A Descriptive Study on Existing System in Medical Records Department and its Gap Analysis in Multispecilaity Hospital

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Abstract:

The study goals are to assess the efficiency of the current medical record system and the current system for keeping medical records and to stipulate the advantages and downsides of completely linking computerized health databases with patient anamnesis. The study analyse the existing system of documentation of the medical record department, to identify bottlenecks in the existing system of medical records, and to provide recommendations to overcome the bottlenecks and implement the required changes in the required medical records department. And to discover user responses to computerized health databases, whether users are satisfied or not with computerized health databases, and what is users' perceptions of computerized health databases through a data collection process that includes direct observation and questionnaires for MRD staff, doctors, and nurses. Therefore, the medical records department has become an important department in every hospital, providing a variety of services not only to patients but also to the hospital& efficient operation, as well as playing a key role in health promotion and patient care quality.

INTRODUCTION

MGM hospital and Research Centre, a Multi-speciality Hospital at CBD Belapur was established on 1st Oct 1986. The hospital is NABH Accredited. It is 100 bedded hospitals having adequate no. of Resident doctors, 160 Paramedical and other staff, over 70 Specialists & Super Specialists on the panel who take care of patient on 24 * 7 bases.

MEDICAL RECORDS DEPARTMENT

The Medical Records Department (MRD) is an important element of a hospital facility that primarily holds records of patients who have been treated in the hospital's Outpatient Department (OPD), Inpatient Patient Department (IPD), or Emergency Unit.

Necessary to have a Medical record department

Patients require a medical records department to obtain any past medical records in the event of damage or loss, or for future treatment/opinion, and medical practitioners require a medical records department to study various diseases and their recovery.

Primary responsibilities of the Medical records department

A medical records department is the repository for all information pertaining to a patient who has been discharged from the hospital following treatment. A medical records department's primary responsibility

is to store the medical records or treatment files of patients who are treated in the inpatient or emergency departments. The records from the outpatient department can be kept in the medical records department or kept independently. The medical records section also sends government data on the number of births and deaths in the hospital for census registration.

Location of department -Medical Records Department is situated in basement level, opposite of stores department

Working Hours for a medical records department: -A medical records department's operational hours can differ from one institution to the next. The medical record department of present study location working hours are from 9 a.m. to 5 p.m.

In charge of the medical records department: -The hospital's medical services team is normally in charge of the medical records department. A medical records officer, a medical records technician, and an assistant run the medical records department in particular. The medical records department's staffing is determined by the hospital's bed capacity. In a 100-bed hospital, at least one medical records officer, one medical records technician, and one assistant are required. The medical records department's whole team should be computer savvy when it comes to filing and accessing documents.

Medical records department Procedure

The data from medical records is stored on shelves or cabinets in a medical record department after scanning each document and giving unique no. or MRD NO. to each file

The same information is also preserved in the hospital software application as a soft copy. The medical records department receives a patient's file once he or she is discharged from the hospital. The file is then alphabetically or numerically indexed (based on the patient's registration code or department) and coded according to the International classification of diseases to designate the detected ailment as a specific code for future reference and statistical analysis.

Security of Medical records in MRD

Medical records department is built in such a way that any potential damage is minimised. In the medical records department, smoking is strictly prohibited, and smoke/fire detectors and water sprinklers have been installed and are frequently monitored. Pest control is performed on a regular basis to prevent damage to the records, and access to the medical records department is restricted to prevent theft or loss of any medical records.

Retrieving Policy of MRD

A written request outlining the necessity for an old medical record must be sent to the medical records department. The request must be sent to the hospital director, once authorization has been obtained, the file can be retrieved by contacting the medical records department.

Medical records are kept for as long as they are needed.

In this study location retention period is followed as policy set by hospital such as: -

OPD Patients -5 years

Private Patient – 5years

Company Patient (Insurance)- 10 Years

MLC Cases – Stored for Lifetime

Death and Birth Register –Stored for Lifetime

Other Register -5 years

The policy of destroying medical records is determined by the standard medical record keeping requirements set forth by the state or country, as well as the hospital's own policies.

PHYSICAL FACILITIES: -

- Computer
- Scanning machine
- Printer
- Intercom

The Medical Record Department (MRD) has evolved into a vital department in every hospital, providing a variety of services not only to patients but also to the effective operation of the hospital, as well as playing an important role in health promotion and patient care quality.

The patient's identification details, health history, and medical examination findings are all contained in the medical record. A summary of the patient's current and former medications, as well as any medical allergies, is included in the Medical Record. It is a method of documenting a patient's medical history and care providers in a methodical manner.

It serves as a foundation for planning patient care, documenting communication between health care providers and any other professionals involved in the patient's care, and assisting in the protection of the patient's legal interests and those of the health care providers who are responsible for the patient's care. It also provides information for internal hospital auditing and quality assurance, as well as medical research. Over time, the medical records department has emerged as a crucial component of every hospital or healthcare organisation. Medical Record Officers and Medical Record Technicians have gained the right to be regarded as specialists in their own fields because medical records have developed into a specialisation in and of itself. In order for the clinical team and the hospital administration to assess the calibre of medical care and the efficiency of the hospital services, patient care necessitates a chronological record of patient care and treatment.[5]

The systematic documentation of a patient's personal and social information, medical history, clinical findings, investigations, diagnosis, prescribed treatments, follow-up information, and outcome is known as a medical record. The hospital administrator's eyes and ears are the medical records used to create hospital statistics.

Hence, the manual method of keeping records, which continues to be employed in most Indian hospitals, is predicated on the employment of papers and books. Manual record keeping has significant drawbacks, like the need for extensive storage facilities and difficulties retrieving records. The computerization of medical data has resulted in nice and tidy records that may be easily saved and retrieved within the epoch. Confidentiality could be a crucial aspect of the patient's rights. The hospital is legally obligated to stay personal medical records confidential.

The use of knowledge from computerized health databases for patient registries is gaining popularity. Patient's medical information is collected and stored employing a computerized health database, which is an electronic system used and managed by healthcare systems. Computerized health databases are utilized in clinical treatment and healthcare management to trace a spread of medical data from individual patients across time and to manage care coordination.

Patient-level information in computerized health database, include demographics, diagnoses, issue lists, prescriptions, vital signs, and laboratory data, among others. An computerised health databases has multiple core functionalities, in step with the National Academies of drugs, including health information capture, orders and results management, clinical higher cognitive process, healthcare information, electronic communication, patient monitoring, administrative processes, and health promotion reporting.

This study examines the department's current method for keeping medical records and contributes in determining users' opinions of computerized health databases that have been connected to it.

