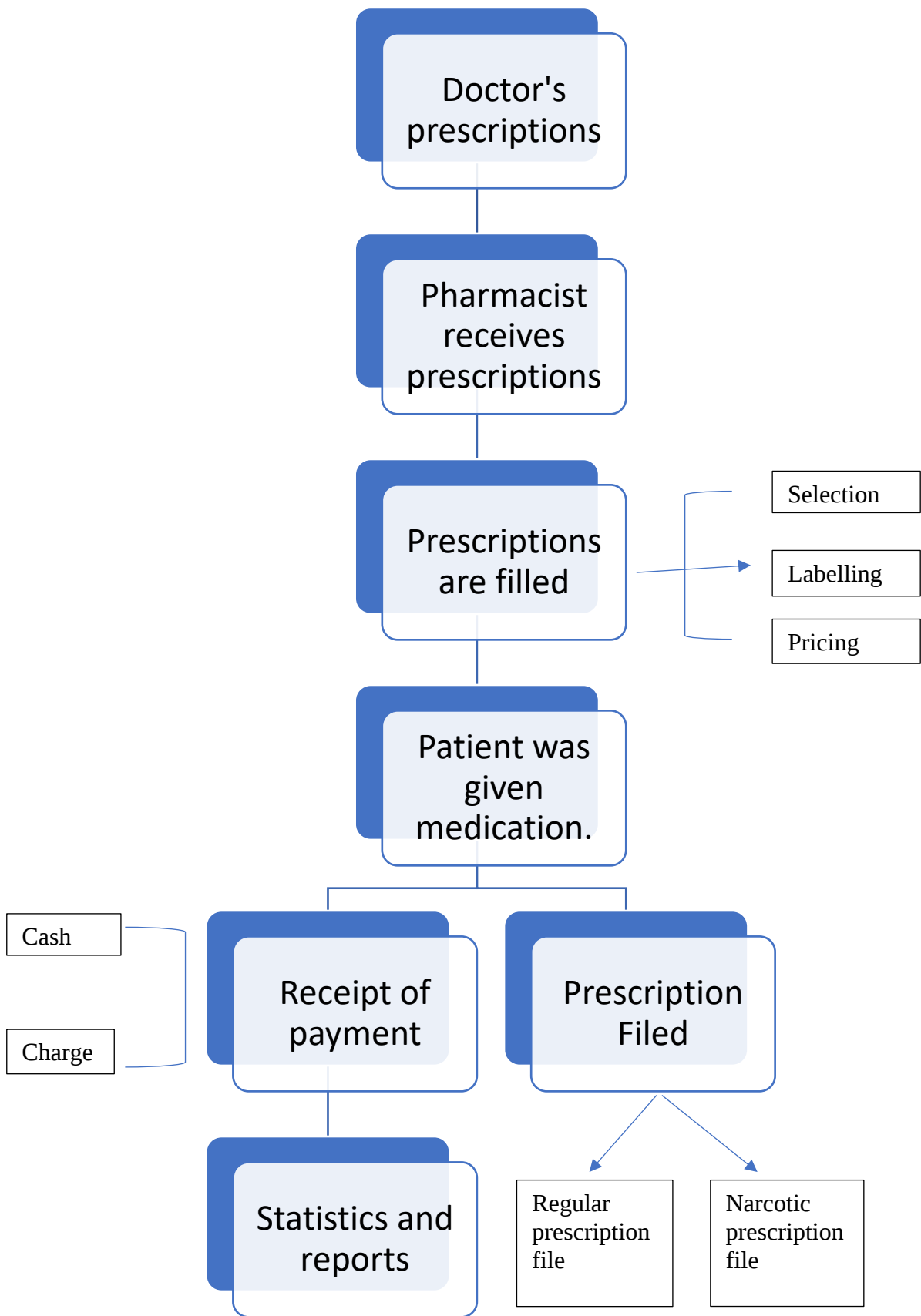
Providing essential information on the current information system used in the hospital is integral to implementing quality improvement at facility level. A doctor's and staff survey is crucial to implementing such a program. This will enable service providers to improve process and service delivery. Besides analysis feedback given by doctors and staff, root cause analysis will identify the causes of low satisfaction, and an action plan will be prepared. Healthcare workers and doctors have busy schedules, so gathering data from them is difficult. To improve the situation, it may be helpful to express the rationale for collecting and using data as well as train employees, leadership, and the general public to appreciate the need to use valid collection methods.

Section -3:

Process Flow Of Registration

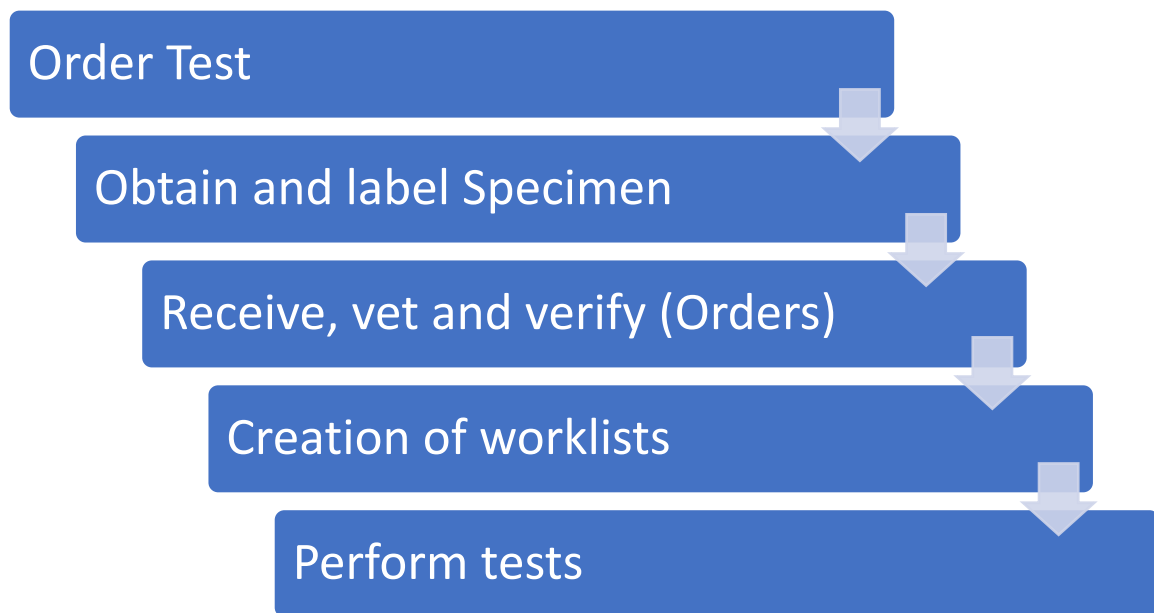


Outpatient Process Flow for Pharmacy

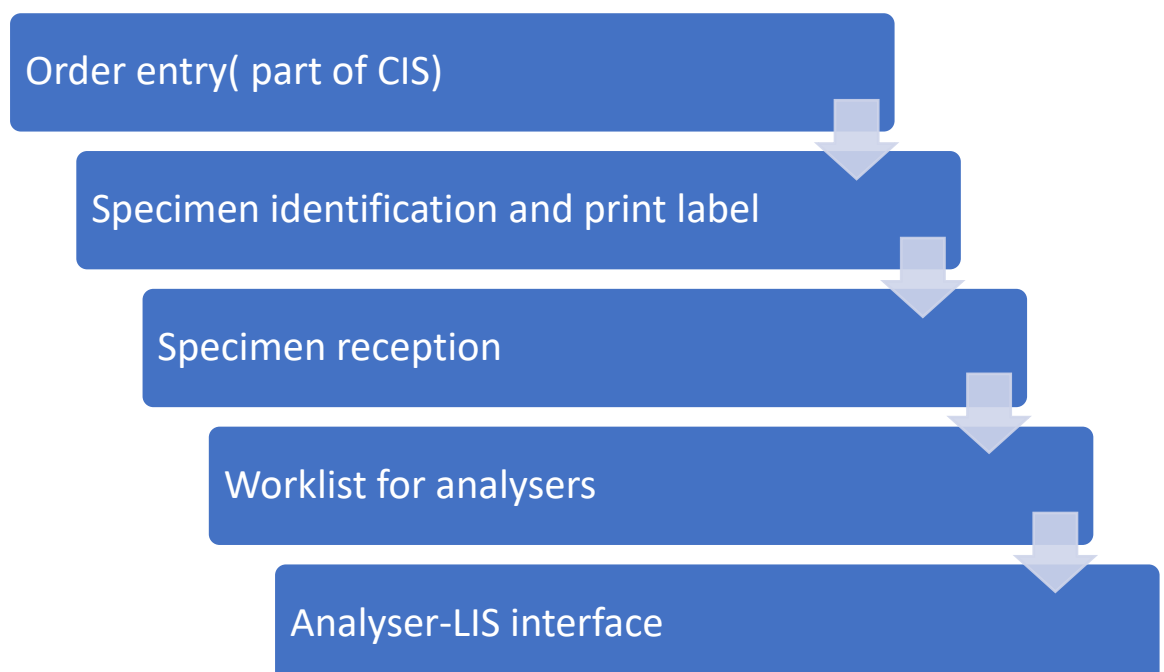


Process Flow of Lab Investigation

Automated Biochemistry, Haematology immunology and Bacteriology tests



Application for automated tests



Section -4:

Conclusive Learning

An internship in healthcare allows me to apply theory in an actual living environment and to socialize into the profession while developing essential skills. Healthcare programs frequently provide theoretical knowledge, attitudes, and skills necessary and prepared for the internship experience. It allows me to gain clinical experience outside of my academic environment. Even though they are related from a business perspective, my experience in these clinical environments will give me a different perspective on campuses and businesses. This internship is significant because transitioning to clinical healthcare internships involves a variety of changes that can adversely affect learning engagement.

