

**Summer Training at
Fortis Escorts Hospital,
Jaipur**

- **Time and Motion Study on ICU Nursing Staff in Fortis Escorts Hospital, Jaipur**
- **A Study on Diagnostic Accuracy Between Provisional Diagnosis with Laboratory and Radiological Diagnosis**

**By
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**Under the guidance of
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**MBA Pharmaceutical Management
2015-2017**



**The IIHMR University, Jaipur
2016**

TO WHOMSOEVER IT MAY CONCERN

This is to certify that, **Dr. Syed Waseem Farooq** student of MBA in Pharmaceutical Management from The IIHMR University, Jaipur has undergone summer training at **Fortis Escorts Hospital, Jaipur** from **1st April 2016** to **31st May 2016**.

The candidate has successfully carried out the study designated to him during summer training and his approach to the study has been sincere, scientific and analytical.

The summer training is in fulfillment of the course requirements.

I wish him all success in all his future endeavors.



Col (Dr) Ashok Kaushik
Dean, Academic and Student Affairs
The IIHMR University, Jaipur



Dr. S.D. Gupta
Chairman
The IIHMR University, Jaipur

13th June, 2016

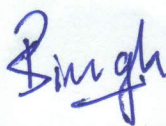
TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Mr. Syed Waseem Farooq** worked as a **Trainee** with us in the **Dept. of Quality Assurance** from 01st April, 2016 to 01st June, 2016.

His performance during the period in the department was good, we would like to acknowledge him for contribution towards the drafting of ICU chart.

He comes across as a willing, sincere and intelligent person who has a strong drive and zeal for learning.

We wish him the best for all his future endeavors.



Authorized Signatory



ACKNOWLEDGEMENTS

I have taken efforts in this project. However, it would not have been possible without the kind support and help of many individuals and organization. I would like to extend our sincere thanks to all of them.

I am thankful to **Mr Prateem Tamboli, Facility Director of Fortis Escorts Hospital, Jaipur** for letting us do our summer training from this reputed organization.

I am highly indebted to **Ms. Nihar Bhatia, Head Quality Assurance and FOS** for her guidance and constant supervision as well as for providing necessary information regarding the project & also for her support in completing the project.

I would like to express our special gratitude and thanks to the team of Quality assurance and FOS for giving us such attention and time.

I would like to express our gratitude towards the clinical and non-clinical staff of Fortis Escorts, Jaipur for their kind co-operation and encouragement which helped us in completion of this project.

My heartfelt thanks to Col. Ashok Kaushik and Dr. S. D. Gupta for giving me this great opportunity to enhance our skills.

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ACRONYMS/ABBREVIATIONS

• FOS	Fortis Operating System
• CCFS	Critical Care Flow Sheet
• IVC	Inferior Vena cava
• PIVD	Prolapsed of Intervertebral Disc
• CAD	Coronary Artery Disease
• DVD	Double Vessel Disease
• Ca	Carcinoma
• PIH	Prolactin Inhibiting Hormone
• IUGR	Intra uterine Growth Retardation
• DUB	Dysfunctional Uterine Bleeding
• RHD	Rheumatic Heart Disease
• DM	Diabetes Mellitus
• HTN	Hypertension
• CKD	Chronic Kidney Disease
• CVA	Cerebral Vascular Accident
• TIA	Transient Ischemic Attack
• PCA	Posterior Cerebral Artery
• COPD	Chronic Obstructive Pulmonary Disease.
• LVF	Left Ventricular Failure
• DVT	Deep Vein Thrombosis
• CLD	Chronic Liver Disease
• SAH	Sub Arachnoid Hematoma
• SDH	Sub Dural Hemorrhage
• EDH	Extra Dural Hemorrhage
• SOL	Space Occupied Lesion
• ICH	Intra Cerebral hemorrhage.
• RTA	Road Traffic Accident.

HOSPITAL PROFILE

Fortis Healthcare is India's fastest growing healthcare chain, with state-of-the-art facilities and an unparalleled commitment to patient care. Fortis Escort Healthcare Limited (FHL) is founded on the vision of becoming an integrated Healthcare Delivery Organization driven by quality, excellence, technology and compassionate care. FHL, one of the largest private healthcare companies in India, has one of its hospitals in Jaipur as Fortis Escorts Hospital, Jaipur. (FEHJ) which specializes in cardiac sciences, neurosciences, renal sciences and gastrointestinal diseases. The hospital also provides superior services in mother and childcare, orthopedics and also a complete range of multi-specialty services in all disciplines. JaM JaA JeE → Good day = 'Good Morning / Good Afternoon / Good Evening' – Greeting for Fortisians

FEHJ has dedicated facilities for comprehensive care of trauma patients and others in need of emergency care. FEHJ is the first amongst the proposed multi super specialty hospitals to be set up in Rajasthan. FEHJ is the first hospital in the country to attain NABH Accreditation in minimum stipulated time after commencement of operations and was re-accredited on 27th April 2011.

Specialties- Cardiology & Cardiac Surgery, Renal Sciences, Neuro Sciences, Gastro-Intestinal sciences, Orthopedics & Joint Replacement , Diabetes & Endocrinology, Dermatology, Internal Medicine, Pulmonary, Medicine, Ophthalmology, Dietetics, Physiotherapy and Preventive Health Check, General Surgery, Dental Surgery, Cosmetic & Plastic Surgery, ENT, Gynecology & Obstetrics, Pediatrics & Neonatology.

VISION OF THE HOSPITAL:

"To create a world-class integrated healthcare delivery & learning system in India, entailing the finest medical skills combined with compassionate patient care".

BRIEF HISTORY:-

Dr. Parvinder Singh was a visionary, a strategist, a thinker, an entrepreneur and leader par excellence. A rare personality, who always thought beyond his time and realized many of his dreams in a short span of life. FHL was formed with the sole objective of providing integrated healthcare by establishing a state-of-the-art health delivery system. The vision of the company is to become the most revered healthcare service provider in India. "Team Fortis" is committed to meet all healthcare needs of its clientele, starting from maintenance of

good health to providing global standards in diagnostics, Therapeutic and Surgical requirements at the time of need. It aims to exceed customer expectations in terms of quality, service, safety and value for money through constant innovation and better product delivery. Jaipur, Aug 2, 2007 - Fortis Healthcare Ltd, one of the largest private healthcare companies in India, Thursday announced a multi-specialty hospital at Jaipur as part of its initiative to expand its operations in Rajasthan . The then Chief Minister, Mrs. Vasundhara Raje inaugurated the Fortis Escorts Hospital Jaipur (FEHJ) in the presence of Mr..Malvinder Mohan Singh, Chairman, Fortis Healthcare, Mr. Shivinder Mohan Singh, CEO and MD, Fortis Healthcare, besides other dignitaries and company officials.

FORTIS LOGO:-



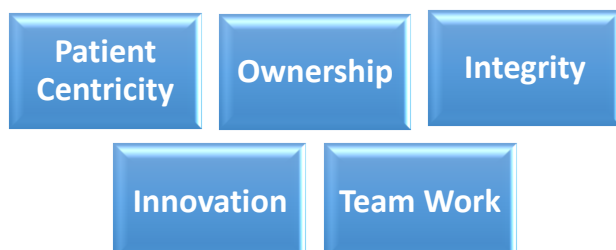
The two hands that fuse seamlessly with a human form, express their re-assuring approach to health care. A constant reminder to all that patients centric care is fundamental to our ethos. **GREEN** is the color of healing and is symbolic of Fortis's steadfast focus to ensure the health and well being of those they minister to.

RED is expressive of the dynamic zeal with which Fortis strive to make it a reality

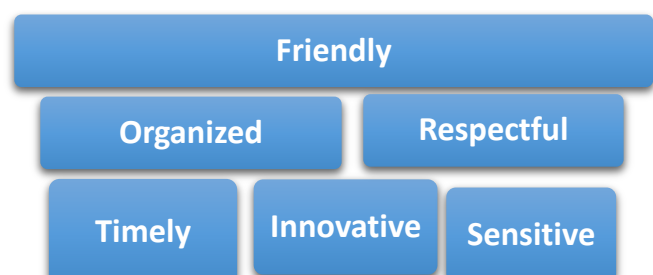
The Fortis logo is the indelible assurance that there expertise will always be tempered with humanity.

FORTIS VALUES:-

POINT



FORTIS



FORTIS GROUP:

Founder Chairman: Late Dr. Parvinder Singh

Executive Chairman: Mr. Malvinder Mohan Singh

India CEO: Mr. Bhavdeep Singh

Fortis Jaipur inaugurated on 2nd August 2007

No. of beds – Currently: 245

NABH accreditation received in June 2008 (within 10 months of operations, NABL & Blood Bank.

INFRASTRUCTURE:

The infrastructure facilities of Fortis Escorts Hospital, Jaipur, are par excellence, such as:

C arm with digital subtraction angiography

Flat panel cath lab

Advanced pathological lab

64 Slice CT scan

TMT, ECHO, HOLTER recorder and monitor and ECG to help non-invasive cardiac investigations.

500mA image intensifier TV

Digital CR reader

X- Ray.