AIMS & OBJECTIVES

1. To study the existing system of Medical records department
2. To identify the bottlenecks in the existing system of Medical records department
3. To find out responses of users regarding Computerized health databases

REVIEW OF LITERATURE

In 2020, Amit Bali, Deepika Bali Nageshwar Iyer, Meenakshi Iyer. in a research paper "Management of Medical Records: Facts and Figures for Surgeons" According to this study, Medical records are the document that describes all detail about the patient's history, clinical findings, diagnostics testing results, pre and postoperative treatment, patient's progress and medicine. Medical records, if written appropriately, will assist the doctor in determining whether or not the treatment is correct. Despite the actual fact that India recognized the requirement of accurate record keeping, it's still in its early phases. Medical records are the one most essential think about determining whether or not a medico-legal case is won or lost. The assorted aspects of record management are discussed during this study.[1]

In 2005, Singh Sanju. in study title "Preservation of medical records- An essential part of health care delivery" In this study ,Diagnosis and treatment reports, clinical and Para clinical care, medico-legal reports, fertility and mortality certificates are a number of the medical records that are prepared in an exceedingly hospital for the good thing about the patient, the hospital, and also the law. Medical records are required to be retained for a particular period of your time, and this text discusses the safe methods of medial record preservation.[3]

In 2014, Dr. Satpal Singh, Dr. Seema . in the study title "Medical Record Department: An Analytical Study" According to this study, Medical Records Departments have evolved into an important aspect of any health care organisation or hospital over time. "People forget, but records remember," says the adage. Medical Records has evolved into its own specialty, and Medical Record Officers and Medical Record Technicians have acquired the right to be called experts in their respective fields. This is due to the fact that patient care necessitates a chronological record of patient care and treatment, which allows the clinical team, as well as the hospital administration, to assess the quality of medical care and the effectiveness of hospital services. This research has a few goals: to assess the present medical record keeping system and to assess the effectiveness of the existing medical record system.

In 2013, Sima Ajami ,Afsaneh Ebadsichani ,Shahram Tofighi ,Nahid Tavakoli. in research paper "Medical records department and balanced scorecard approach" In this study, authors say The Balanced Scorecard (BSC) is a management tool that helps firms enhance strategic performance and outcomes by allowing them to rectify operational operations and providing feedback on both internal processes and external outcomes, purpose of this study was to evaluate MRD performance in a hospital using the BSC technique. The results of the performance were then compared to the projected score. Programs, actions, and plans were altered in order to meet the final goal. Customer satisfaction was successfully absorbed by the MRD. Conclusion of this study was as Customer satisfaction scores in the admissions and statistics departments were 82 percent and 83 percent, respectively, from the customer's perspective.[6]

In 2018, Mastura Md Zali, Saiful Farik Mat Yatin ,Mohd Razilan Abdul Kadir ,Siti Noraini Tobi. in the study title "Managing Medical Records in Specialist Medical Centres"

According to this study, The Medical Records Department is in charge of maintaining the daily records produced by each department. It is a department of clinical support services that manages patient data, produces patient information, manages medical reports, and keeps track of hospital statistics. The purpose of this article is to examine the challenges of keeping medical records in an organisation and how to handle and manage them using records management as a risk mitigation technique. As a result, it's likely to boost more research by filling in gaps in service delivery and contributing to the body of knowledge in the subject of records management and archives in general.[7]

In 2013 Isfahani SS, Bahrami S, Torki S in a research paper "Job characteristic perception and intrinsic motivation in medical record department staff". is association between job features and intrinsic motivation among medical record staff in hospitals was investigated in this study paper. Human resources are also important in service businesses like hospitals, according to this study. As a result, inspiring human resources to meet an organization's goals is critical.[8]

In 2013, Al-Jafar E.in the study title "Exploring patient satisfaction before and after electronic health record (EHR) implementation: The Kuwait experience" It determined that Patient satisfaction with the quality of services offered before and after the introduction of electronic health records (EHRs) at Primary Health Care Centers (PHCCs) in Kuwait was investigated in the study. According to this study, respondents disagreed with the doctor's carefulness in completing the examination, use of medical terminology, explanations for medication dispensed, and time given to a patient by more than 30% before EHR implementation. After EHR installation, there was also more disagreement on the rest of the topics about the patient/physician interaction (25 percent to 39 percent).[9]

In 2012, Nahid Tavakoli, Sakineh Saghaiannejad, Mohammad Reza Habibi in study title "A comparative study of laws and procedures pertaining to the medical records retention in selected countries" Therefore, according to this study there were lack of a complete, transparent and update medical record retention schedule in Iran, lead to confusion for hospitals. Some of hospitals maintain medical records more than of determined retention period and some of them destruct them before expiring of essential retention period. In order to optimize the situation of health records retention in Iran, it is necessary to review, correction and correction and completion of medical records retention schedule on the provided recommendations for kinds of medical record.[10]

In 2013 Aykut Uslu , Jürgen Stausberg. In study "Value of the Electronic Medical Record for Hospital Care: Update from the Literature " According to this study, Electronic medical records have the potential to improve the quality and efficiency of health care The purpose of this study is to provide a list of empirical research on the value of electronic medical records (EMRs) in hospital treatment that were published between 2010 until April 2019.The significance of EMRs was clearly demonstrated in this study. In addition to the overwhelming majority of financial benefits, the evaluation found that all studies improved the quality of care. In the meantime, secondary data studies have won out over primary data research. Future research could concentrate on certain characteristics of electronic records in order to assist their deployment and use.[11]

According to this study, "To Study the Organization and Functioning of Medical Record Department of a Tertiary Level Govt. Hospital" Ashish Tyagi. The Medical Records Department (MRD) has become an essential department in every hospital, providing a variety of services not only to patients but also to the efficient operation of the hospital and to health care management. As a result, evaluating the services offered by this department is critical. The current investigation was conducted in the medical record department of a 500-bed tertiary care government hospital in Haryana as an observational study. This

study not only looked at the structure and operation of the Medical Record Department in a government-run medical college and hospital in a rural setting, but also tried to identify the problems that it faces and suggest ways to improve, strengthen, and modernising the department so that its efficiency and effectiveness improve.[12]

In 2021, Haftom Abebe, Yemane Gebremariam, and Birhanu Jikamo . in research study "Improving Completeness of Inpatient Medical Records" in Menelik II Referral Hospital, Addis Ababa, Ethiopia According to this article, Improving the completeness of patient information could be a critical step toward bettering healthcare quality. The tactic utilised was an easy sampling procedure. According to the findings of this study, a basic set of interventions involving inpatient medical record style and healthcare provider training resulted in a considerable improvement in inpatient medical record completeness. It is advised that the study hospital's Quality Officer and Chief Executive Officer plan and implement intervention programmes to promote medical record completion.[13]

In 2019, Ramadhani Jumanne Mashoka, in the study "Implementation of electronic medical records at an Emergency Medicine Department in Tanzania: The information technology perspective" The deployed EMR (Emergency Department Information System (EDIS)) was created exclusively for emergency centre use and was linked to an existing EMR that focused on registration and invoicing. This very collaborative experience can be implemented as a model for sharing the numerous lessons learned by all parties involved, including hospital management, EC staff, private funders, and EMR providers. During the training, super key users were identified among the workforce, and they assisted in staff empowerment, knowledge consolidation, and burden sharing. Several obstacles were surmounted, including when the power was unreliable, necessitating the installation of an automatic generator and uninterruptible power supply (UPS) devices to protect all computers. [14]

In 2021, Edward R. Melnick. in study title "Analysis of Electronic Health Record Use and Clinical Productivity and Their Association with Physician Turnover " In this study, Patients, physicians, and health-care organisations all suffer as a result of physician turnover. Although survey research has found links between electronic health record (EHR) adoption and professional burnout and effort reduction, these findings are prone to response fatigue and bias. To see if there's a link between physician productivity and EHR usage patterns as assessed by vendor-derived EHR data platforms and physician turnover. Physician productivity and EHR use measures were linked to physician departure in this study[15]

In 2011, Jeongeun Kim, Hongju Jung ,David W Bates. in the study "History and Trends of "Personal Health Record" the findings demonstrate the evolution of terminology over time, as well as a shift toward patient-centeredness and mixed usage. They also discovered the history and trend of PHR research in terms of the number of publications by year, topic, techniques, and target disorders. They may also see the focus of interest in terms of PHR borders and related subjects by looking at MeSH keywords. For the general population to effectively use PHRs, a basic awareness of the history and trends of PHR research may be beneficial. Simultaneously, a thorough knowledge and categorical analysis of expert viewpoints that can lead to the creation and extension of PHRs will be beneficial to their adoption and expansion.[16]

In 2015, Sedighe Torki1, Nahid Tavakoli, Elahe Khorasani. In study title "Improving the Medical Record Documentation by Quantitative Analysis in a Training Hospital "It determine that Completed medical records play a critical role in hospital evaluation, and such flaws are one factor that frequently lowers the evaluation score of the medical records department and hospital clinical wards. As a result of the importance of this issue, this study was conducted to investigate the status of medical records recording by physicians in a training facility.