Suggestion of Improvements

- There should be bell indicator to call the transport staff
- Reception staff should be knowledgeable in guiding the patient to the department according to their symptoms
- Reception staff should be aware of local language for better communication
- There should be Roadmap of the Hospital at the reception area so that patient can locate the particular area
- Free follow-up post Consultation can be extended from 5 days to 7 days to give increased benefit to patients

Project Report

Project topic

Hospital Information System Integration in OPD Services

Section - 1:

Introduction

HIS is a comprehensive, integrated information system designed to manage all the aspects of a hospital's operation, such as medical, administrative, financial, and legal issues and the corresponding processing of services. Hospital information system is also known as **hospital management software (HMS)** or **hospital management system**.

This are used for delivering various types of services. They are used to plan, coordinate, manage, and perform processes as well as to record information. It is a set of systems used to provide complete systems for healthcare, such as those used to detect illnesses, prevent illness, and promote wellness at any location. The purpose of the HIS, is concerned with the treatment of those who are ill (patients). A free-standing general or speciality outpatient clinic can also use this method.

HOSPITAL INFORMATION SYSTEM (HIS)

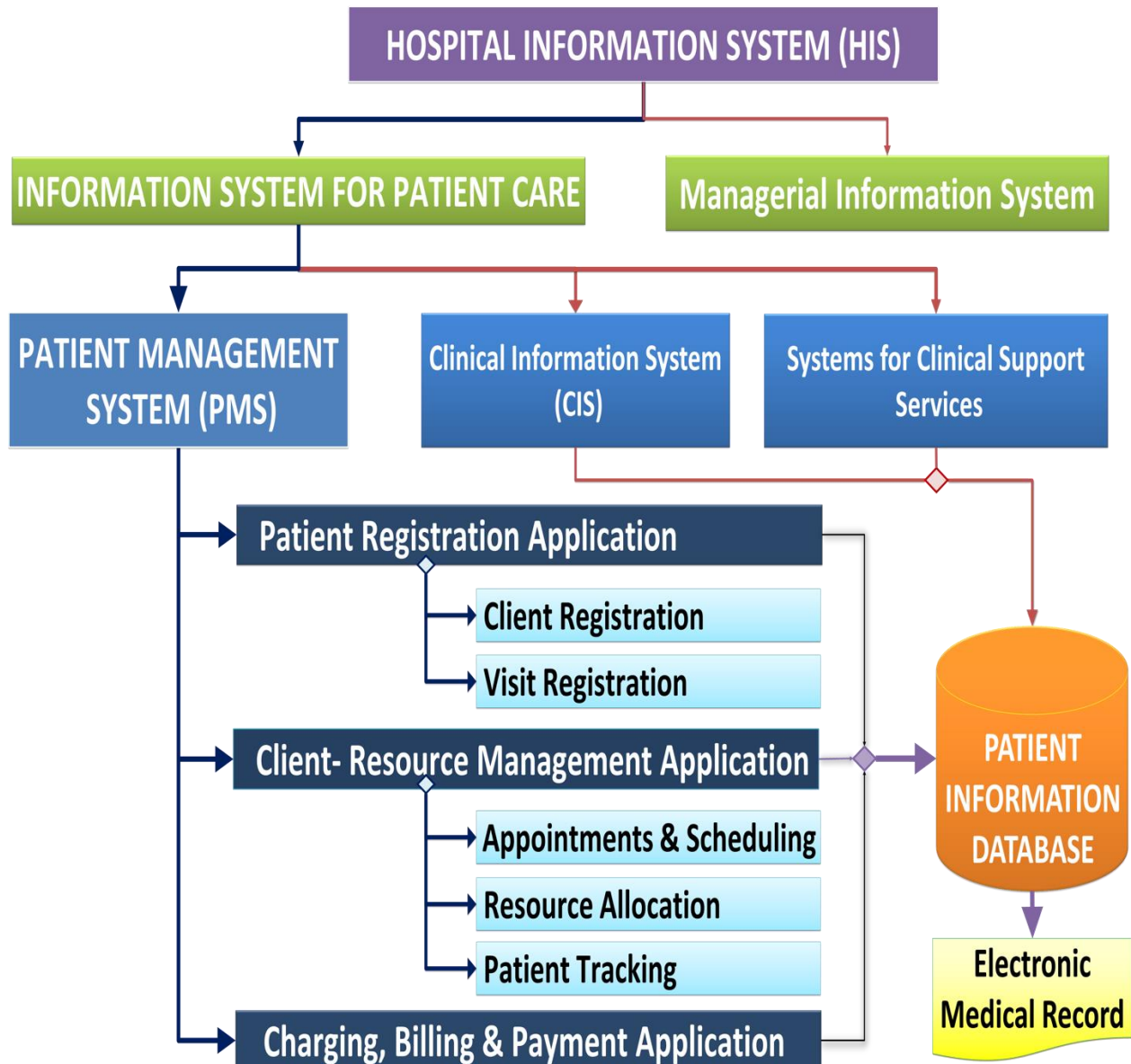
Following factors are taken into consideration in Hospitals by HIS:

- A health-care facility's responsibilities
- Information technology's capabilities

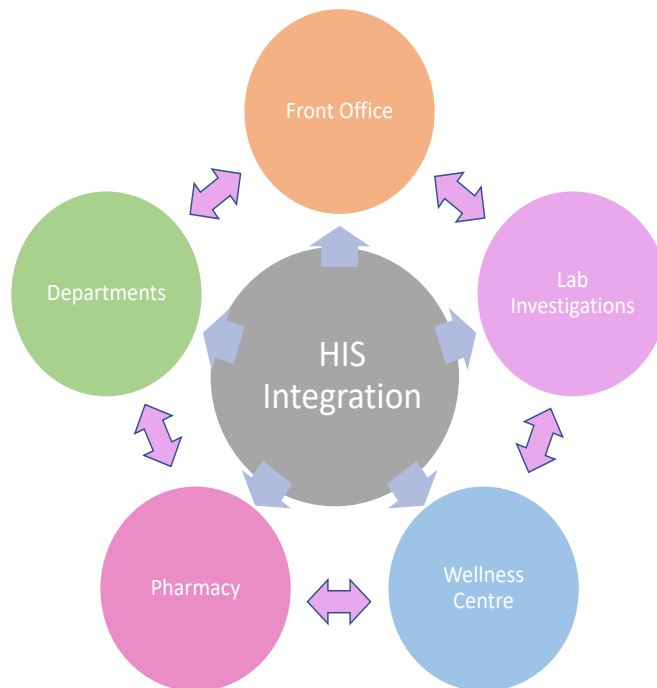
In a hospital, the information management system is an integral aspect of the organizational structure and operation of the institution. By integrating all of these components, it is able to collect, store, and share information. The Hospital Information System (HIS) provides a variety of purposes in terms of scope, content, and organisation. It consists of a collection of sub-systems and applications (commonly referred to as modules) that make the best use of information-communications technology and computerization to make hospital services more efficient.

The Patient Management System (PMS) has these components:

1. Patient Registration Application
2. Client-Resource Management
3. Charging, Billing and Receipt of Payment System



Hospital Information System Integration in OPD Services



Rationale

Information from the Hospital Information System (HIS) is to be collected, stored, processed, and retrieved by a network of computers for all hospital activities, meeting the functional requirements. Additionally, it supports the development of health care policies in an efficient and cost-effective manner by the hospital authorities.