LOCATION:

The access to the hospital is very easy. The hospital is located on JLN Marg road, Jaipur. The address of the hospital is:

Fortis Escorts Hospital, Jaipur

Jawahar Lal Nehru Marg,

Malviya Nagar,

Jaipur- 302107

Rajasthan, India

Tel: 91-141-2547000

AREA:

Spread over 6.68 acres with an investment of Rs. 1.10 billion, it has an operational bed facility of 245 beds with an installed bed capacity of 300 beds.

NUMBER OF DEPARTMENTS:

There are Clinical and Non clinical departments. The detailed information about each department visited is given as under.

Clinical Department:

1. Cardiac Surgery
2. CTVS
3. Cardiology
4. Renal Science
5. Nephrology
6. Urology
7. Neurology
8. Neuro Surgery
9. Gastro Intestinal Diseases
10. Internal Medicine
11. Pulmonology
12. Endocrinology
13. Dermatology
14. Psychiatry
15. General Surgery
16. Plastic Surgery
17. Pediatric Surgery
18. Obstetrics
19. Gynecology
20. Pediatric
21. Neonatology

Non clinical departments:

1. Engineering
2. Biomedical Engineering
3. Finance
4. Marketing
5. Human Resource
6. House keeping
7. Laundry
8. Pharmacy
9. Medical Records
10. Food & beverages
11. Security
12. Central stores
13. Quality Assurance
14. Research
15. Patient Welfare Department
16. Information Technology

PROJECT-I

TIME AND MOTION STUDY ON ICU NURSING STAFF IN FORTIS ESCORTS HOSPITAL, JAIPUR.

INTRODUCTION

“The unexamined life is not worth living,” said the great management thinker Socrates. Every day, people say that they’ll change. At the beginning of every year, millions make resolutions. Most do this without data, hypotheses or any idea of what they’re going to do differently. And they wonder why nothing really changes.

Intention without information is powerless. To misquote great management thinker, Albert Einstein, doing the same thing and hoping for a different result is the definition of inefficiency. This is where the personal time and motion study can help.

Time motion studies were first described in the early 20th century in industrial engineering, referring to a quantitative data collection method where an external observer captured detailed data on the duration and movements required to accomplish a specific task, coupled with an analysis focused on improving efficiency. Since then, they have been broadly adopted by biomedical researchers and have become a focus of attention due to the current interest in clinical workflow related factors. However, attempts to aggregate results from these studies have been difficult, resulting from a significant variability in the implementation and reporting of methods. While efforts have been made to standardize the reporting of such data and findings, a lack of common understanding on what “time motion studies” are remains, which not only hinders reviews, but could also partially explain the methodological variability in the domain literature (duration of the observations, number of tasks, multitasking, training rigor and reliability assessments) caused by an attempt to cluster dissimilar sub-techniques. A crucial milestone towards the standardization and validation of time motion studies corresponds to a common understanding, accompanied by a proper recognition of the distinct techniques it encompasses. Towards this goal, we conducted a review of the literature aiming at identifying what is being referred to as “time motion studies”.

We undertook a time and motion study to provide an evidence-based understanding of how medical-surgical nurses spend their time and of the influence of unit architectural layout on nurses' use of time and distance traveled. Documenting the drivers of inefficiency in nursing practice will allow for targeted changes to the work environment to positively influence patient safety and quality of care.

Measuring the average nursing care time is an objective measure for assessing the quantity and quality of the nursing staff in hospitals because it allows hospitals to evaluate the condition of the existing human resources. Thus, in intensive care units (ICU), predictions for personnel requirements should be estimated using instruments that consider the various nursing activities involved, which helps to quantify the actual workload and determine the number of workers needed to form a team.

In the current context, the instruments for assessing a patient's clinical condition and required care needs have become indispensable in efforts to improve the cost-effectiveness of health care. Thus, care indicators are increasingly needed in nursing to ensure the quality of care, helping to quantify the number of staff required to provide care that is safe for both the patients and the health professionals.

Thus, the Nursing Activities Score (NAS) is an instrument that has been designed to measure the actual nursing workload in ICUs, quantifying the nursing care and the degree of complexity involved. The total score obtained using the NAS scoring system represents the percentage of time spent by nurses per shift in direct patient care.

It is in these scenarios that identifying the nursing workload is the key to determine the needed workforce of health professionals. To identify this variable, the time that nurses use to provide patient care must be measured, and the tools used to measure the workload should also consider indirect care activities.

According to the Nursing Interventions Classification (NIC), direct care intervention is a treatment performed through interaction with the patient(s), direct social actions and counselling. Indirect care intervention is a treatment performed away from the patient, but on his/her behalf or on behalf of a group of patients, where these actions support the overall effectiveness of direct care interventions.

Given that the ICU is one of the health care fields where technology is constantly improving, in addition to a large amount of patient information and data, a significant amount of attention has been directed toward electronic health systems. The use of information technology systems provides easy access to information, data sharing possibilities, simultaneous access to information by multiple professionals, legibility and integration with other health information systems, reducing the overall time spent on documenting patient care activities.

The advantages and benefits of an electronic system have been surveyed by several authors. However, some studies report that there is insufficient evidence regarding the time spent on

nursing documentation in electronic systems and its impact on patient care. The importance of measuring the time spent on nursing documentation and other processes involving electronic health systems has prompted the following research question: how much time is spent by the nursing staff on direct and indirect patient care in the ICU, when using an electronic health system?

Thus, the aim of this study was to identify the direct and indirect nursing care time in an intensive care unit.

RATIONALE

Our aim for doing time and motion studies is to establish rules of motion that guaranteed optimal performance during a given time period and reduces the number of movements needed to get work accomplished so that such time can be used to increase the nursing efficiency in bed time care. Time and motion studies have been done in many ways both to ascertain how long it takes to do a given job and to improve it through setting production goals and reducing unnecessary steps in a process. Our time and motion study is entirely focused on the time aspect of work, or how long it takes to do a job, and is critical in getting fundamental information on how a process is working.

REVIEW OF LITERATURE

The ICU patient presents challenges for carers because their condition can change rapidly and in an unpredictable way, necessitating the need for constant vigilance. Nursing activities in the ICU have been explored to describe nurses' workload. The ICU nurses work with advanced technology and are frequently required to make multiple decisions in a high pressure work environment. It is important to observe the entirety of their work day to gain an insight into their activities which will give a better understanding of their true workload. In addition to a number of studies being undertaken to specifically develop workload tools researchers have focused on what nurses do in the ICU.

Aitken and Bucknall explored the decision making of ICU RNs in the clinical setting. Aitken observed eight expert critical care nurses in 2 h periods as they worked at the bedside. As the critical care nurses cared for their patient they described their actions using a "thinking aloud" process. Bucknall used event sampling and a microphone to record and observe 18 nurses of different levels for 2 h after handover. Her findings indicated that the individual and their environment are factors that will affect the critical care nurse's decision making process. Wong et al. utilised a time and motion method to observe 10 ICU nurses for 4h before and after the introduction of a computer information system in an American hospital. The authors used 5 major categories of direct care, indirect care, Documentation, Administrative, Housekeeping and 69 subcategories to group the critical care nurses' activities. Their findings indicated that ICU nurses time documenting decreased by 31% after the introduction of the computer information system which meant that more time was spent on 'direct care' activities.

In an study of ICU nurses over a one-week period covering all shifts, ICU nurses documented their activities every 5 min in 135 logs. About 85% of nursing activities fell within four categories "patient assessment 38%, direct nursing care 24%, clerical nursing duties 17%, and time out, patient-focused activity 6%" The "time out, patient-focused activity" had seven activities such as communication with relatives, preoperative visits and patient transfers. Patient assessment consumed 18% of the ICU nurses' time. Interestingly, there was very little variation in the time spent on various activities between day, evening and night shift. That is, the four categories represented 83% of the time during day and evening

shift and 86% of the time during the night shift. In summary, researchers have studied a range of ICU nursing activities using a variety of research methods. These include decision making in the clinical setting using observation and the ‘thinking aloud’ verbal report.¹⁶ ICU nurses were observed.

According to M. Abbey Mphil, Grad Cert, BN(Hons)a,*, W. Chaboyer PhD, MN, BScb, M. Mitchell RN, BN(Hons), Grad Cert Ed (Higher Ed), PhDc Just over 76 h of observations occurred over 10 days and 3081 activities documented during this time. The major work activity groups for the ICU nurses were; ‘direct care’ 1857 activities and 40.5% of their time, ‘indirect care’ 986 activities and 32.4% of their time, ‘personal’ activities 140 activities and 21.9% of their time and ‘unit-related’ 98 activities and 5.0% of their time. The ICU nurses undertook two activities simultaneously for 43% of the study timeframe.

According to Ann Hendrich, RN, MSN, FAAN Marilyn P Chow, DNSc, RN, FAAN Boguslaw A Skierczynski, PhD Zhenqiang Lu, PhD A total of 767 nurses participated. More than three quarters of all reported time was devoted to nursing practice. Three subcategories accounted for most of nursing practice time: documentation (35.3%; 147.5 minutes), medication administration (17.2%; 72 minutes), and care coordination (20.6%; 86 minutes). Patient care activities accounted for 19.3% (81 minutes) of nursing practice time, and only 7.2% (31 minutes) of nursing practice time was considered to be used for patient assessment and reading of vital signs. The time and motion study identified three main targets for improving the efficiency of nursing care: documentation, medication administration, and care coordination. Changes in technology, work processes, and unit organization and design may allow for substantial improvements in the use of nurses’ time and the safe delivery of care.