After doing quantitative analysis and employing a defect elimination checklist, progress notes, medical history sheets, and summary sheets were more complete than medical records prior to November. They push physicians to complete incomplete records by attaching defect elimination forms to medical records, and they recognize that completion of these forms will be monitored, and that these forms must be completed or records will be directed back to them for completion.[18]

MATERIALS AND METHOD

Study Design - The type of Research study is descriptive

Study location: The study was conducted in the medical record department of a multispecialty hospital.
- MGM Hospital & Research Center, CBD BELAPUR -Navi Mumbai

Study population: Medical Record department, Staff of hospital involved in medical record maintenance and users of computerized health databases

Method of Data collection - The data was collected through the Primary and Secondary sources.

Primary Sources: For current research study, primary data was collected by canvassing of the questionnaires from the required personnel

- A predesigned and pre-structured questionnaire have been used for data collection. That was series of questions about the Medical Record Department's organisation, functioning, and working method and Questionnaire for users of computerized health databases which was assessed by 3 point Likert scale
- And Direct Observation and hospital records provided more information.

Secondary Sources: Secondary data was gathered from previously published sources such as books, journals, and the internet.

Study period: 1 Year

Sample size: The study covered medical record department and personnel using computerized health databases of a multispecialty 100 bedded hospital.

That includes: -

Total no. of users using computerized health databases =115

Doctors=56

Nurses =56

MRD Employees=3

Sample selection: Simple Radom Technique. The in-charge of the Medical Record Department and other regular employees of department and doctors & nursing staff who were present at the survey using computerized health databases were included in selection.
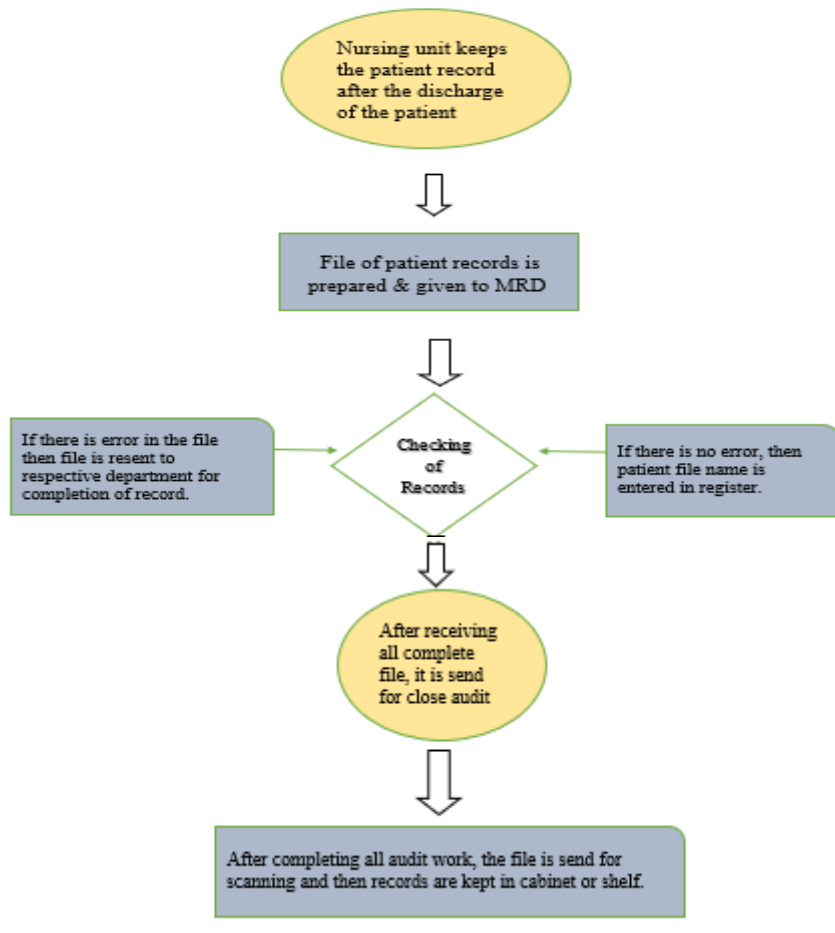
Selection Criteria

a. **Inclusion Criteria**
- Medical record department and their employees
- Users using computerized health databases

b. **Exclusion Criteria**

Employees who not willing to participate
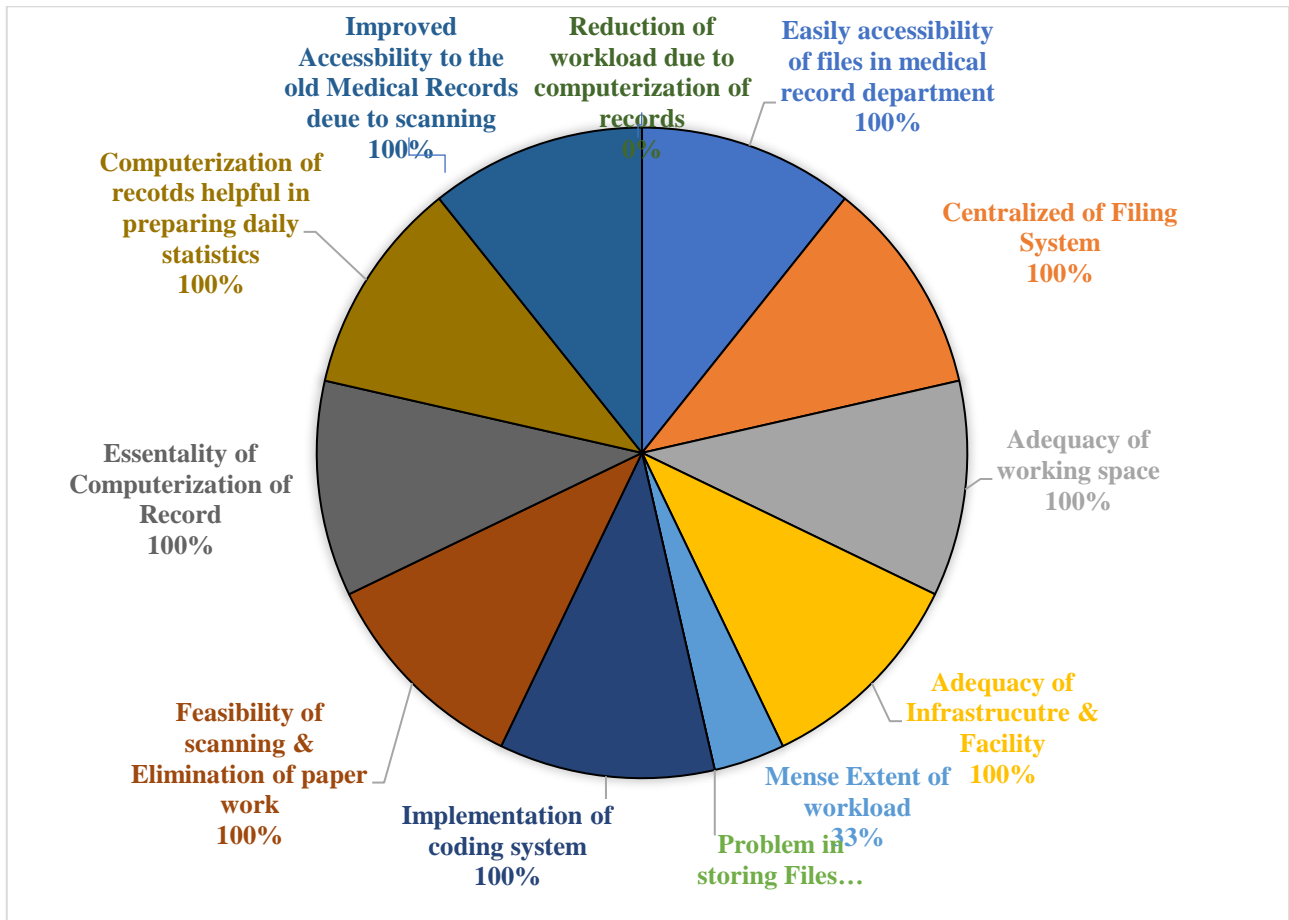
Housekeeping, Fire , Stores and Bio-Medical Department