Role-based access control, data accuracy, revenue management, appointment scheduling, overall cost savings, and data security just are a few of the many benefits of implementing an HIS.

Without a timely and efficient management information system, a hospital can be compared to an "old, broken, paper machine that suffers drastic losses, which cannot be reviewed or observed".

This analysis is valuable to Client in the decision-making process so that they can make more informed recommendations to improve the quality of their organisation, assuring better patient care and profitability, reducing data loss risks, and enhancing data accuracy.

Research Question

What are the current issues faced in the effective working of Hospital Information system in Out Patient Department?

Objective

- Integrated management allows for better decisions- making
- To improve patient information accessibility to health care professionals during treatment.
- Improvements to the medical records handling process
- An improved registration process with a shorter turnaround time

Section - 2:

Research Design

Survey Type:

Personal Interview (along with Questionnaire)

Research Type:

Descriptive, Cross sectional Analytic Study

Sample Size

Survey was done into 2 groups

50 Doctors with 18 Questionnaire

30 Billing Staff with 15 Questionnaire

Sampling Technique

Simple Random Sampling

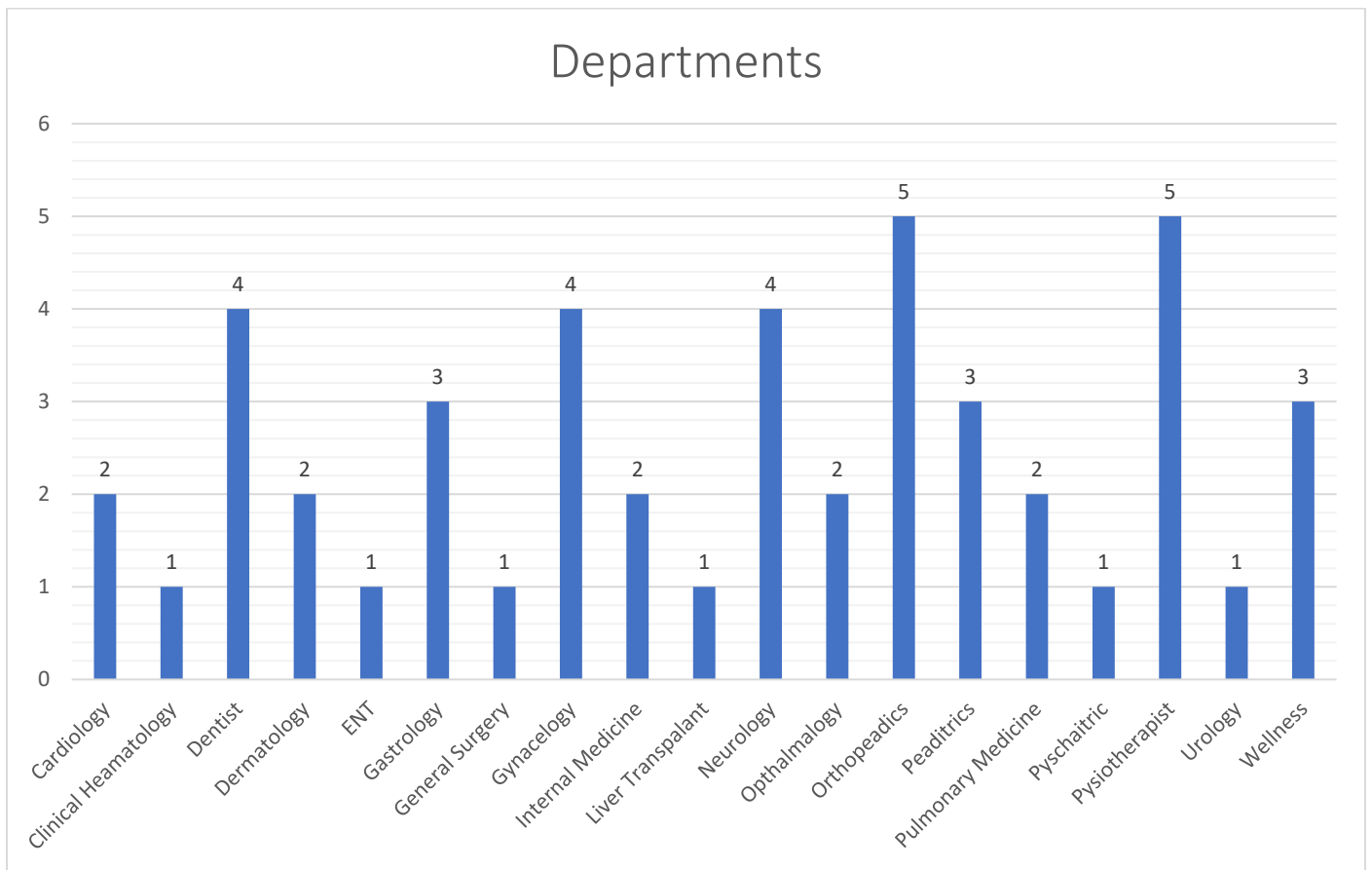
Data Type

Primary Data

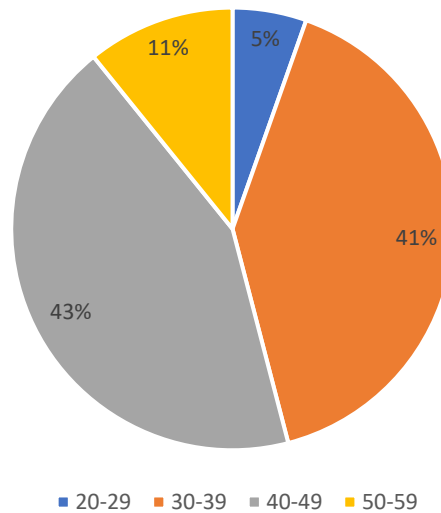
Hard copy of Questionnaire collected personally from Staff and Doctors

Section - 3:

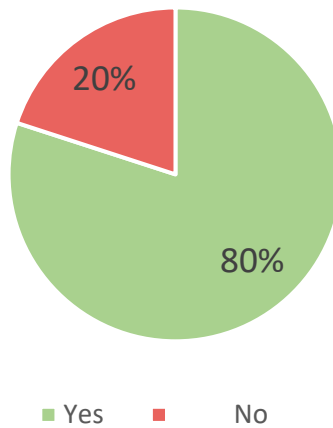
Doctors' Survey Data Analysis



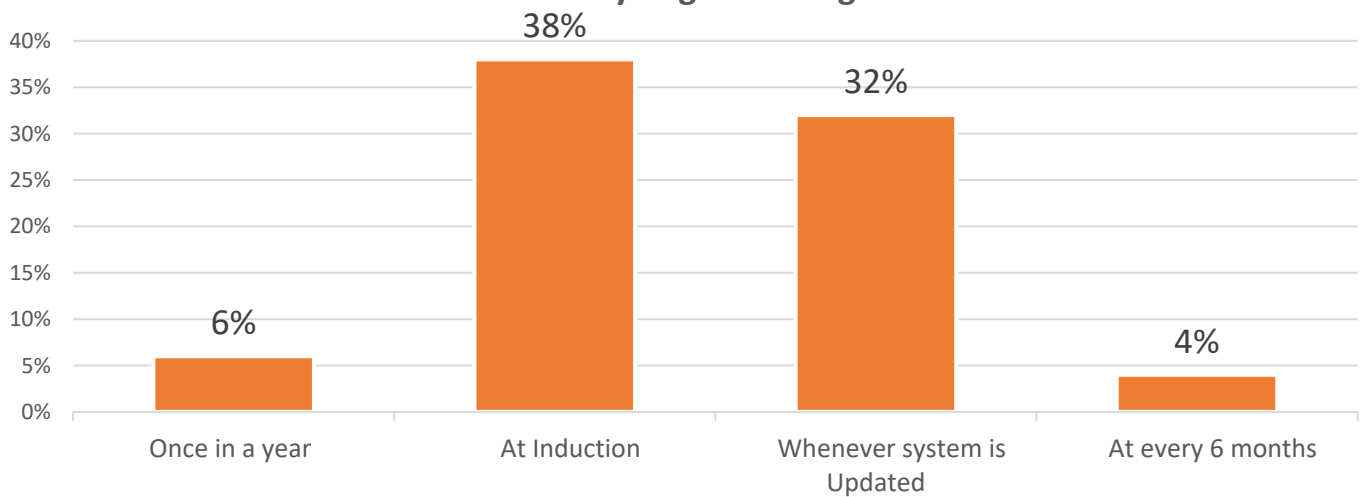
Doctor's Age Distribution



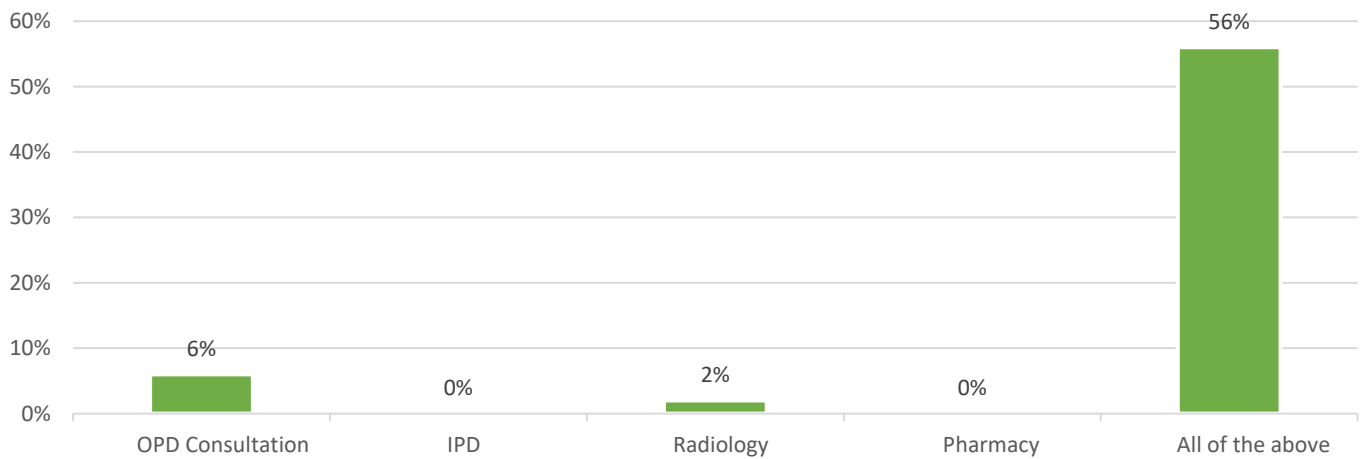
Have you got official training from Hospital in HIS?



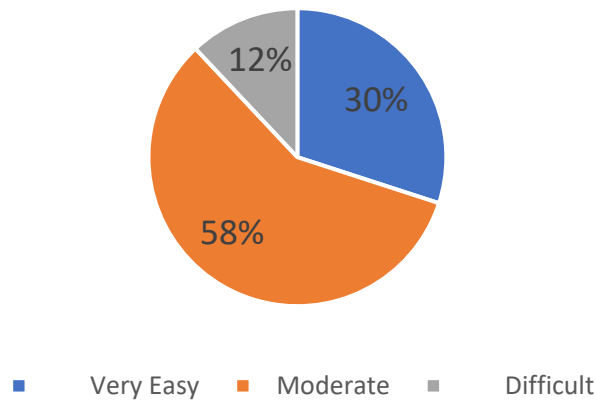
How often do you get training for HIS?



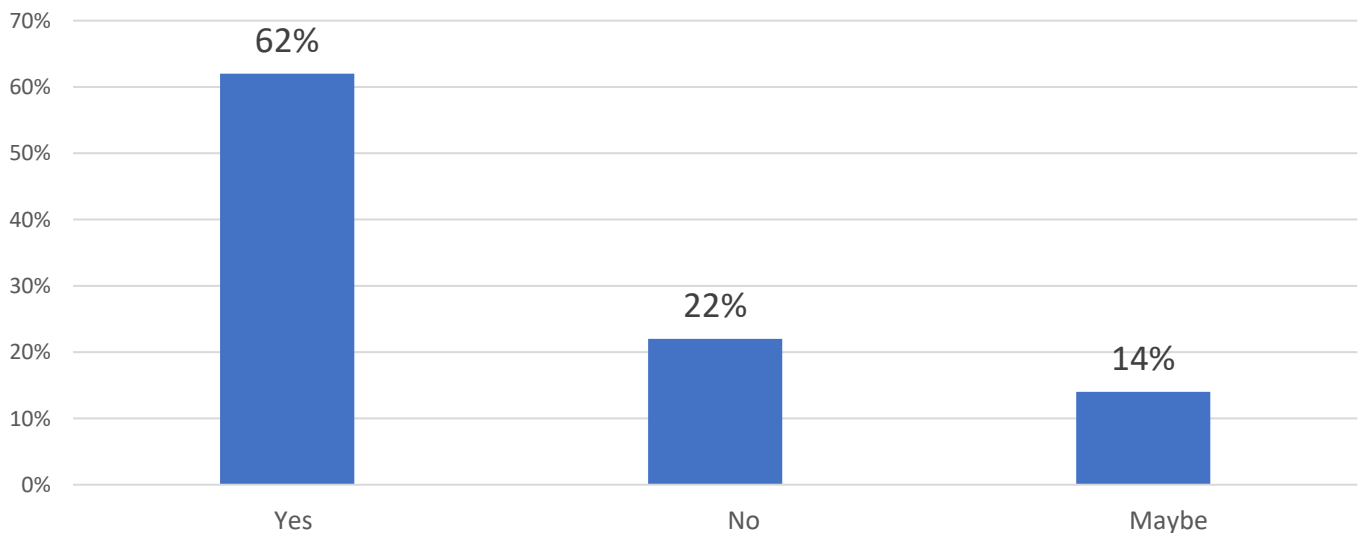
For what Purpose do you use the HIS in Patient care?



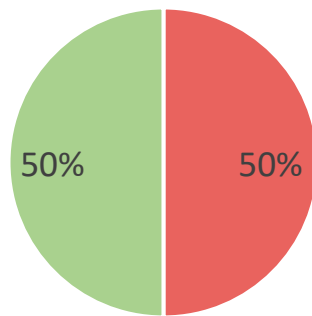
How easy is it to retrieve and track the past medical history?



Does the HIS helps to interpret the laboratory test data and generates diagnostic comments?

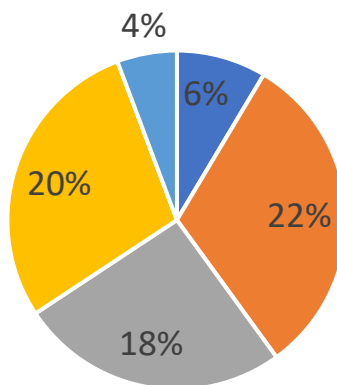


Have you carried out teleconsultation/Video Conferencing through HIS?



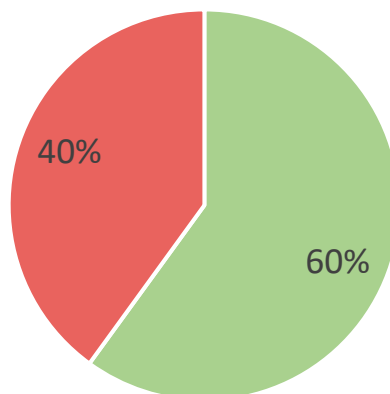
■ Yes ■ No

If yes then how satisfied are you with the ?



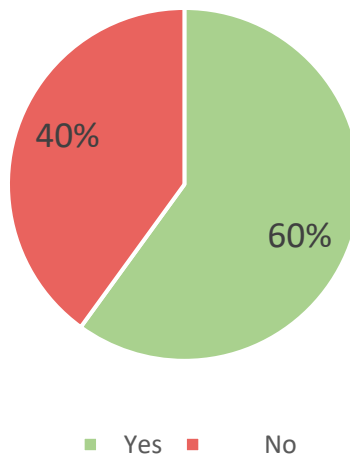
■ Poor ■ Average ■ Good ■ Very Good ■ Excellent

Are you aware of the Hospital online portal?