Zhihua Tang, PhD, Janine Mazabob, RN, MAOM, Liza Weavind, MD, Eric Thomas, MD, and Todd R. Johnson, PhD conducted a time-motion study of registered nurses’ work in an ICU remote monitoring facility. Data were collected on seven nurses through 40 hours of observation. The results showed that nurses’ essential tasks were centered on three themes: monitoring patients, maintaining patients’ health records, and managing technology use. In monitoring patients, nurses spent 52% of the time assimilating information embedded in a clinical information system and 15% on monitoring live vitals. System-generated alerts frequently interrupted nurses in their task performance and redirected them to manage suddenly appearing events. These findings provide insight into nurses’ workflow in a new,

technology-driven critical care setting and have important implications for system design, work engineering, and personnel selection and training.

OBJECTIVE

- To find out the time taken by ICU nurses in filling documents, for patient monitoring, in communication, their personal time and the non value added time in morning, evening and night shifts.

METHODOLOGY

Sample size for time motion study – 30 ICU nursing staff

Sampling type –Convenience sampling

Type of study –Descriptive and Exploratory

Study hours – 204 Hours.

Data collection method – We prepared a tool in which we divided the time slots in five minute segments and then observations were made.(annexure attached)

Tool was made in such a way that included each five minutes of observation for all the six hours (which makes one shift). The tool included five major categories which are –

- 1) Documentation
- 2) Patient monitoring
- 3) Communication
- 4) Technical work
- 5) Miscellaneous

Further we divided these major categories in minor sub categories which are –

DOCUMENTATION			
CCFS	EXCEPT- CCFS	ADDMISSIO N	DISCHARGE

PATIENT MONITORING			
VITAL SIGNS	MEDICINE PREPRATION & ADMINISTRA TION	HYGIENE	SAMPLING & TESTING

COMMUNICATION		
WITH PATIENT & FAMILY	WITH STAFF	WITH DOCTOR

TECHNICAL WORK	
COMPUTER	ICU DEVICE

MISCELLANEOUS	
PERSONAL	NONE VALUE ADDED TIME

➤ Critical care flow sheet – It is a chart which is used by doctors and nursing staff to monitor and record vitals of 24 hours.

➤ Except critical care flow sheet documents –

- 1) Medication chart
- 2) Blood bank issue slip
- 3) Relative communication record
- 4) Pressure sore prevention /care flow sheet
- 5) Modified aldrete scoring system
- 6) Daily reminder checklist for devices and ICU/wards
- 7) Pre catheterization nursing checklist
- 8) Microbiology
- 9) Pre operative checklist
- 10) Blood transfusion notes
- 11) Antibiotic calendar
- 12) OT documentation checklist
- 13) Nursing log for cath procedures
- 14) Shift handover check list
- 15) Vital signs flow sheet
- 16) Nursing admission assessment
- 17) Nursing care plan
- 18) Pre cath check list
- 19) Investigation flow chart
- 20) Nurses investigation chart
- 21) Central line maintenance checklist

➤ Vital signs include checking patient's vitals like blood pressure, heart rate, temperature etc on monitor.

➤ Since the admission and discharge process' documentation differ from that of other documentation so we have defined it into other categories, So that individual time for each can be ruled out.

➤ Under patient monitoring the hygiene part includes patients' as well as nurses' hygiene

➤ Sampling time is the time which starts from collecting patients' sample e.g. Taking blood sample and then testing it to generate reports.

- Under technical work all the computer related work like printing of required form, updating patient reports and tracking their results etc are included. Similarly dealing with ICU devices includes like suction procedure, catheterization, handling medication pump etc.
- Personal time includes the time spent on receiving personal calls, talking to other staff those things which are not relevant to patient history, in between meals time.
- Non value added time includes calling pharmacy again and again for medicines, calling patients' attendants to meet the doctor, running after doctor for signature, waiting for doctor to accompany the critical patients to get diagnostic imaging of patients done .

RESULTS

ALL SHIFTS COMPILED DATA

TABLE – 1

TIME INTERVAL	DOCUMENTATION				PATIENT MONITORING				COMMUNICATION			TECHNICAL WORK		MISCELLANEOUS	
	CCFS	EXCEPT-CCFS	ADMISSION	DISCHARGE	VITAL SIGNS	MEDI. PRE. & ADMINISTRATION	HYGIENE	SAMPLING & TESTING	WITH PATIENT & FAMILY	WITH STAFF	WITH DOCTOR	COMPUTER	ICU DEVICE	PERSONAL	NON VALUE ADDED TIME
TOTAL(6HRS)	22	22.5	0	51	4.5	35	9.5	37.5	63	17.5	14	23.5	21	27	12
TOTAL(6HRS)	5.5	40.5	0	0	6	78.5	8	10	42	61.5	29.5	10	19	11.5	38
TOTAL(6HRS)	37	59	0	0	14	55	20	15	60	24	6	5	37	23	5
TOTAL(6HRS)	20	27	0	0	11.5	27	11.5	11	100	65.5	19	10	29.5	25	3
TOTAL(6HRS)	27	30	0	0	7	48	10	35	60	30	20	25	25	28	15
TOTAL(6HRS)	35	54	0	0	13	59	19	14	62	26	8	8	35	20	7
TOTAL(6HRS)	8	39	0	0	8	75	11	11	41	58	33	12	17	12	35
TOTAL(6HRS)	22	25	0	0	9	28	10	12	95	70	21	12	27	23	6
TOTAL(6HRS)	21	36	0	0	10	51	14	16	69	49	22	14	28	21	9
TOTAL(6HRS)	23	32	0	0	11	58	12	25	70	45	9	20	20	25	10
TOTAL(6HRS)	10	35	0	0	8	80	9	9	49	56	28	11	22	13	30
TOTAL(6HRS)	24	30	0	0	5	74	15	29	55	23	17	25	24	26	13
TOTAL(6HRS)	20.5	26.5	0	0	6	40	12.5	26	78	60	24.5	11	23	13	19
TOTAL(6HRS)	22	22.5	0	51	4.5	35	9.5	37.5	63	17.5	14	23.5	21	27	12
TOTAL(6HRS)	5.5	40.5	0	0	6	78.5	8	10	42	61.5	29.5	10	19	11.5	38
TOTAL(6HRS)	37	59	0	0	14	55	20	15	60	24	6	5	37	23	5
TOTAL(6HRS)	20	27	0	0	11.5	27	11.5	11	100	65.5	19	10	29.5	25	3
TOTAL(6HRS)	27	30	0	0	7	48	10	35	60	30	20	25	25	28	15
TOTAL(6HRS)	35	54	0	0	13	59	19	14	62	26	8	8	35	20	7
TOTAL(6HRS)	8	39	0	0	8	75	11	11	41	58	33	12	17	12	35
TOTAL(6HRS)	22	25	0	0	9	28	10	12	95	70	21	12	27	23	6
TOTAL(6HRS)	21	36	0	0	10	51	14	16	69	49	22	14	28	21	9
TOTAL(6HRS)	23	32	0	0	11	58	12	25	70	45	9	20	20	25	10
TOTAL(6HRS)	10	35	0	0	8	80	9	9	49	56	28	11	22	13	30
TOTAL(6HRS)	24	30	0	0	5	74	15	29	55	23	17	25	24	26	13
TOTAL(6HRS)	20.5	26.5	0	0	6	40	12.5	26	78	60	24.5	11	23	13	19
TOTAL(6HRS)	57	17	0	0	20	96	0	5	80	2	8	0	60	15	0
TOTAL(6HRS)	49	16	0	0	21	83	5	6	85	5	3	10	45	12	20
TOTAL(6HRS)	50	18	0	0	17	95	7	3	61	6	5	12	41	17	28
TOTAL(6HRS)	51	16	0	0	18	85	2	5	71	6	8	11	45	15	27
TOTAL(6HRS)	13	23	0	0	11	103	35	15	30	25	10	0	20	60	15
TOTAL(6HRS)	12	25	0	0	8.5	95.5	32	20	35	30	11	3	15	56	17
TOTAL(6HRS)	14	21	0	0	9	99	30	18	32	26	13	3	21	51	23
TOTAL(6HRS)	15	22	0	0	10	97	36	16	40	28	9	4	17	45	21
TOTAL	811	1071	0	102	340.5	2170.5	470	589	2122	1299	569	416	919	806	555
	1984				3570				3990			1335		1361	
	6.63%	8.75%	0.00%	0.83%	2.78%	17.73%	3.84%	4.81%	17.34%	10.61%	4.65%	3.40%	7.51%	6.58%	4.53%
	16.21%				29.17%				32.60%			10.91%		11.12%	
AVERAGE TIME/SHIFT/STAFF	23.85294	31.5	0	3	10.01471	63.83824	13.82353	17.32353	62.41176	38.20588	16.73529	12.23529	27.02941	23.70588	16.32353
	58.35294118				105				117.3529412			39.26470588		40.02941176	

- **Table 1** indicates that out of 6 Hours an average of 58.35 minutes go in documentation, and out of these 58.35 minutes an average of 23.85 minutes go in filling up the CCFS while as 31.5 minutes go in filling up the extra documentation comprising of all necessary documents except CCFS.