PROCESS FLOW OF DEPARTMENT

RESULTS

Table -1 Opinion of staff working in MRD about the existing Medical Record Keeping system

	Easily accessibility of files in medical record department	Centralized of Filing System	Adequacy of working space	Adequacy of Infrastrucutre & Facility	Mense Extent of workload	Problem in storing Files	Implementation of coding system	Feasibility of scanning & Elimination of paper work	Essentality of Computerization of Record	Computerization of recotds helpful in preparing daily statistics	Improved Accessbility to the old Medical Records deue to scanning	Reduction of workload due to computerization of records
Agree	3	3	3	3	1	0	3	3	3	3	3	0
Neutral	0	0	0	0	0	2	0	0	0	0	0	3
Disagree	0	0	0	0	1	1	0	0	0	0	0	0
Percentage	100%	100%	100%	100%	33%	0%	100%	100%	100%	100%	100%	0%

Graph -1

Interpretation

According to the staff of the Medical Record Department, the majority of MRD employees agree with the aforementioned factors. The factors were measured in 3point Likert scale that is Agree, Neutral and Disagreed.

Employees were delighted with their workplace since it was spacious, they didn't have any storage issues, and they were satisfied with the computerised health databases. However, the data analysis revealed that employees disagreed with the idea that these Computers health databases were reducing their workload.

- **Doctors and Nurses responses about Computerized health databases in hospital**

Table – 2 Satisfied with computerized health databases

Grade	YES	Percentage	NO	Percentage	MAYBE	Percentage
Doctors	51	91%	5	9%	0	0%
Nurses	46	82%	7	13%	3	5%

Graph -2
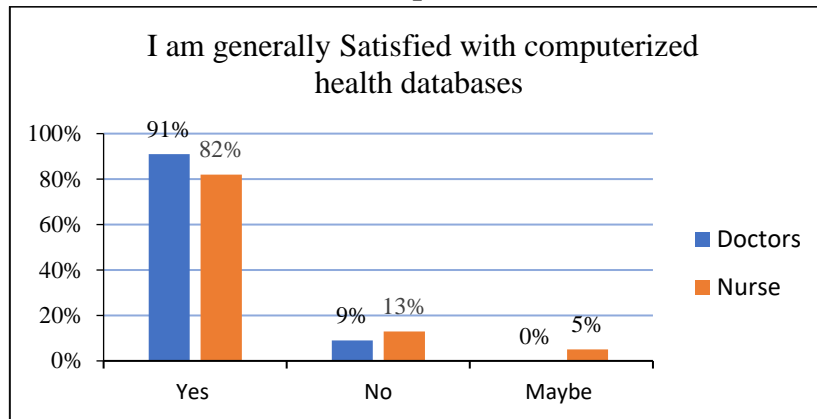
Observation

- 51 Doctors are satisfied and the percentage ratio is 91%
- 9 Doctors are dissatisfied and the percentage ratio is 9%
- 46 Nurses are Satisfied and the percentage ratio is 82%
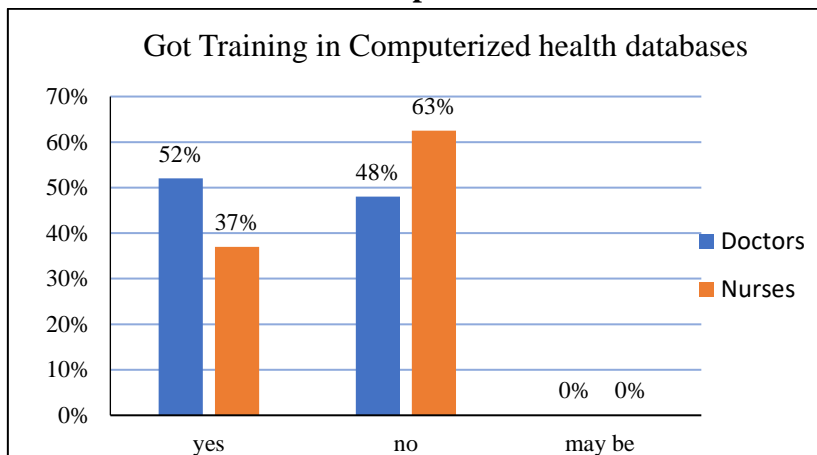- 7 Nurses are dissatisfied and the percentage ratio is 13%

Interpretation

The result drawn from the graph above shows that Doctors are more satisfied than Nurses with Computerized health databases.