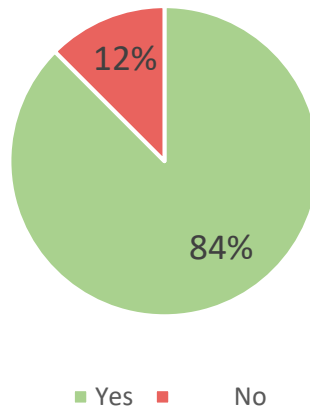


■ Yes ■ No

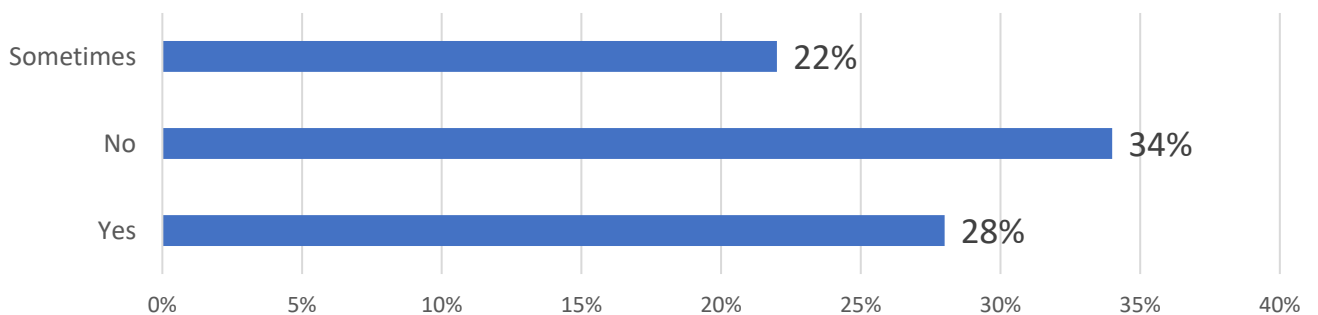
Is the HIS accessible from a smart phone?



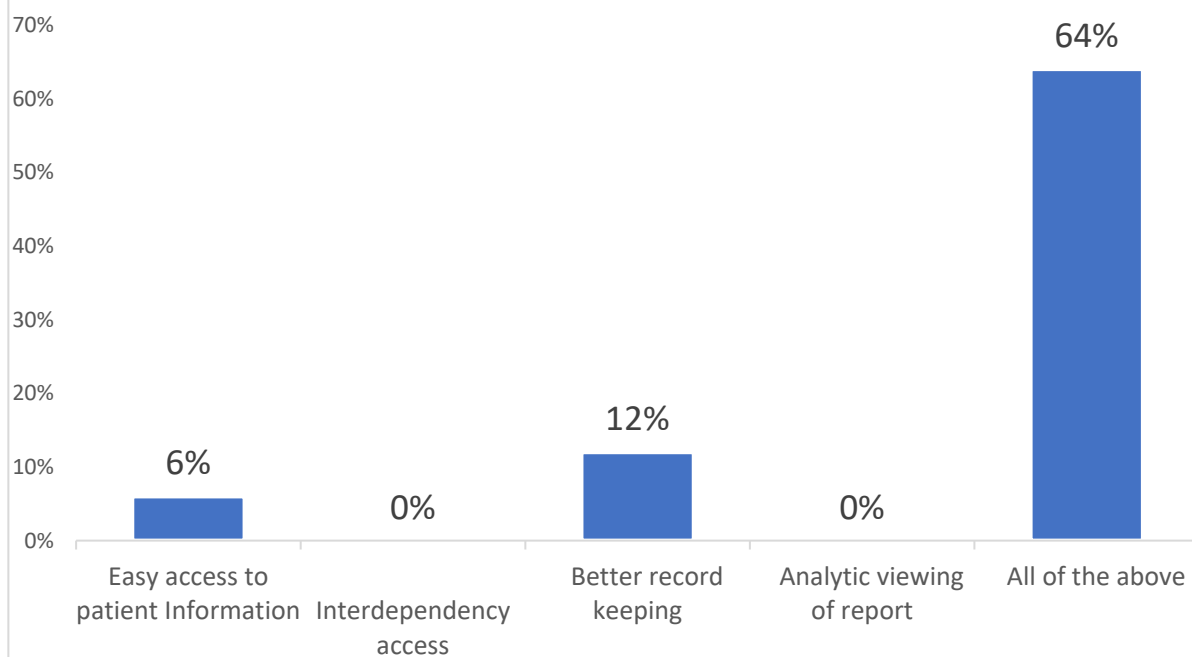
Do you think Auto type (Speech to text feature) will be helpful?



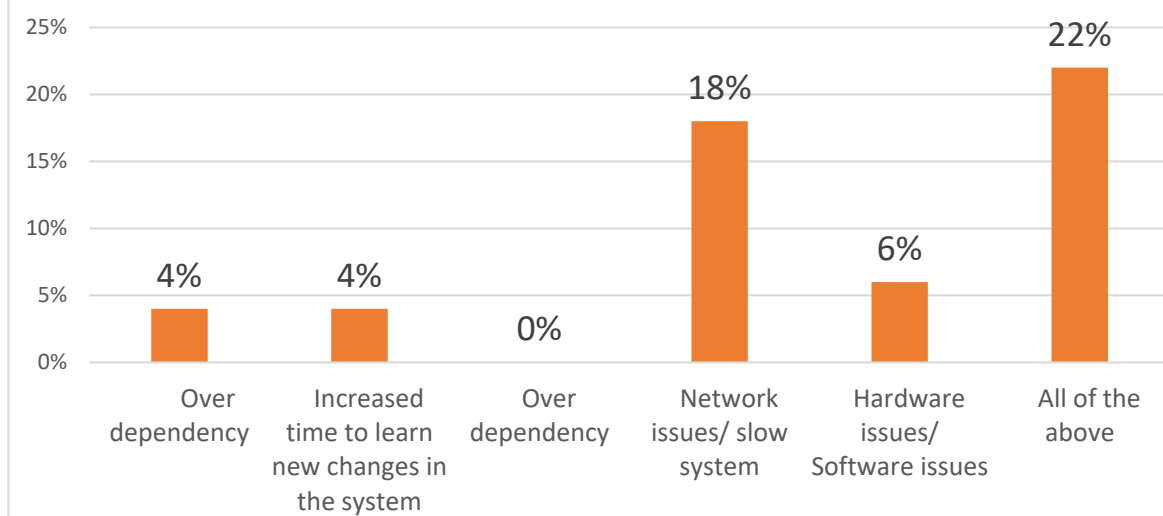
If yes, do you inform the patient about online patient portal to access reports and prescriptions?



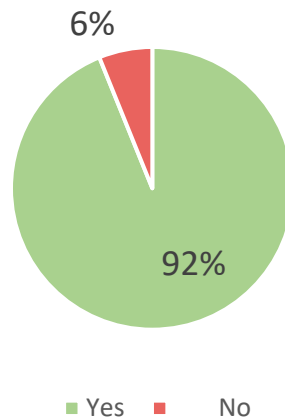
In your opinion, what are the pros of the HIS?



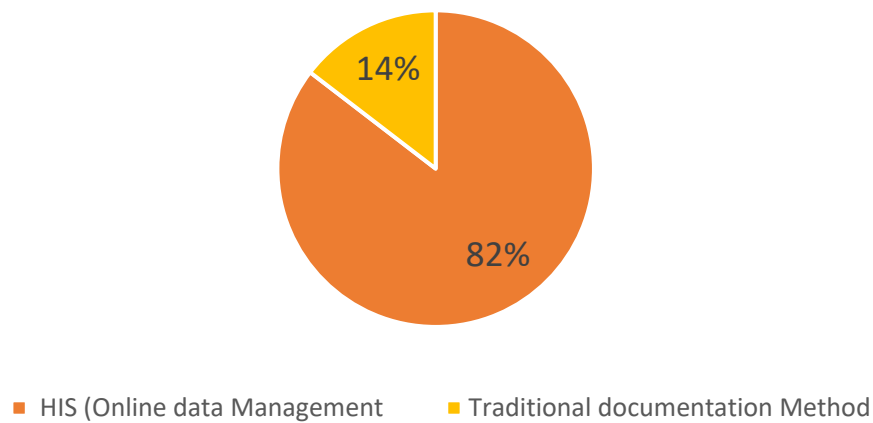
In your opinion, what are the Cons of the HIS?



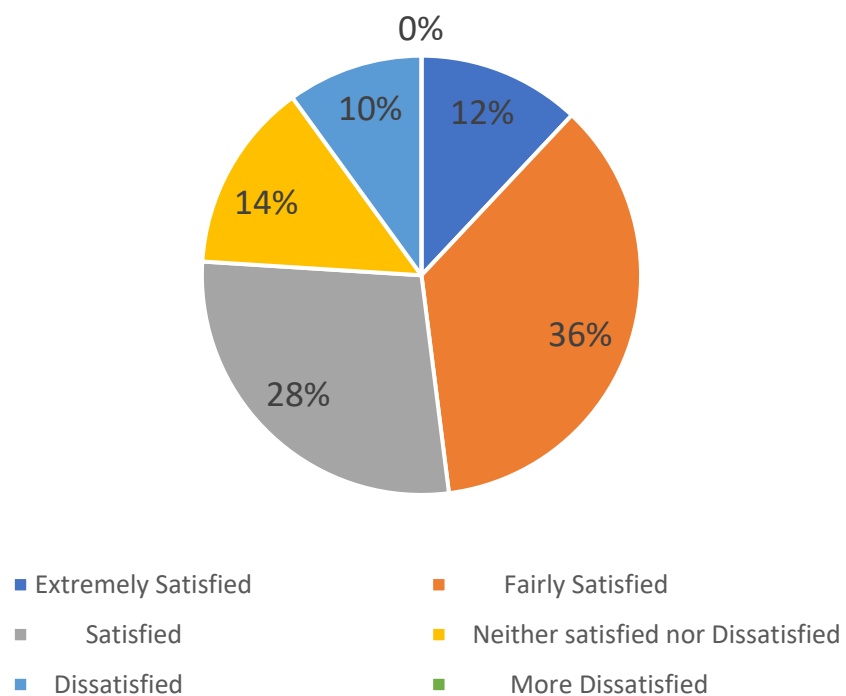
Do you feel HIS is useful in improving health care services ?