MORNING SHIFT DATA

TABLE – 2

MORNING																
TIME INTERVAL		DOCUMENTATION				PATIENT MONITORING				COMMUNICATION			TECHNICAL WORK		MISCELLANEOUS	
		CCFS	EXCEPT-CCFS	ADMISSION	DISCHARGE	VITAL SIGNS	MED. PRE. & ADMINISTRAT.	HYGIENE	SAMPLING & TESTING	WITH PATIENT & FAMILY	WITH STAFF	WITH DOCTOR	COMPUTER	ICU DEVICE	PERSONAL	NON VALUE ADDED TIME
TOTAL(6HRS)		22	22.5	0	51	4.5	35	9.5	37.5	63	17.5	14	23.5	21	27	12
TOTAL(6HRS)		5.5	40.5	0	0	6	78.5	8	10	42	61.5	29.5	10	19	11.5	38
TOTAL(6HRS)		37	59	0	0	14	55	20	15	60	24	6	5	37	23	5
TOTAL(6HRS)		20	27	0	0	11.5	27	11.5	11	100	65.5	19	10	29.5	25	3
TOTAL(6HRS)		27	30	0	0	7	48	10	35	60	30	20	25	25	28	15
TOTAL(6HRS)		35	54	0	0	13	59	19	14	62	26	8	8	35	20	7
TOTAL(6HRS)		8	39	0	0	8	75	11	11	41	58	33	12	17	12	35
TOTAL(6HRS)		22	25	0	0	9	28	10	12	95	70	21	12	27	23	6
TOTAL(6HRS)		21	36	0	0	10	51	14	16	69	49	22	14	28	21	9
TOTAL(6HRS)		23	32	0	0	11	58	12	25	70	45	9	20	20	25	10
TOTAL(6HRS)		10	35	0	0	8	80	9	9	49	56	28	11	22	13	30
TOTAL(6HRS)		24	30	0	0	5	74	15	29	55	23	17	25	24	26	13
TOTAL(6HRS)		20.5	26.5	0	0	6	40	12.5	26	78	60	24.5	11	23	13	19
		275	456.5	0	51	113	708.5	161.5	250.5	844	585.5	251	186.5	327.5	267.5	202
TOTAL TIME		782.5				1233.5				1680.5			514		469.5	
		5.88%	9.75%	0.00%	1.09%	2.41%	15.14%	3.45%	5.35%	18.03%	12.51%	5.36%	3.99%	7.00%	5.72%	4.32%
% OF TIME USED IN ACTIVITY		16.72%				26.36%				35.91%			10.98%		10.03%	
AVERAGE TIME /STAFF/SHIFT		21.15385	35.11538	0	3.923077	8.692308	54.5	12.42308	19.26923	64.92308	45.03846	19.30769	14.34615	25.19231	20.57692	15.53846
		60.192				94.88				129.27			39.54		36.12	

- **Table II** indicates that out of 6 Hours the average time that goes in filling documents in the morning shift is 60.19 minutes and out of these 60.19 minutes an average of 21.15 minutes go in filling up the CCFS while as 35.11 minutes go in filling up the extra documentation comprising of all necessary documents except CCFS.

EVENING SHIFT DATA

TABLE – 3

EVENING																
TIME INTERVAL		DOCUMENTATION				PATIENT MONITORING				COMMUNICATION			TECHNICAL WORK		MISCELLANEOUS	
		CCFS	EXCEPT-CCFS	ADMISSION	DISCHARGE	VITAL SIGNS	MEDI. PRE. & ADMINISTR AT.	HYGIENE	SAMPLING & TESTING	WITH PATIENT & FAMILY	WITH STAFF	WITH DOCTOR	COMPUTER	ICU DEVICE	PERSONAL	NON VALUE ADDED TIME
TOTAL(6HRS)		16.5	6	0	0	14	105	11	23	44.5	22	13	7	38	32	28
TOTAL(6HRS)		19	13	0	0	10	23	18.5	9	66	22	8	6	16	126.5	23
TOTAL(6HRS)		16	10.5	0	19	2	25.5	6	13	50.5	15.5	12.5	0	20.5	149.5	19.5
TOTAL(6HRS)		20	31.5	0	0	9	39.5	32	12	104	48	11	3	15.5	32.5	2
TOTAL(6HRS)		15	7	0	0	13	101	13	26	45.5	21.5	15	9	33	31	30
TOTAL(6HRS)		18	14	0	0	12	35	11.5	11	52.5	23.5	14	8	25	103	32.5
TOTAL(6HRS)		11.5	15	0	0	5	30	8	15	52.5	17.5	10	2	20	143.5	30
TOTAL(6HRS)		17	22.5	0	0	7	45	28	10	82	46	15	7	22.5	35	23
TOTAL(6HRS)		8	17.5	0	0	15	99	12	22	61.5	34	13.5	10	17.5	40	10
TOTAL(6HRS)		17	15	0	0	9	32	17.5	14	60	28	10.5	6	20	106	25
TOTAL(6HRS)		13	12	0	0	4	48.5	7	17	49	20.5	14.5	3	21.5	135	15
TOTAL(6HRS)		9.5	21.5	0	0	8	42	25	23.5	90.5	45	15.5	5	15.5	41	18
TOTAL(6HRS)		10.5	18.5	0	0	6	68	15	30.5	49.5	30	10	8	31	58	25
		191	204	0	19	114	693.5	204.5	226	808	373.5	162.5	74	296	1033	281
		414				1238				1344			370		1314	
		4.08%	4.36%	0.00%	0.41%	2.44%	14.82%	4.37%	4.83%	17.26%	7.98%	3.47%	1.58%	6.32%	22.07%	6.00%
		8.85%				26.45%				28.72%			7.91%		28.08%	
AVERAGE TIME /STAFF/SHIFT		14.69231	15.69231	0	1.461538	8.769231	53.34615	15.73077	17.38462	62.15385	28.73077	12.5	5.692308	22.76923	79.46154	21.61538
		31.84615385				95.23076923				103.3846154			28.46153846		101.0769231	

- **Table III** indicates that out of 6 Hours the average time that goes in filling documents in the evening shift is 31.84 minutes and out of these 31.84 minutes an average of 14.69 minutes go in filling up the CCFS while as 15.69 minutes go in filling up the extra documentation comprising of all necessary documents except CCFS.

NIGHT SHIFT DATA

TABLE – 4

NIGHT																
TIME INTERVAL		DOCUMENTATION				PATIENT MONITORING				COMMUNICATION			TECHNICAL WORK		MISCELLANEOUS	
		CCFS	EXCEPT-CCFS	ADMISSION	DISCHARGE	VITAL SIGNS	MEDI. PRE. & ADMINISTRATION	HYGIENE	SAMPLING & TESTING	WITH PATIENT & FAMILY	WITH STAFF	WITH DOCTOR	COMPUTER	ICU DEVICE	PERSONAL	NON VALUE ADDED TIME
TOTAL(6HRS)		57	17	0	0	20	96	0	5	80	2	8	0	60	15	0
TOTAL(6HRS)		49	16	0	0	21	83	5	6	85	5	3	10	45	12	20
TOTAL(6HRS)		50	18	0	0	17	95	7	3	61	6	5	12	41	17	28
TOTAL(6HRS)		51	16	0	0	18	85	2	5	71	6	8	11	45	15	27
AVERAGE TIME /STAFF/SHIFT		51.75	16.75	0	0	19	89.75	3.5	4.75	74.25	4.75	6	8.25	47.75	14.75	18.75
		68.5				117				85			56		33.5	
		207	67	0	0	76	359	14	19	297	19	24	33	191	59	75
TOTAL TIME IN MINS.		274				468				340			224		134	
		14.38%	4.65%	0.00%	0.00%	5.28%	24.93%	0.97%	1.32%	20.63%	1.32%	1.67%	2.29%	13.26%	4.10%	5.21%
		19.03%				32.50%				23.61%			15.56%		9.31%	
TOTAL(6HRS)		13	23	0	0	11	103	35	15	30	25	10	0	20	60	15
TOTAL(6HRS)		12	25	0	0	8.5	95.5	32	20	35	30	11	3	15	56	17
TOTAL(6HRS)		14	21	0	0	9	99	30	18	32	26	13	3	21	51	23
TOTAL(6HRS)		15	22	0	0	10	97	36	16	40	28	9	4	17	45	21
AVERAGE TIME /STAFF/SHIFT		13.5	22.75	0	0	9.625	98.625	33.25	17.25	34.25	27.25	10.75	2.5	18.25	53	19
		36.25				158.75				72.25			20.75		72	
		54	91	0	0	38.5	394.5	133	69	137	109	43	10	73	212	76
TOTAL TIME IN MINS.		145				635				289			83		288	
		3.75%	6.32%	0.00%	0.00%	2.67%	27.40%	9.24%	4.79%	9.51%	7.57%	2.99%	0.69%	5.07%	14.72%	5.28%
		10.07%				44.10%				20.07%			5.76%		20.00%	

- **Table IV** indicates that out of 6 Hours the average time that goes in filling documents in the night shift (first half) is 68.5 minutes and out of these 68.5 minutes an average of 51.75 minutes go in filling up the CCFS while as 16.75 minutes go in filling up the extra documentation comprising of all necessary documents except CCFS.
- Out of the next 6 Hours (second half) of night shift an average of 36.25 minutes go in filling up the documents, an average of 13.5 minutes go in filling up the CCFS while as 22.75 minutes go in filling up the extra documentation comprising of all necessary documents except CCFS.