Table -3 Have you got Training in Computerized health databases

| Grade	YES	Percentage	NO	Percentage	MAYBE	Percentage
Doctors	29	52%	27	48%	0	0%
Nurses	21	37%	35	63%	0	0%

Graph -3

Observation

- 29 Doctors got training and the percentage ratio is 52%
- 27 Doctors does not got training and the percentage ratio is 48%
- 21 Nurses got training and the percentage ratio is 37%
- 35 Nurses does not got training and the percentage is 63%

Interpretation

The result drawn from the graph above shows that Nurses got less training than Doctors in Computerized health databases

Table - 4 Computerized health databases give information that help you in better writing

Grade	YES	Percentage	NO	Percentage	MAYBE	Percentage
Doctors	52	93%	0	0%	4	7%
Nurses	43	77%	6	11%	7	12%
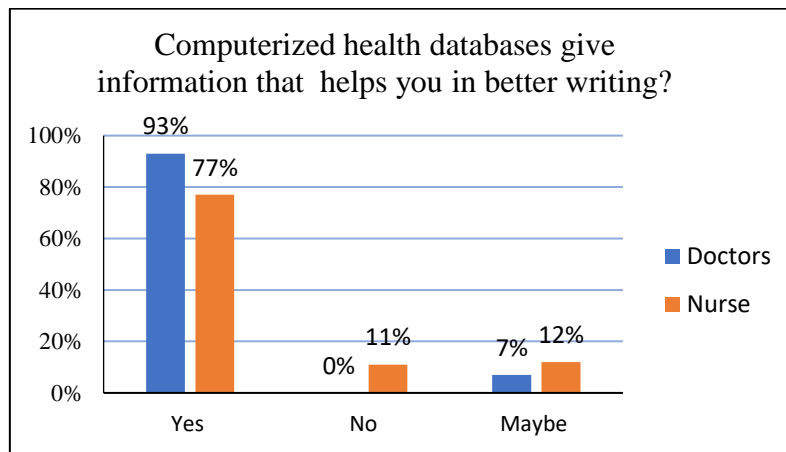
Graph -4

Observation

- 52 Doctors voted yes and the percentage ratio is 93 %
- 4 Doctors are not sure and the percentage ratio is 7%
- 32 Nurses voted yes and the percentage ratio is 77%
- 6 Nurses voted no and the percentage ratio is 11%
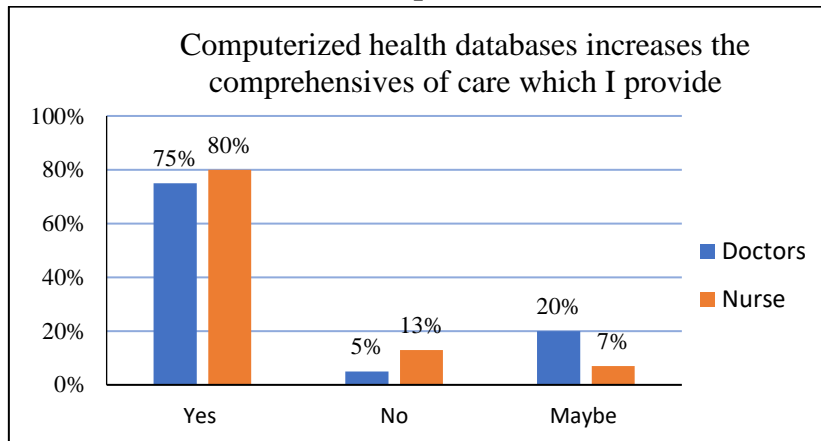- 7 Nurses are not sure and the percentage ratio is 12 %

Interpretation

The outcome derived from the graph above demonstrates that nearly all doctors and Nurses agree that computerized health databases provide information that is more helpful than written words

Table – 5 Computerized health databases increases the comprehensives of care

Grade	YES	Percentage	NO	Percentage	MAYBE	Percentage
Doctors	42	75%	3	5%	11	20%
Nurses	45	80%	7	13%	4	7%

Graph -5

Computerized health databases increases the comprehensives of care which I provide

Observation

- 42 Doctors voted yes and the percentage ratio is 75 %
- 3 Doctors voted no and the percentage ratio is 5%
- 11 Doctors are not sure and the percentage ratio is 20%
- 45 Nurses voted yes and the percentage ratio is 80 %
- 7 Nurses voted no and the percentage ratio is 13 %
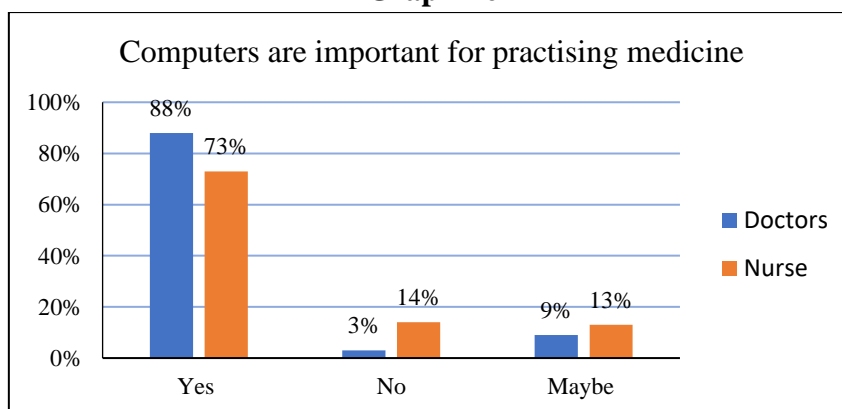- 4 Nurses are not sure and the percentage ratio is 7%

Interpretation

The result seen in the graph above illustrates that Computerized health databases boost the comprehensiveness of care, according to more than doctors' and nurses' perceptions.

Table – 6 Computers are important for practising medicine

Grade	YES	Percentage	NO	Percentage	MAYBE	Percentage
Doctors	49	88%	2	3%	5	9%
Nurses	41	73%	8	14%	7	13%

Graph - 6

Computers are important for practising medicine

Observation

- 49 Doctors supported and the percentage ratio is 88 %
- 2 Doctors does not encourage and the percentage ratio is 3%
- 5 Doctors are not sure and the percentage ratio is 9%

- 41 Nurses supported and the percentage ratio is 73 %
- 8 Nurses does not encourage and the percentage ratio is 14 %
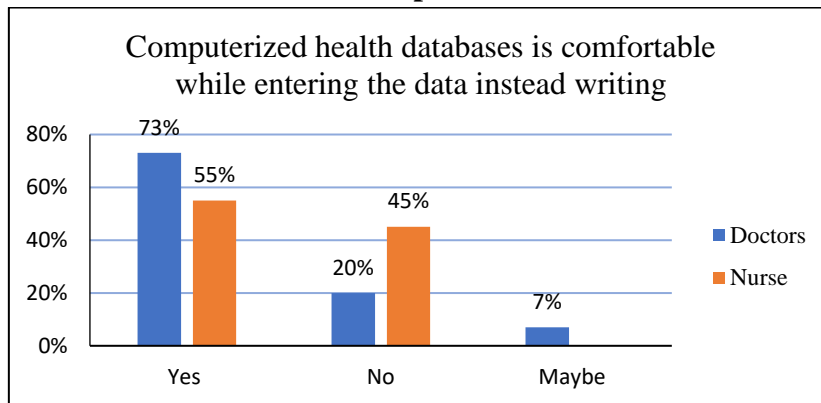- 7 Nurses are not sure and the percentage ratio is 13 %**Interpretation**

The outcome displayed in the graph above demonstrates that more Doctors than Nurses support computers that are important for practising medicine.

Table – 7 Computerized health databases is comfortable while entering the data

Grade	YES	Percentage	NO	Percentage	MAYBE	Percentage
Doctors	41	73%	11	20%	4	7%
Nurses	31	55%	25	45%	0	0%

Graph -7

Observation

- 41 Doctors supported and the percentage ratio is 73 %
- 11 Doctors does not encourage and the percentage ratio is 20%
- 4 Doctors are not sure and the percentage ratio is 7%
- 31 Nurses supported and the percentage ratio is 55 %
- 25 Nurses does not encourage and the percentage ratio is 45 %

Interpretation

The result seen in the graph above illustrates that more Doctors are comfortable while entering the data than Nurses.