In your experience which system is better for patient care?



Overall how satisfied are you with the hospital information services as concerned with patient care?

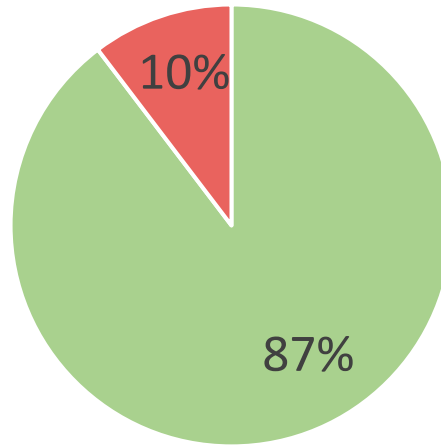


Doctor's Survey Interpretations

- 50% of the Doctors have used teleconsultation / Video Conferencing in HIS. 42% of these are satisfied whereas 28% were dissatisfied.
- Only 12% Doctors find it difficult to retrieve and track medical history in HIS
- Doctor find HIS useful in record keeping and ease of access to patient information. Hence 82% Doctors feel HIS is better for patient care than traditional documentation method.
- 76% of doctors are satisfied with HIS and 14% have neutral view. 10% Doctors are dissatisfied which can be attributed to issues related to Network, Hardware and Software.

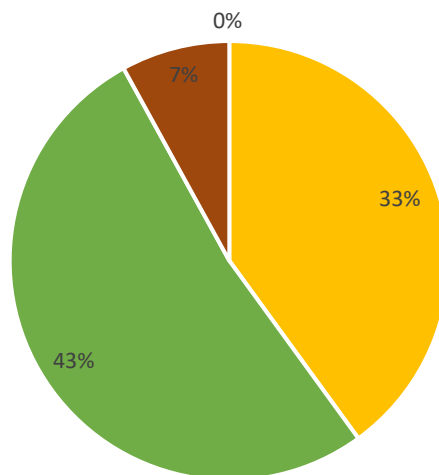
Staff Survey Data Analysis

Have you received training for HIS?



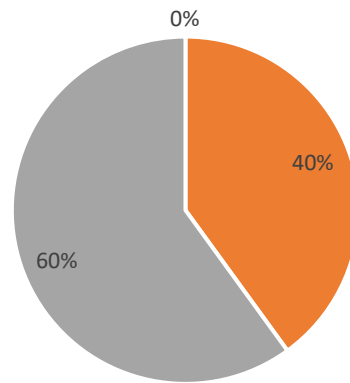
■ Yes ■ No

If yes, how often do you get training regarding RHIS ?



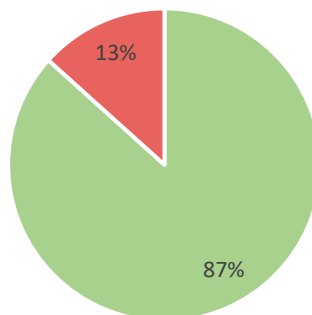
■ Once in a year ■ At Induction ■ Whenever system is updated ■ At every 6 months

How difficult did you feel to learn HIS?



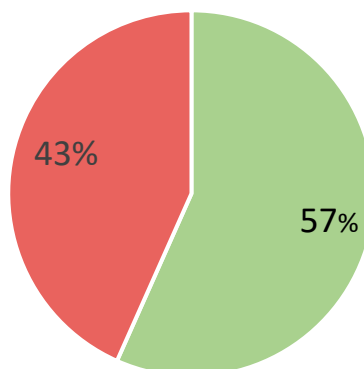
■ Very difficult ■ Moderate ■ Easy

Do you appreciate if training video are displayed in the HIS?



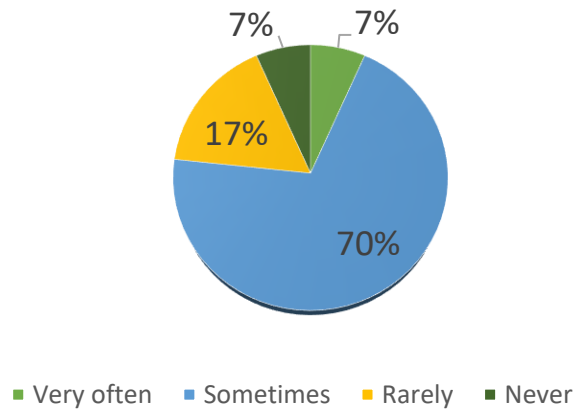
■ Yes ■ No

Are you satisfied with the speed of HIS?

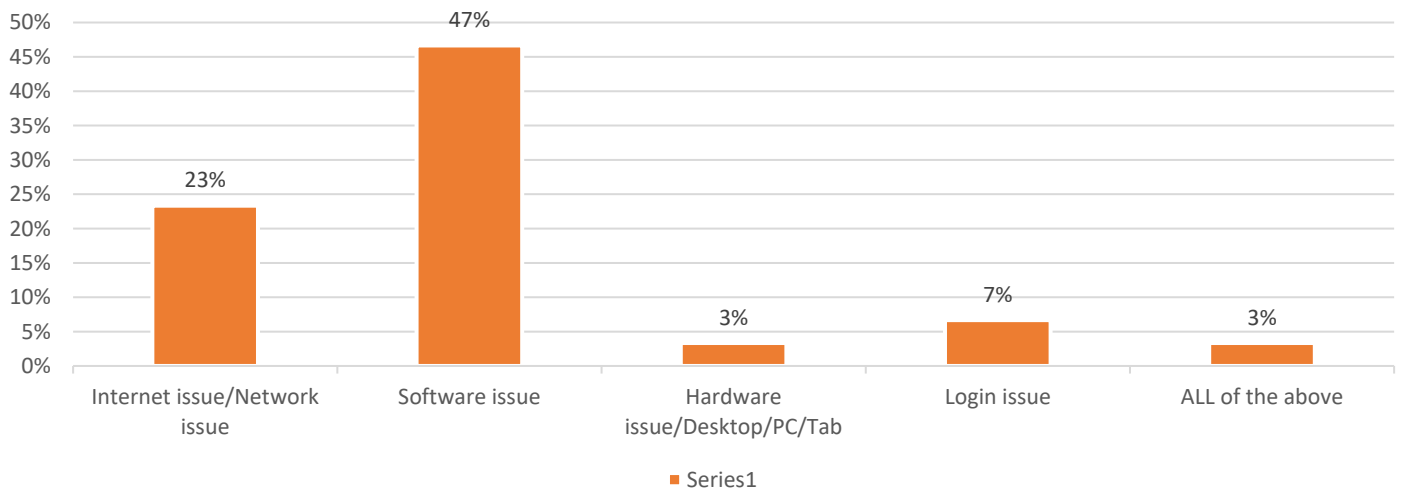


■ Yes ■ No

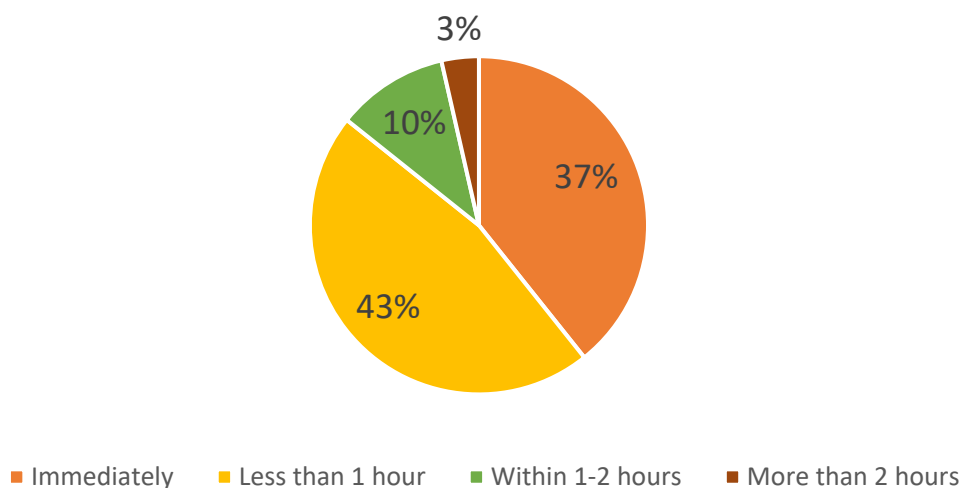
How often do you face problems with HIS?