ANALYSIS

FIG-I

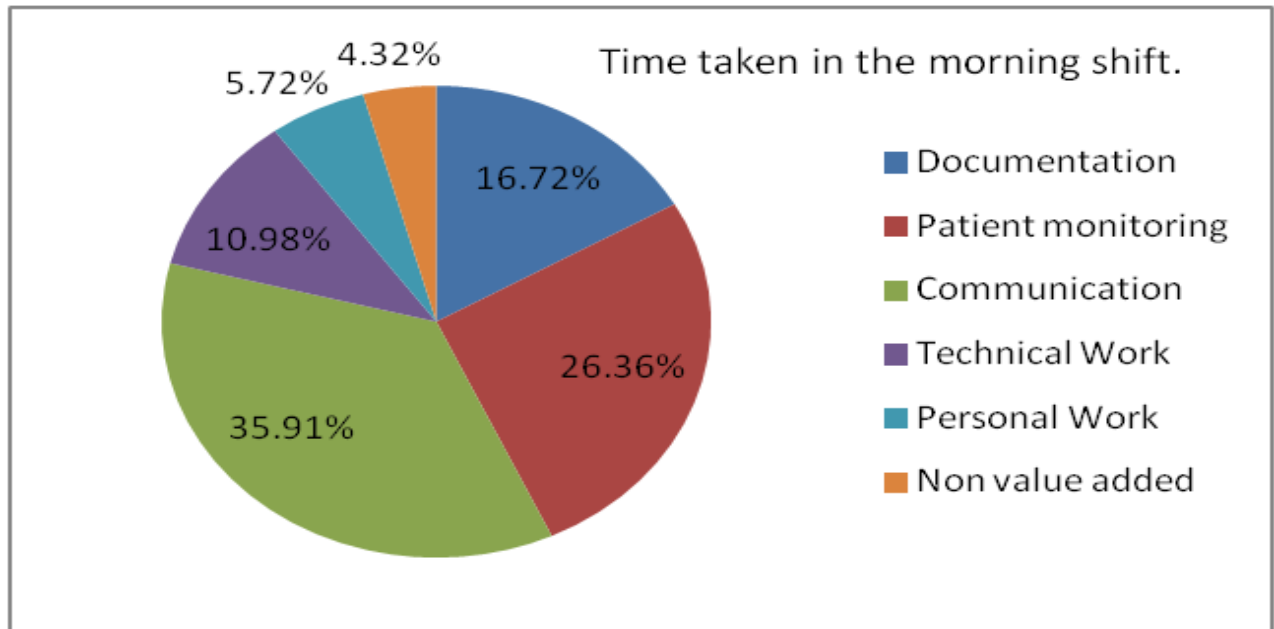
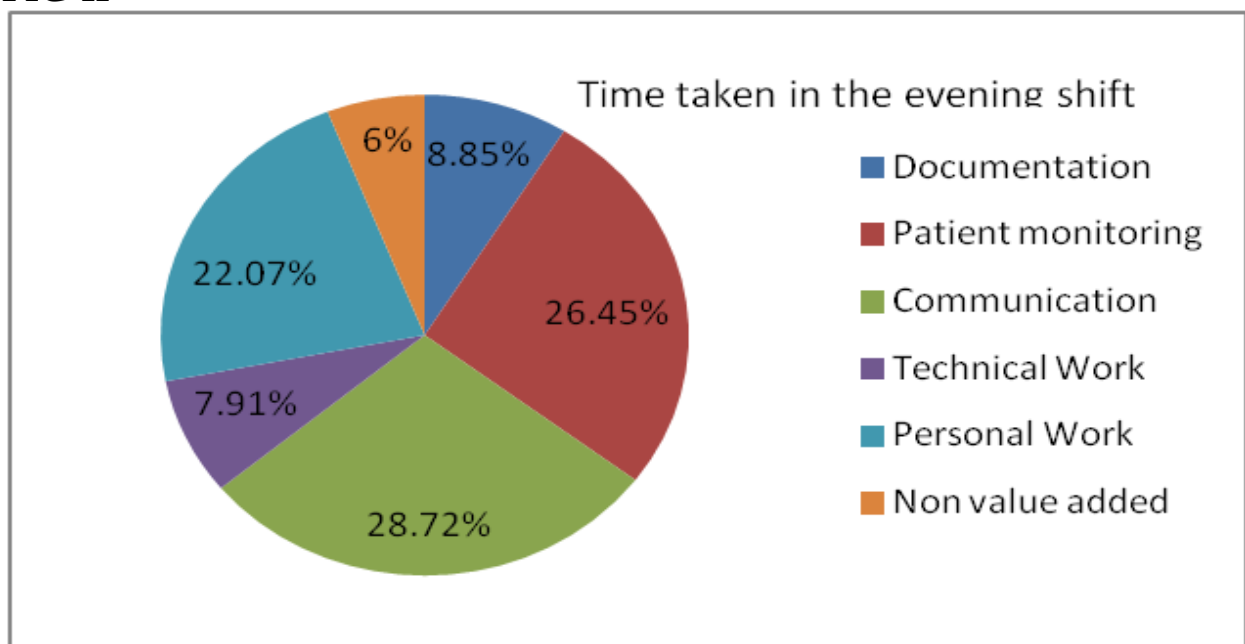


FIG-II



- **FIG I and II** represents that 16.72% of the total time of Morning shift while as 8.85% of the total time of the Evening shift go in documentation. Also the non value added time accounts for about 4.32% of the total morning time while as 6% of the evening time.

FIG-III

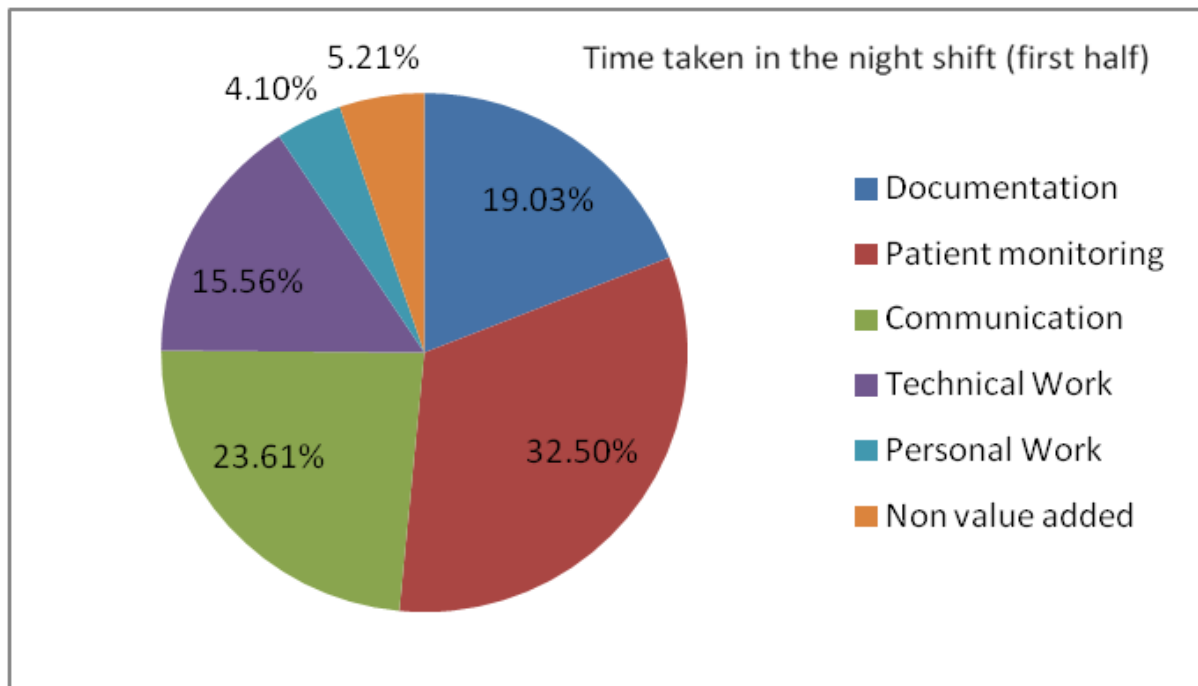
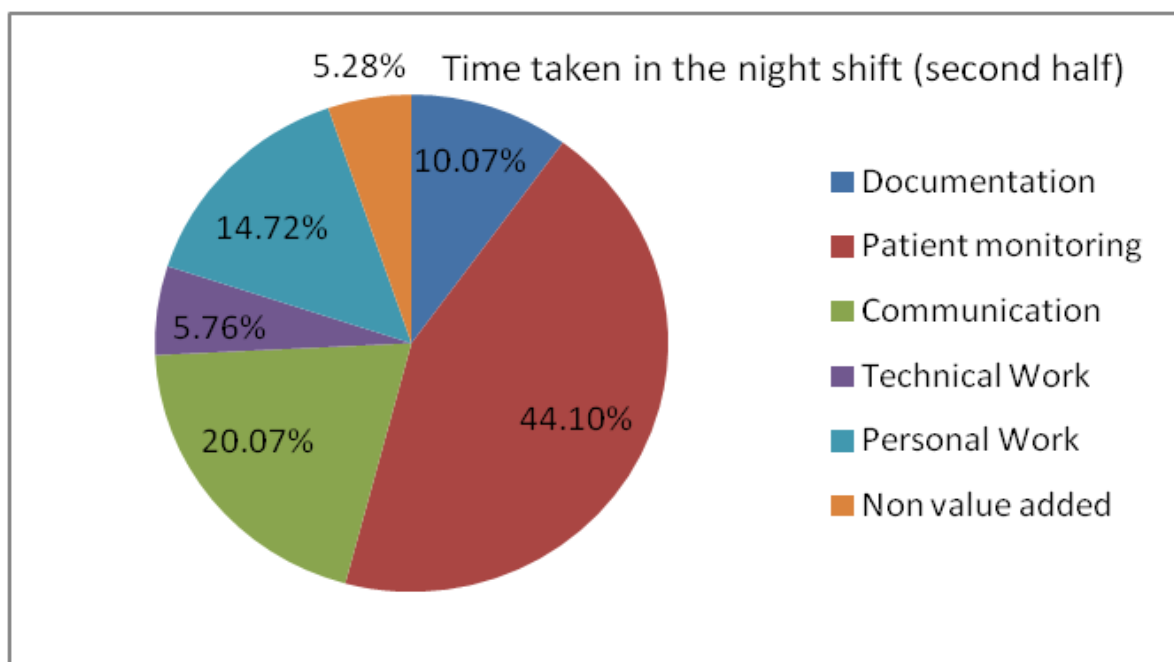