Table – 8 computerized health databases improves quality of Practise

Grade	YES	Percentage	NO	Percentage	MAYBE	Percentage
Doctors	52	93%	0	0%	4	7%
Nurses	45	7%	0	0%	11	20%

Graph - 8

Computerized health databases improves quality of Practise
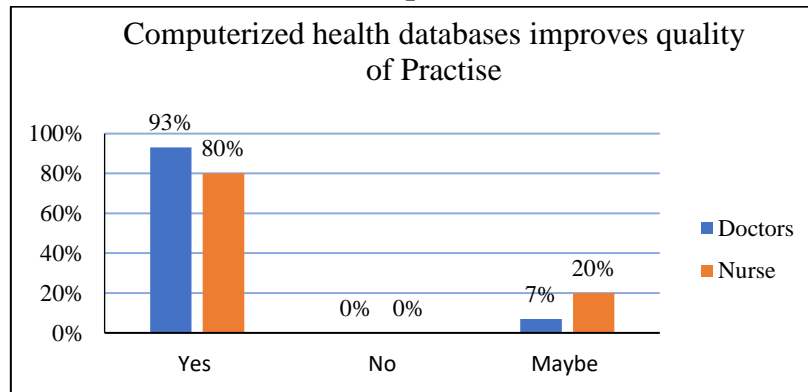
Observation

- 52 Doctors supported and the percentage ratio is 93 %
- 4 Doctors are not sure and the percentage ratio is 7%
- 45 Nurses supported and the percentage ratio is 80 %
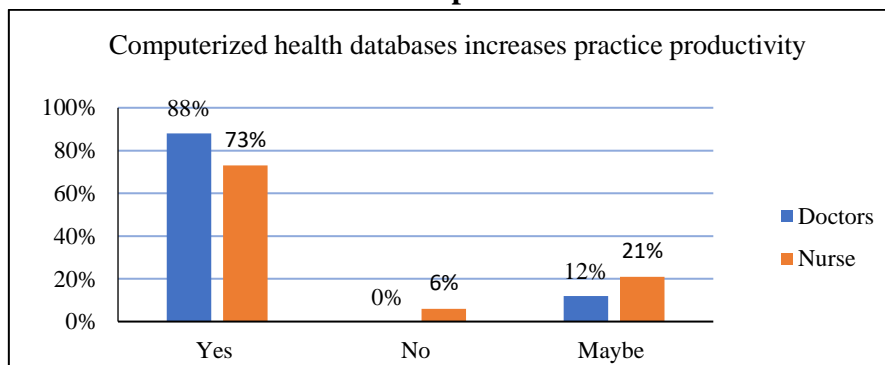- 11 Nurses are not sure and the percentage ratio is 20 %

Interpretation

The outcome represented in the graph above demonstrates nearly all doctors and Nurses agree that computerized health databases improve quality of practise.

Table – 9   Computerized health databases increases practice of productivity

Grade	YES	Percentage	NO	Percentage	MAYBE	Percentage
Doctors	49	88%	0	0%	7	12%
Nurses	41	73%	3	6%	12	21%

Graph-9

Computerized health databases increases practice productivity

Observation

- 49 Doctors supported and the percentage ratio is 88 %
- 7 Doctors are not sure and the percentage ratio is 12%
- 41 Nurses supported and the percentage ratio is 73 %
- 3 Nurses does not encourage and the percentage ratio is 6 %
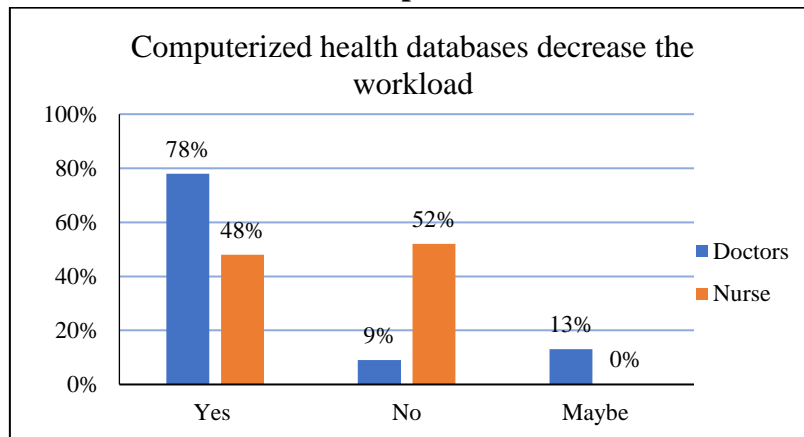- 12 Nurses are not sure and the percentage ratio is 21%

Interpretation

The result shown in the graph above illustrates that almost both doctors and Nurses are agreed that Computerized health databases increases practise of productivity but some nurses were not sure.

Table – 10 computerized health databases decrease the workload

Grade	YES	Percentage	NO	Percentage	MAYBE	Percentage
Doctors	44	78%	5	9%	7	13%
Nurses	27	48%	29	52%	0	0%

Graph-10

Observation

- 44 Doctors voted yes and the percentage ratio is 78 %
- 5 Doctors voted no and the percentage ratio is 9 %
- 7 Doctors are not sure and the percentage ratio is 13 %
- 27 Nurses voted yes and the percentage ratio is 48 %
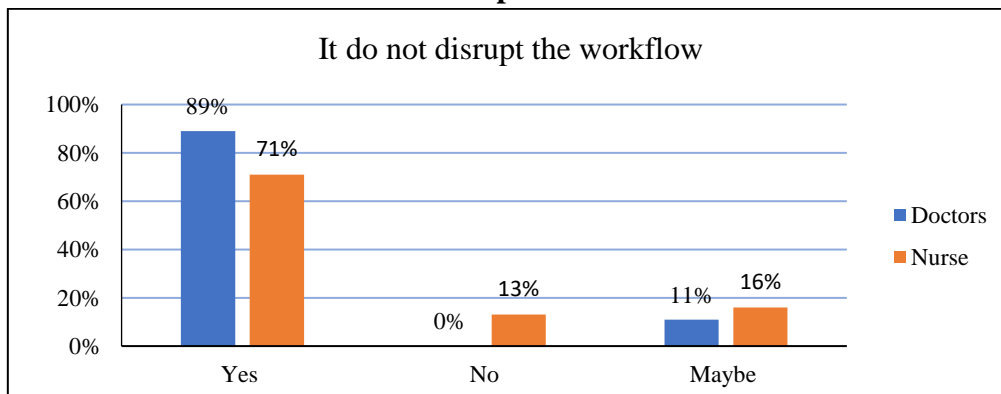- 29 Nurses voted no and the percentage ratio is 52 %

Interpretation

The outcome depicted in the graph above demonstrates that the majority of nurses disagreed that to computerized health databases decreases the workload. Some doctors were not sure and other was agreed to it.

