

Time and Motion study on the ICU Nursing staff & A study on diagnostic accuracy between provisional & lab./radiological diagnosis

Introduction Time and 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.

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 shift.

Introduction A diagnosis is meant to provide a reliable description of the clinical condition. A provisional diagnosis is the first considered diagnosis. 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.

Objective To find out the correlation between Lab diagnosis, Radiological diagnosis with Provisional diagnosis.

Methodology-
Sample size (Lab.)= 403
Sample size (Radio)= 396
Convenience Sampling

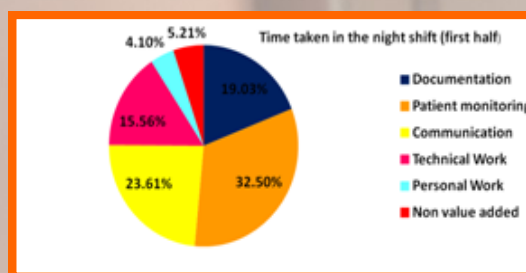
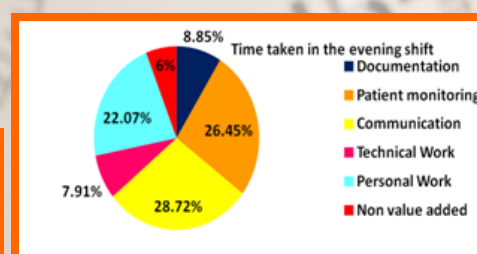
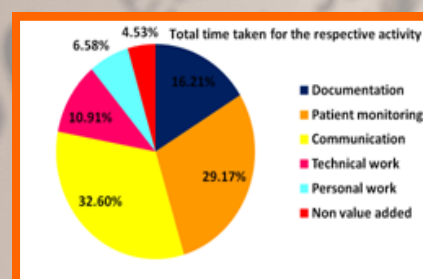
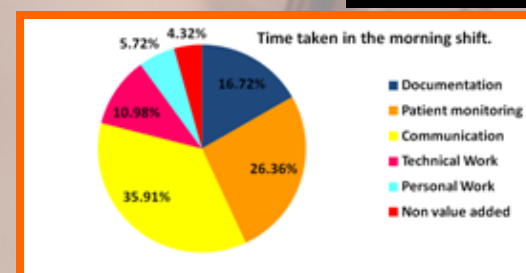
Methodology- Descriptive and exploratory

Sample size 30 ICU
Nursing Staff.
Convenience sampling.
Study hours **204** hours

NAME -	GENDER -	EMP. ID -	ICU -	SHIFT -														
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			
8:00	8:05																	
8:05	8:10																	
8:10	8:15																	
8:15	8:20																	
8:20	8:25																	
8:25	8:30																	



Findings



Limitations

- Time taken by the nurses with an experience of <1 yr. were not included
- Only highly occupied ICU nursing staff were included in the sample
- The challenge which 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



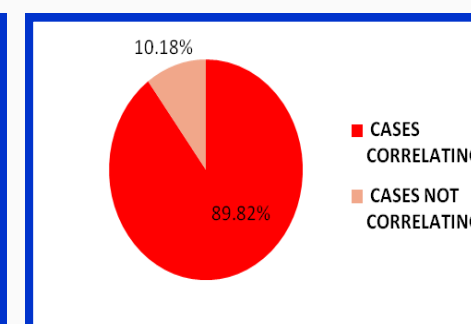
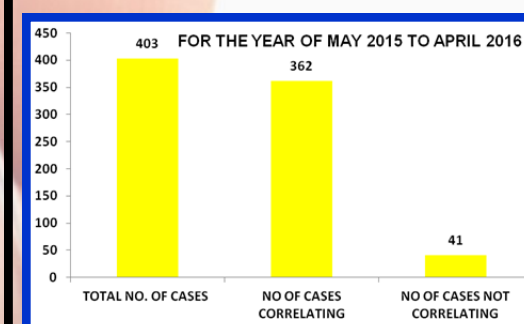
Recommendations

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

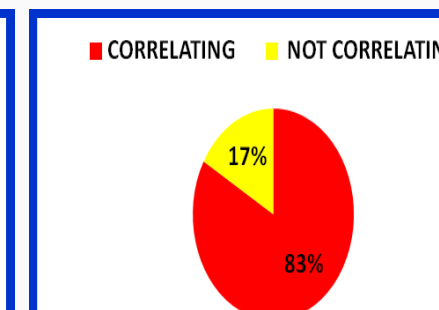
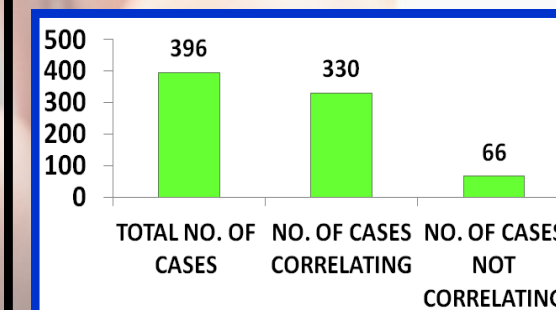
BY- Dr Syed Waseem Farooq (MBA Pharmaceutical management)
Dr. Sakshi Jalali (MBA Hospital And Healthcare Management)

Findings

Laboratory diagnosis and Provisional diagnosis (May 2015– April 2016)



Radiological diagnosis & Provisional diagnosis (Dec. 2015 to Mar. 2016)



Limitations

- Manual records were provided in which some of the provisional diagnosis were illegible and acted as source of bias.
- 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 an investigation.
- Some provisional diagnosis were not filled and were treated as outliers

Conclusion

- The study indicates 90% accuracy in laboratory diagnosis and 83% 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.