FIG-IV



- **FIG III and IV** shows that in the first half of night shift 19.03% of the time goes in documentation (14.38% of which goes in filling CCFS) and non value added time is 5.21%. 10.01%(3.75% of which goes in filling CCFS) time of the second half of night shift goes in documentation while as 5.28% is the non value added time.

LIMITATION

- The study includes nurses having an experience of 1-5 years and excludes nurses with an experience of less than 1 year. So the time taken by them in filling documentation could not be recorded.
- The study included nursing staff of only highly occupied ICU's as the sample.
- Limited sample size
- The study design required identification of all activities of a nursing shift and grouping these activities into cogent, useful, and appropriate categories. The rationale for these activities and groupings could be sensibly debated.
- The challenge study nurses faced in continuing their jobs without any interference from the time and motion study might have led to problems in the data collected.

CONCLUSION

Nurses are the primary hospital caregivers, and the efficient use of their time and energy is critical to the future of all hospitals. Our study evaluated the time that nurses spent in different activities. The results demonstrate that nurses devote large proportion of their time to documentation, patient monitoring and communication. Changes in few of their activities or the changes in the documents could benefit nursing efficiency and the high quality delivery of care.

RECOMMENDATIONS

A study on various documents used in ICUs can be helpful in finding out how to alter the documents and increase nursing efficiency. Further,

- 1) Modification of all the ICU charts by removing unnecessary columns and adding necessary columns in order to reduce documentation time
- 2) Removing some extra documents and merging the same in CCFS to increase patient monitoring or bed side time.
- 3) Non value added time could be worked upon and reducing it would add in the bed side care.

PROJECT II
A STUDY ON DIAGNOSTIC ACCURACY
BETWEEN PROVISIONAL DIAGNOSIS WITH
LABORATORY AND RADIOLOGICAL
DIAGNOSIS

INTRODUCTION

A diagnosis is meant to provide a reliable description of the clinical condition, one that provides a means of communication between patients and the clinician, as well as interested patient parties. A provisional diagnosis is either the first considered diagnosis, or a subsequent diagnosis after the previous one has been found wanting. Nevertheless, the provisional diagnosis sets in motion the first stage of treatment and illness management. History taking, clinical examination and diagnostic investigations help the clinician to come to the final diagnosis. Therefore to confirm the provisional diagnosis, one should proceed with available methods of investigations. The common methods are- Biochemical investigations, histopathological investigations, microbiological examinations, radiological investigations etc. The final diagnosis can usually be reached following chronological organization and critical evaluation of the information obtained from the patient history, physical examination and the result of radiological and laboratory examination. The final diagnosis usually identifies the diagnosis for the patient's primary complaint first, with subsidiary diagnosis of concurrent problems. Achieving a high degree of diagnostic accuracy is important in practice of medicine. Being able to make accurate diagnosis help to foster good doctor patient relationships and to build up rapport needed in subsequent management. High degree of diagnostic accuracy can have clinical, financial, legal implications. High degree of accuracy of provisional diagnosis may lead to use of lesser number of investigations with lesser cost burden to the health sector but providing greater satisfaction to the patients in terms of diagnosis and may lesser period of stay in hospital .Therefore, this correlation study aims to find out that how accurately provisional diagnosis matches final diagnosis and role of clinical examination and diagnostic investigations for such purpose.

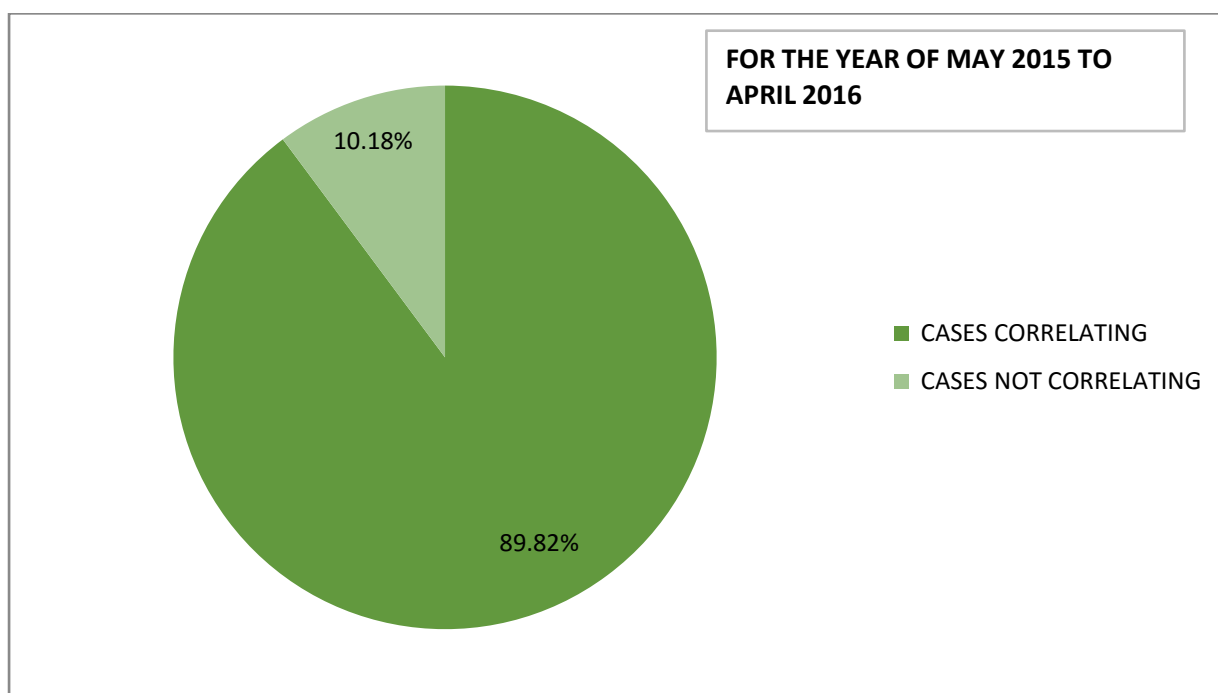
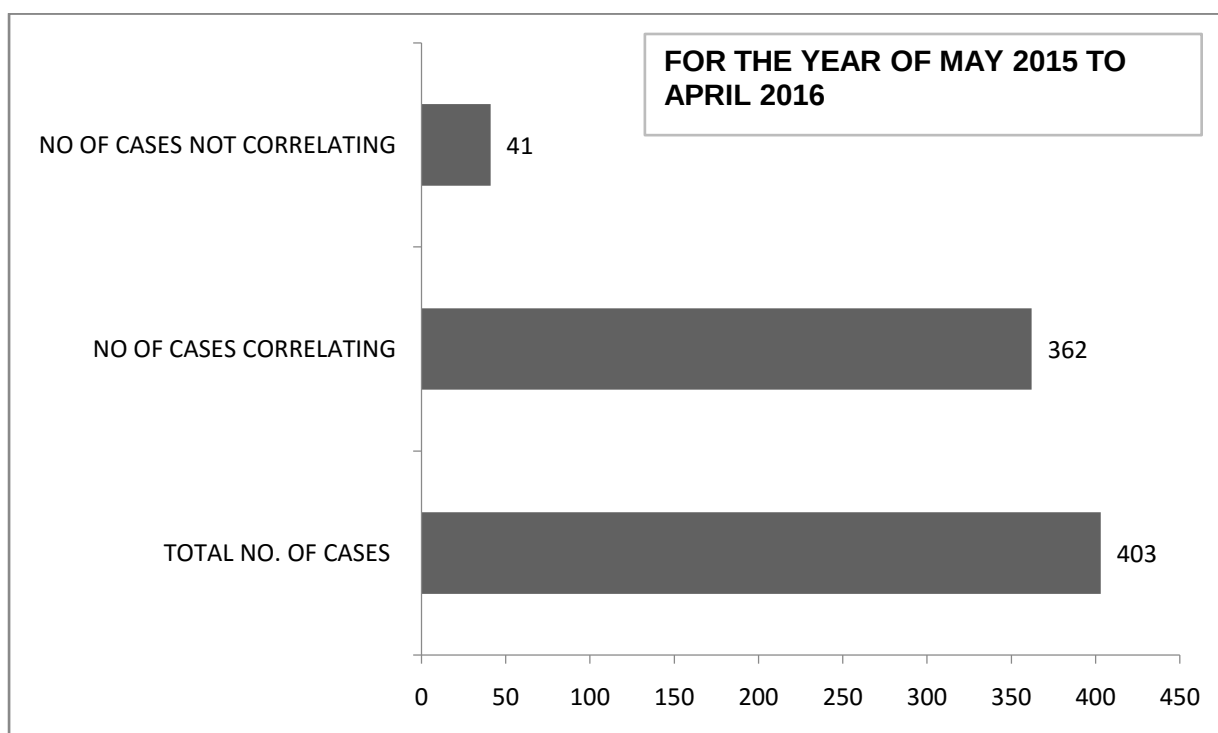
REVIEW OF LITERATURE