Table -11   Computerized health databases do not disrupt the workflow

Grade	YES	Percentage	NO	Percentage	MAYBE	Percentage
Doctors	50	89%	0	0%	6	11%
Nurses	40	71%	7	13%	9	16%

Graph -11

Observation

- 50 Doctors supported and the percentage ratio is 89 %
- 6 Doctors are not sure and the percentage ratio is 11%
- 40 Nurses supported and the percentage ratio is 71 %
- 7 Nurses does not encourage and the percentage ratio is 13 %
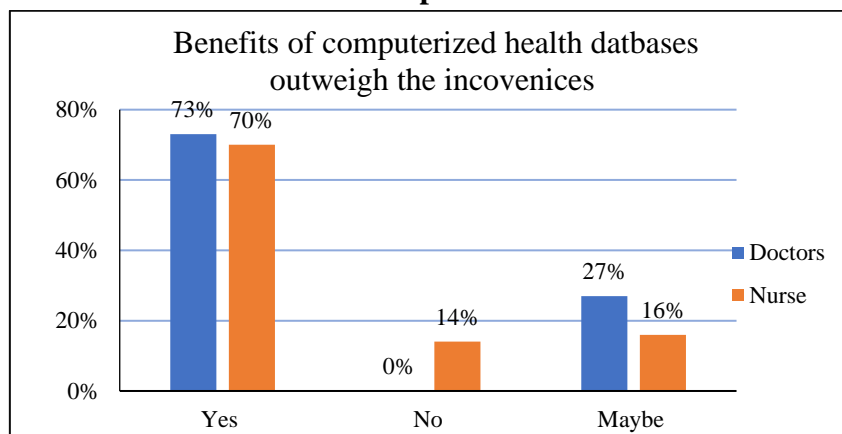- 9 Nurses are not sure and the percentage ratio is 16 %

Interpretation

The result seen in the graph above illustrates that almost all doctors were agreed that computerized health databases does not disrupt the workflow but some Nurses were disagreed and they were not sure about the same.

Table – 12   Benefits of computerized health databases

Grade	YES	Percentage	NO	Percentage	MAYBE	Percentage
Doctors	41	73%	0	0%	15	27%
Nurses	39	70%	8	0%	9	16%

Graph-12

Observation

- 41 Doctors supported and the percentage ratio is 73 %
- 15 Doctors are not sure and the percentage ratio is 27 %
- 39 Nurses supported and the percentage ratio is 70 %
- 8 Nurses does not encourage and the percentage ratio is 14 %
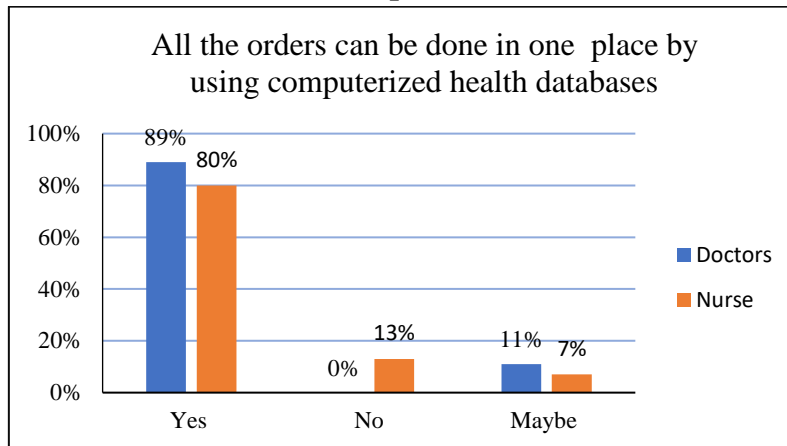- 9 Nurses are not sure and the percentage ratio is 16 %

Interpretation

The outcome displayed in the graph above demonstrates that almost both doctors and Nurse's agreed and some of them were not sure about benefits of computerized health databases outweigh the insolvencies.

Table – 13   All orders can be done in one place

Grade	YES	Percentage	NO	Percentage	MAYBE	Percentage
Doctors	50	89%	0	0%	6	11%
Nurses	45	80%	7	13%	4	7%

Graph -13

All the orders can be done in one place by using computerized health databases

Observation

- 50 Doctors supported and the percentage ratio is 89 %
- 6 Doctors are not sure and the percentage ratio is 11%
- 45 Nurses supported and the percentage ratio is 80 %
- 7 Nurses does not encourage and the percentage ratio is 13 %
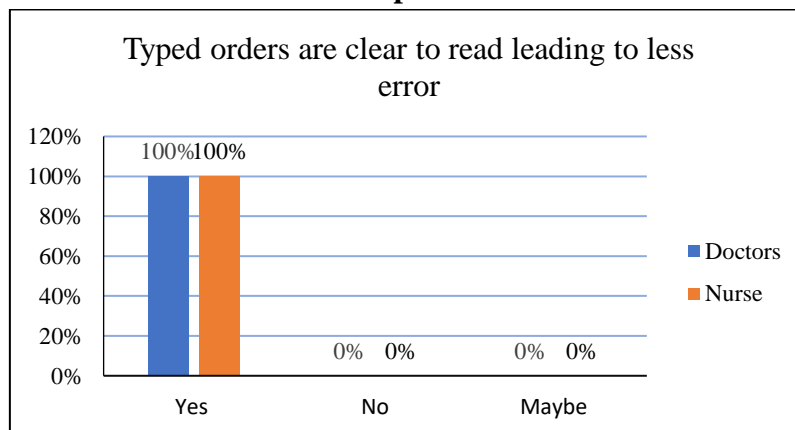- 4 Nurses are not sure and the percentage ratio is 7 %

Interpretation

The result seen in the graph above illustrates that the majority of doctors and Nurses agreed that all the orders can be done by using computerized health databases.

Table – 14   Typed orders are clear

Grade	YES	Percentage	NO	Percentage	MAYBE	Percentage
Doctors	56	100%	0	0	0	0
Nurses	56	100%	0	0	0	0

Graph -14

Typed orders are clear to read leading to less error

Observation

- 56 Doctors supported and the percentage ratio is 100 %
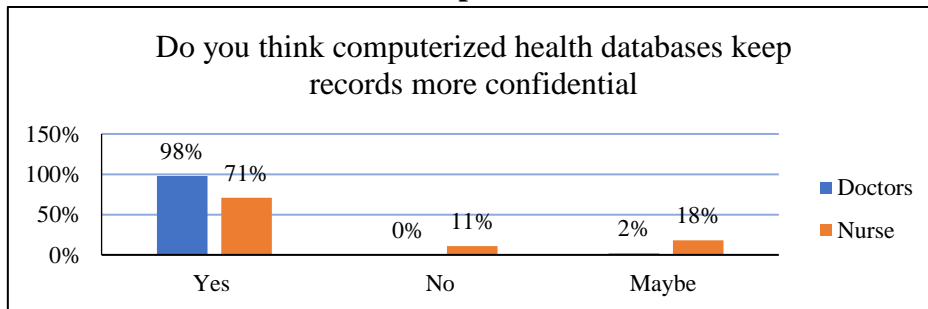- 56 Nurses supported and the percentage ratio is 100 %

Interpretation

The result seen in the graph above illustrates that all doctors and nurses agreed that typed orders are clear which are leading to less error.