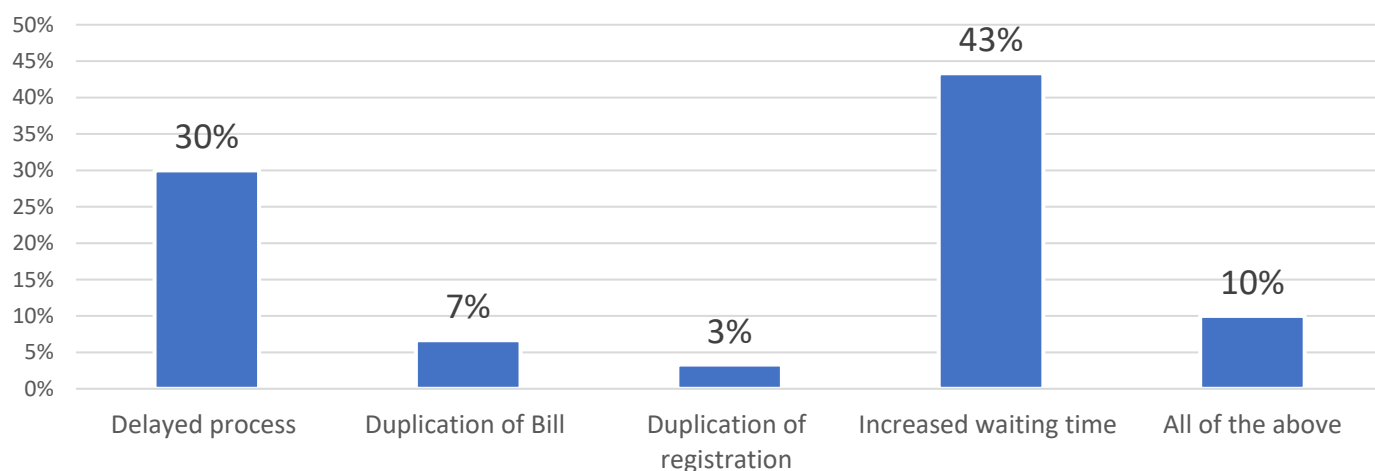
If faced issues what are they mainly related to?



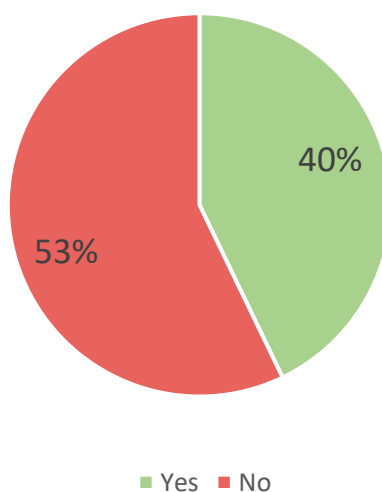
How long does it take to resolve the issue?



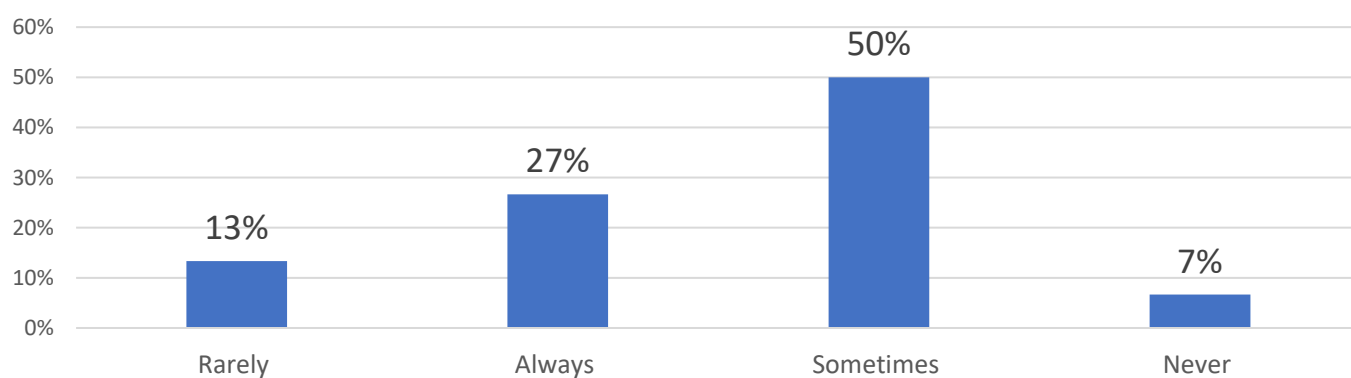
What errors may occur during network downtime that can create problems?



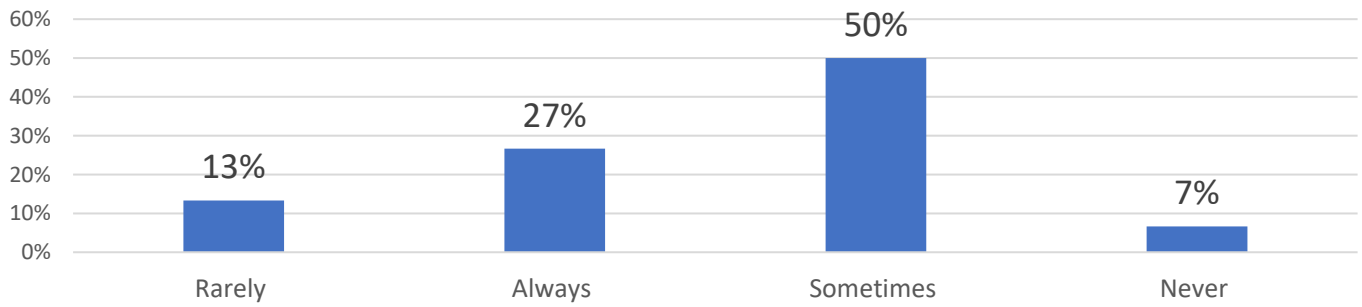
Does the interdependency of departments cause issues in HIS work?



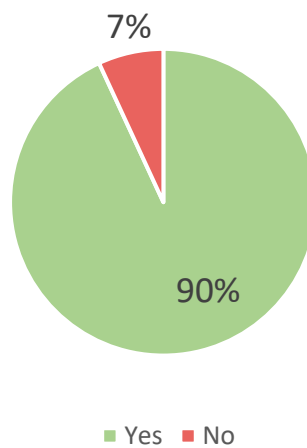
How often are you updated on the changes in HIS?



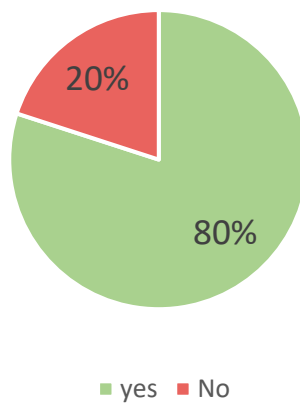
How often are you updated on the changes in HIS?



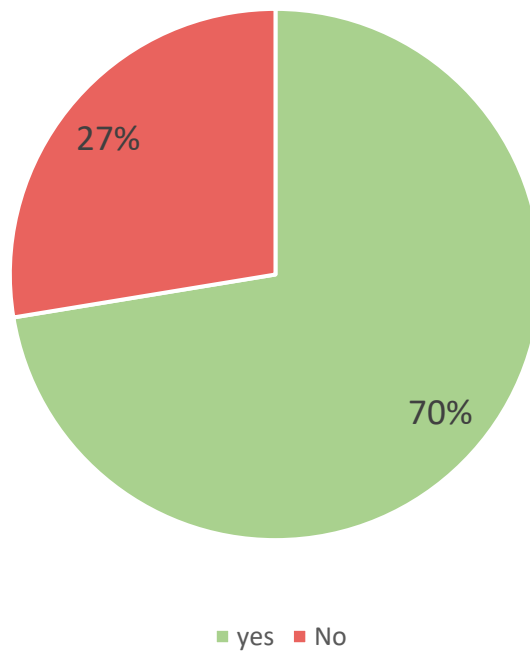
Do you think HIS offers the best solution for coordination between different lines of work and different units in the Hospital?