Correlation studies between admission diagnosis and discharge diagnosis are rare. Some studies regarding methods of diagnosis have been done in relation to specific diseases or related situations, but general comparison between final and initial diagnosis irrespective of specific disease situations in a hospital is a very rare attempt. Attempt to use clinical examination and proper history taking for accurate diagnosis has been highlighted in some studies but ideal situation of achieving maximum accuracy is still wanted.

Few salient features of this study were that in 43.3% of the cases there was an agreement in diagnosis between the final diagnosis and provisional diagnosis. One such study in relation to matching of diagnosis was carried out in Hong Kong, to find out the accuracy of emergency department admission and effect of investigations on diagnostic accuracy; of all admission diagnoses 71.4% matched the final diagnoses in this study. A study was also done in Lahore where 80% of the cases had correct provisional diagnosis. No significant association was found between the matching /un matching of final and provisional diagnosis with age and gender but period of hospitalization showed significant association, reason of which may have been that complicated cases where diagnosis did not match, may have required longer period of stay. Again, there was significant association in respect to referrals, as difficult cases may have required referrals by which the diagnosis may have been proved to be different from initial one. Similar reason may have been responsible for significant association in case of ≥ 2 types of investigations. Clinical examination had 55.4% sensitivity and likelihood ratio of 1.5 for matching of final diagnosis with provisional diagnosis while diagnostic investigations had sensitivity of 44.51% and likelihood ratio of 0.71. An Australian study compared the sensitivity of clinical examination to radiographs for detection of dental caries in molars and found clinical exam a higher sensitive test (96% vs. 58%). An American study in relation to lumbar spinal stenosis, showed that history taking and physical examination had a strong likelihood ratio of ≥ 2 for detection of the problem.

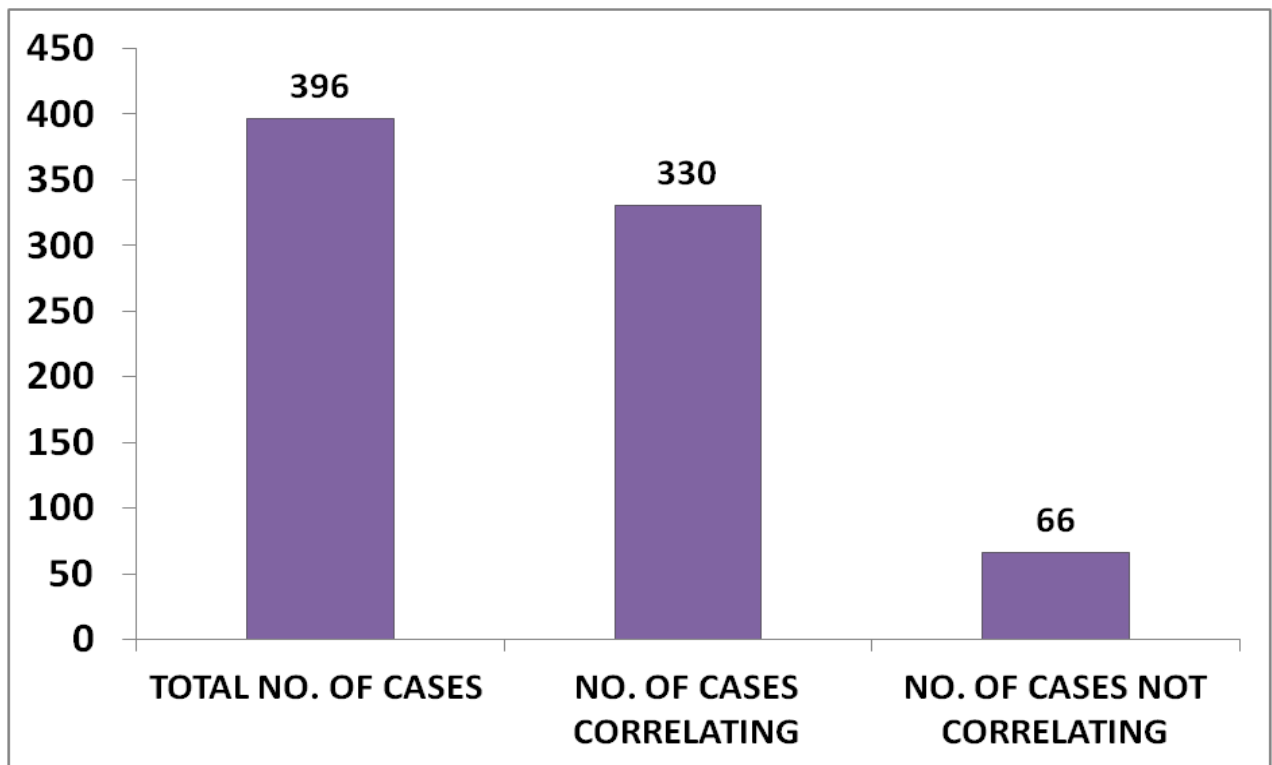
FINDINGS AND ANALYSIS

LAB DIAGNOSIS



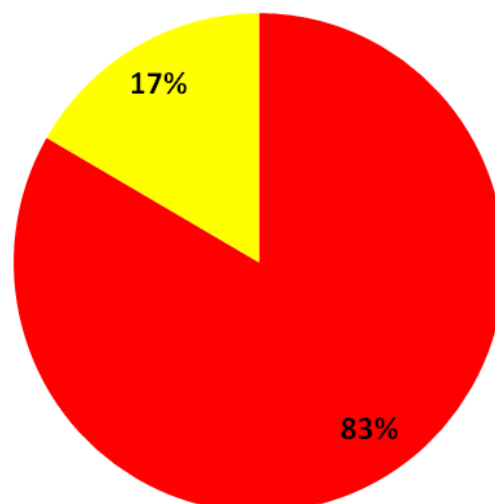
- The amount of correlation that exists between Laboratory diagnosis and provisional diagnosis is 89.82%.

RADIOLOGY DIAGNOSIS



CORRELATION BETWEEN RADIOLOGY DIAGNOSIS AND PROVISIONAL DIAGNOSIS

■ CORRELATING ■ NOT CORRELATING



- The amount of correlation that exists between Radiological diagnosis and provisional diagnosis is 83.82%.

LIMITATIONS

- In lab diagnosis Manual records were provided because of which certain provisional diagnosis seemed illegible and were becoming a source of bias.
- In radiological diagnosis there were certain RTA cases which were falling in our sample, some of it could be used for the study while in others it was not mentioned as to which part needed a radiological investigation.
- Some Provisional diagnoses were not filled, so those could not be included in the sample and were Outliers.

CONCLUSION

The study indicates that 89.92% diagnostic accuracy in laboratory diagnosis and 83% diagnostic accuracy in radiological diagnosis with provisional diagnosis. Matching of provisional diagnosis with discharge diagnosis with greater accuracy and lesser number of investigations can lead to greater patient satisfaction along with lesser burden on health resources of the state. Earlier, diagnosis relied more on signs and symptoms. With development of systematic methods of clinical examination more reliance was placed on signs. However major breakthroughs in diagnosis were achieved when medical technology provided a wide array of accurate and reliable laboratory and radiological investigations. Further refinements in diagnosis are going to be based on technological developments but will never supplant the role of careful history taking for symptoms and clinical examination for signs.