Table – 15   Computerized health databases keep records more confidential

Grade	YES	Percentage	NO	Percentage	MAYBE	Percentage
Doctors	55	98%	0	0%	1	2%
Nurses	40	71%	6	11%	10	18%

Graph -15

Observation

- 55 Doctors supported and the percentage ratio is 98 %
- 1 Doctors are not sure and the percentage ratio is 2 %
- 40 Nurses supported and the percentage ratio is 71 %
- 6 Nurses does not encourage and the percentage ratio is 11 %
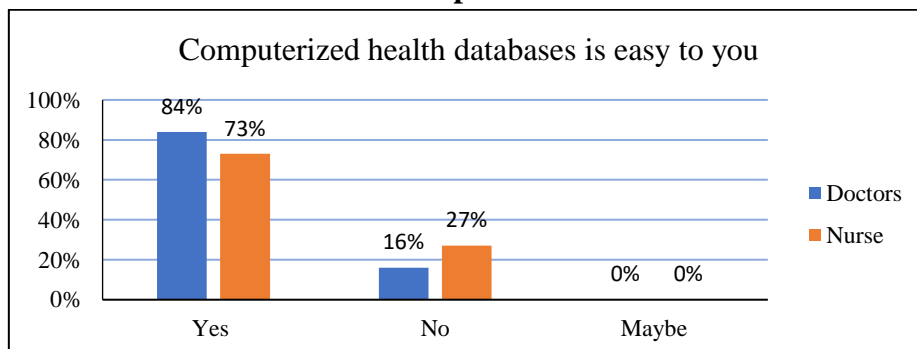- 10 Nurses are not sure and the percentage ratio is 18 %

Interpretation

The outcome displayed in the graph above demonstrates that all doctors agreed and some nurses disagreed and some were also not sure for computerized health databases keep records more confidential.

Table – 16 Computerized health databases is easy

| Grade	YES	Percentage	NO	Percentage	MAYBE	Percentage
Doctors	47	84%	9	16%	0	0%
Nurses	41	73%	15	27%	0	0%

Graph -16

Observation

- 47 Doctors supported and the percentage ratio is 84 %
- 9 Doctors does not encourage and the percentage ratio is 16%
- 41 Nurses supported and the percentage ratio is 73 %
- 15 Nurses does not encourage and the percentage ratio is 27%

Interpretation

The graph shown above displays the result that nearly half of physicians and nurses find Computerized health databases easy to use, while others find it challenging. Compared to doctors who struggle, nurses outnumber them by a large margin.

FISH BONE DIAGRAM (cause –effect)
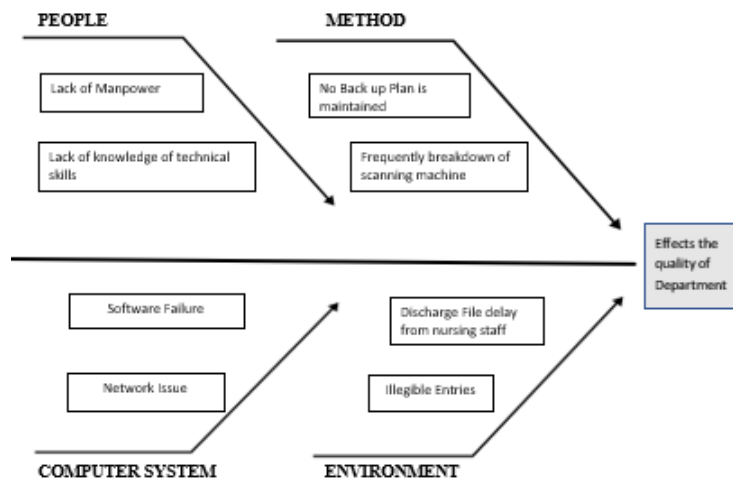
6. DISCUSSION

The goal of this study was to evaluate the Medical Record department's existing working practises in order to identify any areas that could be further improved and to find out responses of users regarding computerized health databases.

The previous study's findings showed that the Medical Record Department follows primarily manual procedures and is generally satisfied, but problems were also identified such as lack of workspace, insufficiently skilled employees, Because of the horizontal file arrangement used in record keeping, it was challenging to find a certain file.[19] There was no separate area for keeping active and inactive records, according to an earlier study carried out at Mewati Government Medical College & Hospital in the state of Haryana.[12]

Electronic health records are future models that are able to reduce the time required of doctors or other healthcare providers, which would enhance focused treatments and increase retention, according to a previously reviewed study.[15]

In a research paper it was found that □e results of the relationship be-

tween job characteristics and intrin-

sic motivation show that there is a sig-

ni□cant relationship between all job

characteristic dimensions

In the present study, finding a certain file and giving the appropriate information to the relevant staff or department is one of every MRD's most frequent problems. The length of time it takes to get a file reveals

how effective the Medical Record Department is. As a result, individuals working in the Medical Record Department responded that files in the Medical Record Department are easily accessible. According to patient records or other records of medical-legal situations, the amount of time needed to retrieve a specific file on demand was calculated. According to staff members in the medical record department, retrieving records typically takes 5 minutes.

The efficiency of the medical record department workers suffers from an excessive workload. The staff in the medical record department answered that their workload is severely affecting working efficiency of department. The staff at the medical record department said that there are no issues with file storage because they have a centralised system for storing all types of patient information. All of the files are kept in one location on individual shelves according to the numerous categories they fall under, such as MLC patients, patients with medical insurance claims, and self-paying patients.

For efficient work flow, the Medical records department's infrastructure and facilities must be adequate. The medical record department's infrastructure and facilities is spacious for various category of file storage, with a separate area for computers, scanners, and other administrative activities. According to the staff members of the medical record department, the infrastructure, facilities, and workspace are sufficient for carrying out everyday tasks.

There have already been existing coding systems, such as ICD 10, which is currently utilised in the majority of medical record departments. When comparing data, it offers uniformity. According to the Medical Records Department's staff, In-Patient cases are categorised using the ICD 10 Coding System and are organised numerically.

File scanning is advantageous because it gets rid of paper files, which take up more space and are more vulnerable to damage. The staff members of the medical record department responded that scanning and getting rid of paper files is advantageous, feasible, and will increase access to older medical records.

The department responsible for maintaining medical records is the great option for computerization. The staff members of the Medical Records Department responded that the workload is reduced by computerising tasks that are necessary and valuable in the department and by creating daily statistics with the use of computers.

Since computers are increasingly being used in health information systems. If there is computerization, it is simple to obtain the data. The workers of the medical record department claimed that because they still have to complete paperwork and do the same tasks in databases, their workload is not lessened by the computerization of medical records.

However, the majority of users, which include doctors and nurses, gave positive feedback on computerised health databases, despite the fact that nurses were less sure of the exact benefits due to the fact that the majority of the workload fell on nurses who also had to care for patients and complete paperwork and system entries.

7. CONCLUSION

By observing working procedures, maintaining records and registers inside the department, and conducting staff interviews with the Medical Record Department employees using pre-structured, standardized questionnaires, the existing system was examined. According to the responses, the staff in the medical record department were sincere and aware, and the department has a system for scanning records that is beneficial.

The department is operating largely satisfactorily, although there are several areas that could be greatly improved, according to the results analysed.

Additionally, it was seen that users' responses to computerised health databases were favourable, and they believed that computers were important and helpful in many departments and that creating daily statistics with their aid reduced workload. Since computers are increasingly being used in health information systems. Hence, if there is computerization, it is simple to obtain the data.

8. RECOMMENDATION

After understanding and analysing the entire Medical records department process leads to a significant improvement in the way the hospital's MRD operates.

1. As there are not enough staff members working in the medical record department, the hospital must recruit skilled personnel in sufficient numbers.
2. If there is a departmental software or network issue, a backup plan should be preserved.
3. Additionally, a number of files that the nursing staff delayed in filing reached MRD on the same day, which increased workload and disrupted departmental process flow.
4. As the department contains confidential records, it should be prohibited for other employees to make illegible entries.
5. On the other hand, all new hospital hires must receive training in the use of computerised health databases, which include doctors and nurses.

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