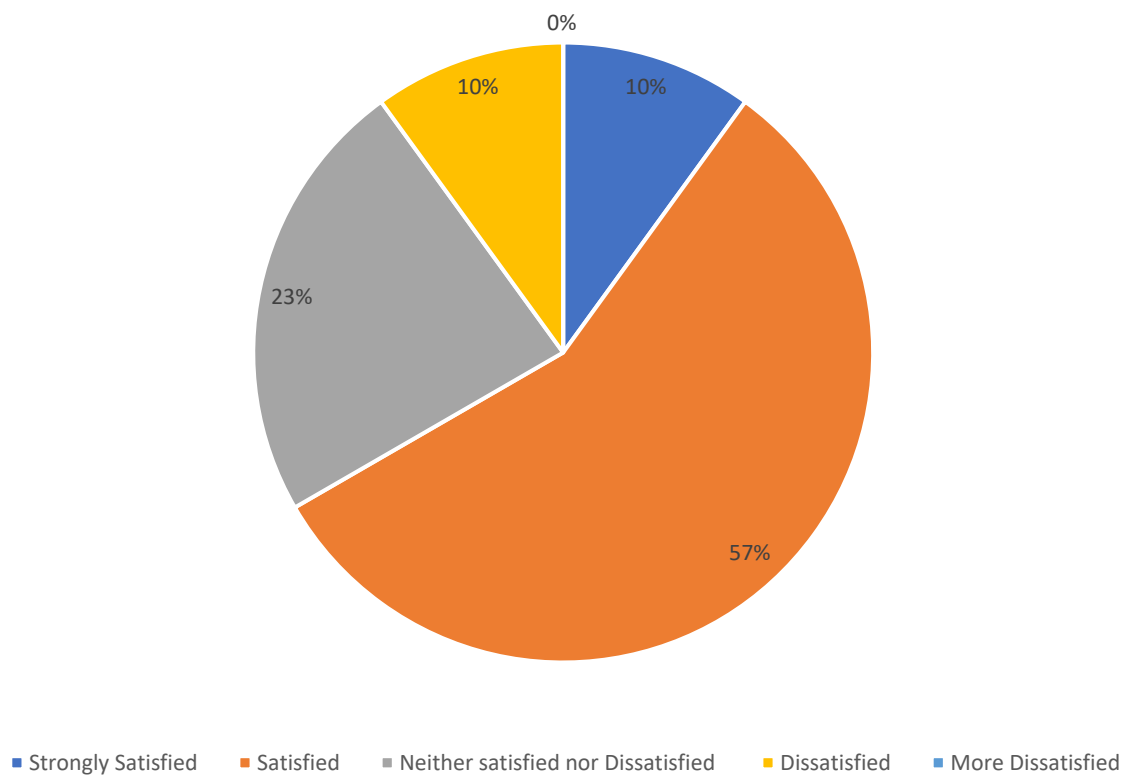
Does your Manager consider staff suggestions for improving the effectivity working of HIS?



In your opinion does the present information system need modification or improvement?



How satisfied are you with the current information system?



Staff's Survey Interpretation

- 70% staff feels HIS requires improvements
- 7% Staff frequently faces issues whereas 70% of Staff encounters issues sometimes
- 47% of the issues are software related and Internet/Network contributes to 23% of the issues
- Good part is that 37% issues are resolved immediately and 43% are resolved within an hour
- Quick issue resolutions coupled with 87% for staff training coverage keeps satisfaction levels for HIS at 67%

Section - 4:

Recommendations for HIS

- Vital box should be reconstructed to optimize space used on paper
- Instead of search & add option, there should be typing option in medication
- Progress Notes section should have direct links to relevant sections like Lab Investigations
- Lab Investigation should be a prominent tab for easy access
- Free Consultation days can be printed on paper for patient information

Conclusions

Hospital information system is integrated system, it offers the best solution for coordination between different lines of work and different units in the Hospital.

HIS has some advantages like easy to access for patient information, Interdependency access, better record keeping and analytic view of report. In spite of this benefits, information system is not readily accepted in Hospitals. Some of the Doctor prefers traditional documentation method for patient care rather than HIS (online data Management). Hospital information system has some disadvantages like overdependency, increased time to learn new changes in the system, network issues/slow system, Hardware issues/software issues.

Organization may need to redesign the system according to users needs. It should be user friendly and easy to use. This can be achieved by proper training, training the users whenever system is updated and education about the system. Organization can additionally remodel better hardware and maintain more reliable network for effective working of HIS.

If full user participation of HIS is achieved then it will increase quality level and reduce burden on administration and ultimately improves patient care. In future with technology advancement, Healthcare sector will grow tremendously.

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<https://drdollah.files.wordpress.com/2014/07/pms3.png>

<https://www.adityabirlahospital.com/#>

Annexure I

Hospital Information System Integration in OPD Services

STAFF

1. Have you received training for HIS?

- ☐ Yes
☐ No

2.If yes, how often do you get training regarding RHIS ?

- ☐ Once in a year
☐ At Induction
☐ Whenever system is Updated
☐ At every 6 months

3.How difficult did you feel to learn HIS?

- ☐ Very Difficult
☐ Moderate
☐ Easy

4.Do you appreciate if training video are displayed in the HIS?

- ☐ Yes
☐ No

5.Are you satisfied with the speed of HIS?

- ☐ Yes
☐ No

6.How often do you face problems with HIS?

- ☐ Very Often
☐ Sometimes
☐ Rarely
☐ Never

7.If faced issues what are they mainly related to

- ☐ Internet issues/Network issues
☐ Software issues
☐ Hardware issues/Desktop/PC/Tab
☐ Login issues

8.How long does it take to resolve the issue?

- ☐ Immediately
☐ Less than 1 hour
☐ Within 1-2 hours
☐ More than 2 hours

9.What errors may occur during network downtime that can create problems?

- ☐ Delayed process
- ☐ Duplication of Bill
- ☐ Duplication of registration
- ☐ Increased waiting time

10. Does the interdependency of departments cause issues in HIS work?

- ☐ Yes
- ☐ No

11.How often are you updated on the changes in HIS?

- ☐ Rarely
- ☐ Always
- ☐ Sometimes
- ☐ Never

12.Do you think HIS offers the best solution for coordination between different lines of work and different units in the Hospital?

- ☐ Yes
- ☐ No

13. Does your Manager consider staff suggestions for improving the effectivity working of HIS?

- ☐ Yes
- ☐ No

14. In your opinion does the present information system need modification or improvement?

- ☐ Yes
- ☐ No

15.How satisfied are you with the current information system

- ☐ Strongly Satisfied
- ☐ Satisfied
- ☐ Neither satisfied nor Dissatisfied
- ☐ Dissatisfied
- ☐ More Dissatisfied

Annexure II

Hospital Information System Integration in OPD Services

DOCTORS

1.Department..... 2.Age.....

3. Have you got official training from Hospital in HIS

Yes

No

4.How often do you get training for HIS

Once in a year

At Induction

Whenever system is Updated

At every 6 months

5. For what Purpose do you use the HIS in Patient care

OPD Consultation

IPD

Radiology

Pharmacy

All of the above

6. How easy is it to retrieved and track the past medical history of patient from HIS

Very Easy

Moderate

Difficult

7.Does the RHIS helps to interpret the laboratory test data and generates diagnostic comments?

Yes

No

Maybe

8. Have you carried out teleconsultation/Video Conferencing through RHIS

Yes

No

9. If yes then how satisfied are you with the process

Poor

Average

Good

Very Good

Excellent

10.Is the HIS is accessible from a smart phone

Yes

No

11. Are you aware of the Hospital online portal?

Yes

No

12. If yes do you inform the patient about online patient portal to access reports and prescriptions

Yes

No

Sometimes

13. Do you think auto type (Speech to text feature) will be helpful

Yes

No

14. In your opinion what are the pros of the HIS

Easy access to patient Information

Interdependency access

Better record keeping

Analytic viewing of report

All of the above

15. In your opinion what are the Cons of the HIS

Over dependency

Increased time to learn new changes in the system

Over dependency

Network issues/ slow system

Hardware issues/ Software issues

All of the above

16. Do you feel RHIS is useful in improving health care services ?

Yes

No

17. In your experience which system is better for patient care

HIS (Online data Management

Traditional documentation Method

18. Overall how satisfied are you with the hospital information services as concerned with patient care

Extremely Satisfied

Fairly Satisfied

Satisfied

Neither satisfied nor Dissatisfied

Dissatisfied

More Dissatisfied