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ANNEXURE

NAME -		GENDER -		EMP. ID -		ICU -		SHIFT -								
TIME INTERVAL		DOCUMENTATION				PATIENT MONITORING				COMMUNICATION			TECHNICAL WORK		MISCELLANEOUS	
		CCFS	EXCEPT-CCFS	ADMISSION	DISCHARGE	VITAL SIGNS	MEDI. PRE. & ADMINISTRAT.	HYGIENE	SAMPLING & TESTING	WITH PATIENT & FAMILY	WITH STAFF	WITH DOCTOR	COMPUTER	ICU DEVICE	PERSONAL	NON VALUE ADDED TIME
8:00	8:05															
8:05	8:10															
8:10	8:15															
8:15	8:20															
8:20	8:25															
8:25	8:30															
8:30	8:35															
8:35	8:40															
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10:35	10:40															
10:40	10:45															
10:45	10:50															
10:50	10:55															
10:55	11:00															
TOTAL(3HRS)																

TIME INTERVAL		DOCUMENTATION				PATIENT MONITORING				COMMUNICATION			TECHNICAL WORK		MISCELLANEOUS	
		CCFS	EXCEPT-CCFS	ADMISSION	DISCHARGE	VITAL SIGNS	MEDI. PRE. & ADMINISTR. AT.	HYGIENE	SAMPLING & TESTING	WITH PATIENT & FAMILY	WITH STAFF	WITH DOCTOR	COMPUTER	ICU DEVICE	PERSONAL	NON VALUE ADDED TIME
11:00	11:05															
11:05	11:10															
11:10	11:15															
11:15	11:20															
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13:35	13:40															
13:40	13:45															
13:45	13:50															
13:50	13:55															
13:55	14:00															
TOTAL(3HRS)																
TOTAL(6HRS)																

NAME -		GENDER -		EMP. ID -		ICU -		SHIFT -									
TIME INTERVAL		DOCUMENTATION				PATIENT MONITORING				COMMUNICATION			TECHNICAL WORK		MISCELLANEOUS		
		CCFS	EXCEPT-CCFS	ADMISSION	DISCHARGE	VITAL SIGNS	MED. PRE. & ADMINISTRAT.	HYGIENE	SAMPLING & TESTING	WITH PATIENT & FAMILY	WITH STAFF	WITH DOCTOR	COMPUTER	ICU DEVICE	PERSONAL	NON VALUE ADDED TIME	
14:00	14:05																
14:05	14:10																
14:10	14:15																
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16:35	16:40																
16:40	16:45																
16:45	16:50																
16:50	16:55																
16:55	17:00																
TOTAL(3HRS)																	

TIME INTERVAL		DOCUMENTATION				PATIENT MONITORING				COMMUNICATION			TECHNICAL WORK		MISCELLANEOUS	
		CCFS	EXCEPT-CCFS	ADMISSION	DISCHARGE	VITAL SIGNS	MED. PRE. & ADMINISTRATION	HYGIENE	SAMPLING & TESTING	WITH PATIENT & FAMILY	WITH STAFF	WITH DOCTOR	COMPUTER	ICU DEVICE	PERSONAL	NON VALUE ADDED TIME
17:00	17:05															
17:05	17:10															
17:10	17:15															
17:15	17:20															
17:20	17:25															
17:25	17:30															
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19:35	19:40															
19:40	19:45															
19:45	19:50															
19:50	19:55															
19:55	20:00															
TOTAL(3HRS)																
TOTAL(6HRS)																

NAME -		GENDER -		EMP. ID -		ICU -		SHIFT -														
TIME INTERVAL		DOCUMENTATION				PATIENT MONITORING				COMMUNICATION			TECHNICAL WORK		MISCELLANEOUS							
		CCFS	EXCEPT-CCFS	ADMISSION	DISCHARGE	VITAL SIGNS	MEDI. PRE. & ADMINISTR. AT.	HYGIENE	SAMPLING & TESTING	WITH PATIENT & FAMILY	WITH STAFF	WITH DOCTOR	COMPUTER	ICU DEVICE	PERSONAL	NON VALUE ADDED TIME						
20:00	20:05																					
20:05	20:10																					
20:10	20:15																					
20:15	20:20																					
20:20	20:25																					
20:25	20:30																					
20:30	20:35																					
20:35	20:40																					
20:40	20:45																					
20:45	20:50																					
20:50	20:55																					
20:55	21:00																					
21:00	21:05																					
21:05	21:10																					
21:10	21:15																					
21:15	21:20																					
21:20	21:25																					
21:25	21:30																					
21:30	21:35																					
21:35	21:40																					
21:40	21:45																					
21:45	21:50																					
21:50	21:55																					
21:55	22:00																					
22:00	22:05																					
22:05	22:10																					
22:10	22:15																					
22:15	22:20																					
22:20	22:25																					
22:25	22:30																					
22:30	22:35																					
22:35	22:40																					
22:40	22:45																					
22:45	22:50																					
22:50	22:55																					
22:55	23:00																					
TOTAL(3HRS)																						

TIME INTERVAL		DOCUMENTATION				PATIENT MONITORING				COMMUNICATION			TECHNICAL WORK		MISCELLANEOUS	
		CCFS	EXCEPT-CCFS	ADMISSION	DISCHARGE	VITAL SIGNS	MEDI. PRE. & ADMINISTR. AT.	HYGIENE	SAMPLING & TESTING	WITH PATIENT & FAMILY	WITH STAFF	WITH DOCTOR	COMPUTER	ICU DEVICE	PERSONAL	NON VALUE ADDED TIME
23:00	23:05															
23:05	23:10															
23:10	23:15															
23:15	23:20															
23:20	23:25															
23:25	23:30															
23:30	23:35															
23:35	23:40															
23:40	23:45															
23:45	23:50															
23:50	23:55															
23:55	0:00															
0:00	0:05															
0:05	0:10															
0:10	0:15															
0:15	0:20															
0:20	0:25															
0:25	0:30															
0:30	0:35															
0:35	0:40															
0:40	0:45															
0:45	0:50															
0:50	0:55															
0:55	1:00															
1:00	1:05															
1:05	1:10															
1:10	1:15															
1:15	1:20															
1:20	1:25															
1:25	1:30															
1:30	1:35															
1:35	1:40															
1:40	1:45															
1:45	1:50															
1:50	1:55															
1:55	2:00															
TOTAL(3HRS)																
TOTAL(6HRS)																

TIME INTERVAL		DOCUMENTATION				PATIENT MONITORING				COMMUNICATION			TECHNICAL WORK		MISCELLANEOUS	
		CCFS	EXCEPT-CCFS	ADMISSION	DISCHARGE	VITAL SIGNS	MEDI. PRE. & ADMINISTRATION	HYGIENE	SAMPLING & TESTING	WITH PATIENT & FAMILY	WITH STAFF	WITH DOCTOR	COMPUTER	ICU DEVICE	PERSONAL	NON VALUE ADDED TIME
2:00	2:05															
2:05	2:10															
2:10	2:15															
2:15	2:20															
2:20	2:25															
2:25	2:30															
2:30	2:35															
2:35	2:40															
2:40	2:45															
2:45	2:50															
2:50	2:55															
2:55	3:00															
3:00	3:05															
3:05	3:10															
3:10	3:15															
3:15	3:20															
3:20	3:25															
3:25	3:30															
3:30	3:35															
3:35	3:40															
3:40	3:45															
3:45	3:50															
3:50	3:55															
3:55	4:00															
4:00	4:05															
4:05	4:10															
4:10	4:15															
4:15	4:20															
4:20	4:25															
4:25	4:30															
4:30	4:35															
4:35	4:40															
4:40	4:45															
4:45	4:50															
4:50	4:55															
4:55	5:00															
TOTAL(3HRS)																

		CCFS	EXCEPT-CCFS	ADMISSION	DISCHARGE	VITAL SIGNS	MEDI. PRE. & ADMINISTRATION	HYGIENE	SAMPLING & TESTING	WITH PATIENT & FAMILY	WITH STAFF	WITH DOCTOR	COMPUTER	ICU DEVICE	PERSONAL	NON VALUE ADDED TIME
TIME INTERVAL		DOCUMENTATION				PATIENT MONITORING				COMMUNICATION			TECHNICAL WORK		MISCELLANEOUS	
5:00	5:05															
5:05	5:10															
5:10	5:15															
5:15	5:20															
5:20	5:25															
5:25	5:30															
5:30	5:35															
5:35	5:40															
5:40	5:45															
5:45	5:50															
5:50	5:55															
5:55	6:00															
6:00	6:05															
6:05	6:10															
6:10	6:15															
6:15	6:20															
6:20	6:25															
6:25	6:30															
6:30	6:35															
6:35	6:40															
6:40	6:45															
6:45	6:50															
6:50	6:55															
6:55	7:00															
7:00	7:05															
7:05	7:10															
7:10	7:15															
7:15	7:20															
7:20	7:25															
7:25	7:30															
7:30	7:35															
7:35	7:40															
7:40	7:45															
7:45	7:50															
7:50	7:55															
7:55	8:00															
TOTAL(3HRS)																
TOTAL(12HRS)																