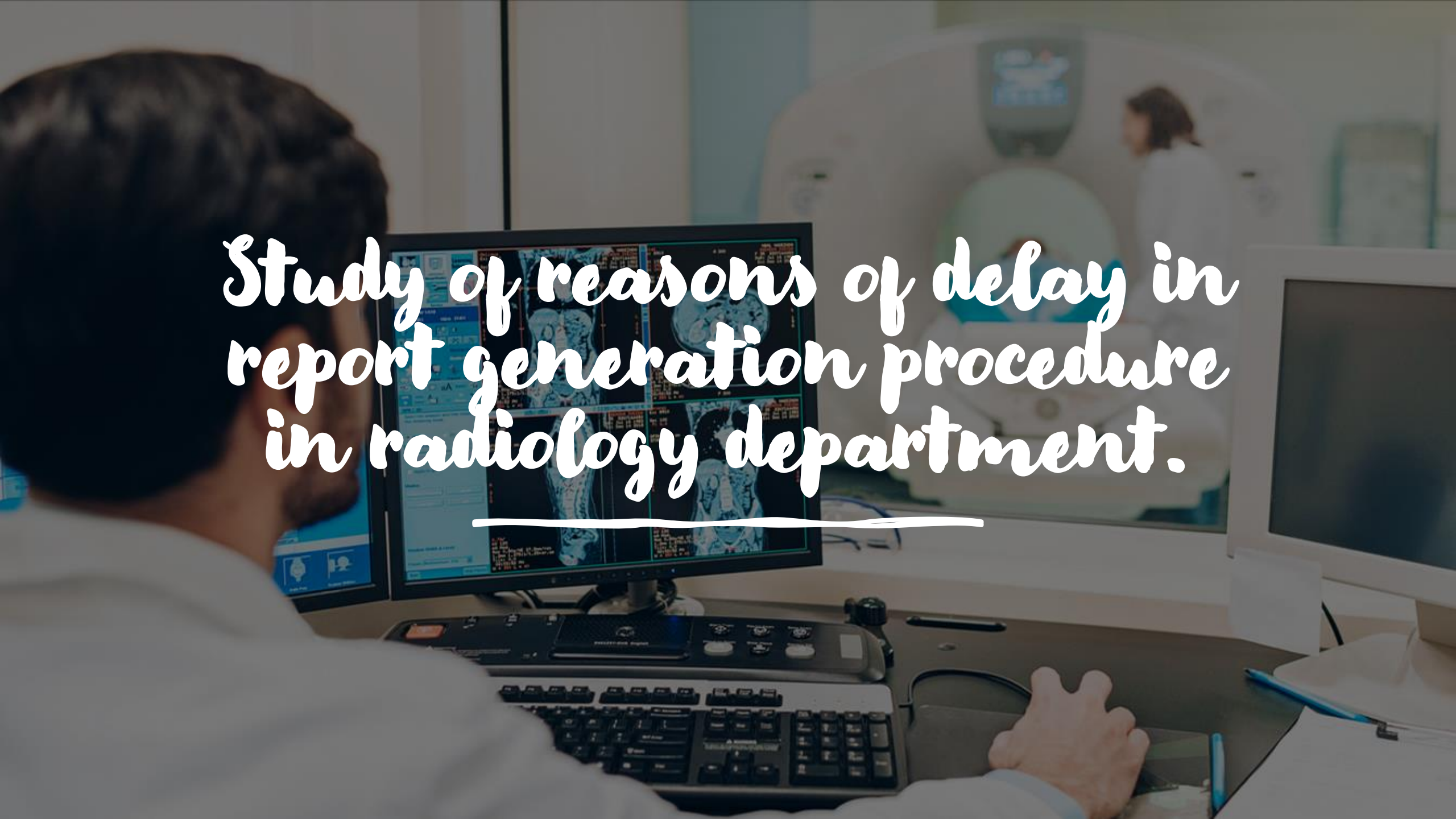


Summer training Presentation

- Name :- Rohit Kishor Chintawar
- MBA HM25
- Roll No. 1179
- Organization Mentor :- Vanadana Patel
- College Mentor :- DR. Neetu Purohit

A radiologist is seen from behind, sitting at a desk with multiple computer monitors. The primary monitor displays a medical imaging software interface with several CT scan slices of a human torso. The radiologist's hand is on a mouse. In the background, a large CT scanner is visible, and another person in a white lab coat is standing near it. The scene is dimly lit, typical of a clinical setting.

Study of reasons of delay in report generation procedure in radiology department.

Introduction

- Radiology reports is a crucial a part of PMR (Patient Medical Record). NABH and JCI have their reporting exercise pointers that designate how the very last file need to be generated and submitted after any radiological examination, procedure, or consultation. A restricted and incomplete preliminary file may be generated to manual the affected persons on the spot treatment, however the distinction among the preliminary file and the very last file need to be suggested quick and reliably. In the case of emergency intervention or viable negative affected person outcomes, unconventional verbal exchange is needed with the healthcare provider, his/her certain personnel, or without delay with the affected person. The documentation of this verbal exchange is obligatory, ideally withinside the file or the affected person's clinical record. The NABH and JCI pointers permit radiologists to have a positive diploma of freedom to make medical judgments in those situations, however it's far obligatory that the body of workers and the precise time be knowledgeable of the effects of the investigation. The crucial a part of in-intensity information in radiology reviews is associated with its significance as a prison document. In-intensity documentation may be the principal bridge among radiological mistakes and the negligent care that constitutes a clinical incident, due to the fact prison agencies generally tend to expect that the absence of documentation approach that the debatable records or activities did now no longer occur.

- As per the ABMH standard protocol for CT-MRI the report should done within 4 hours after completion of study and X-Ray & USG report should be done within 2 hours after completion of study. It is very helpful for the hospital to maintain effectiveness of radiology department and to ensure to get the treatment for patients in time.

Research Question :-

- What are the reasons of delay of reports generation process in radiology department at Aditya Birla Memorial Hospital, Pune?

Objective :-

- To find out the reasons of delay in the report generation process.
- To suggest measures for reducing time taken for generation of report.



Method :-

- Report Turnaround Time values for MRI, CT, X-Ray and USG were compared based (01 June 2021 to 26 June 2021)
- Reasons delay were noted by taking interviews and observation.

Research Design :-

- Descriptive Study

Sample Size :-

- 1549 (From 1 June to 26 June)
- CT-MRI 400
- X-Ray & USG 1149

Data type :-

- Primary data.

Mode Of data collection :-

- From the hospital record with help of Magnum software.

Exclusion :-

- Fluoroscopy and mammography has not been included in this study because it was very difficult to collect and data as there were very few patients come for this procedure.

Reports Generation Procedure for Radiology Department at ABMH



Study Done

Assign to Radiologist

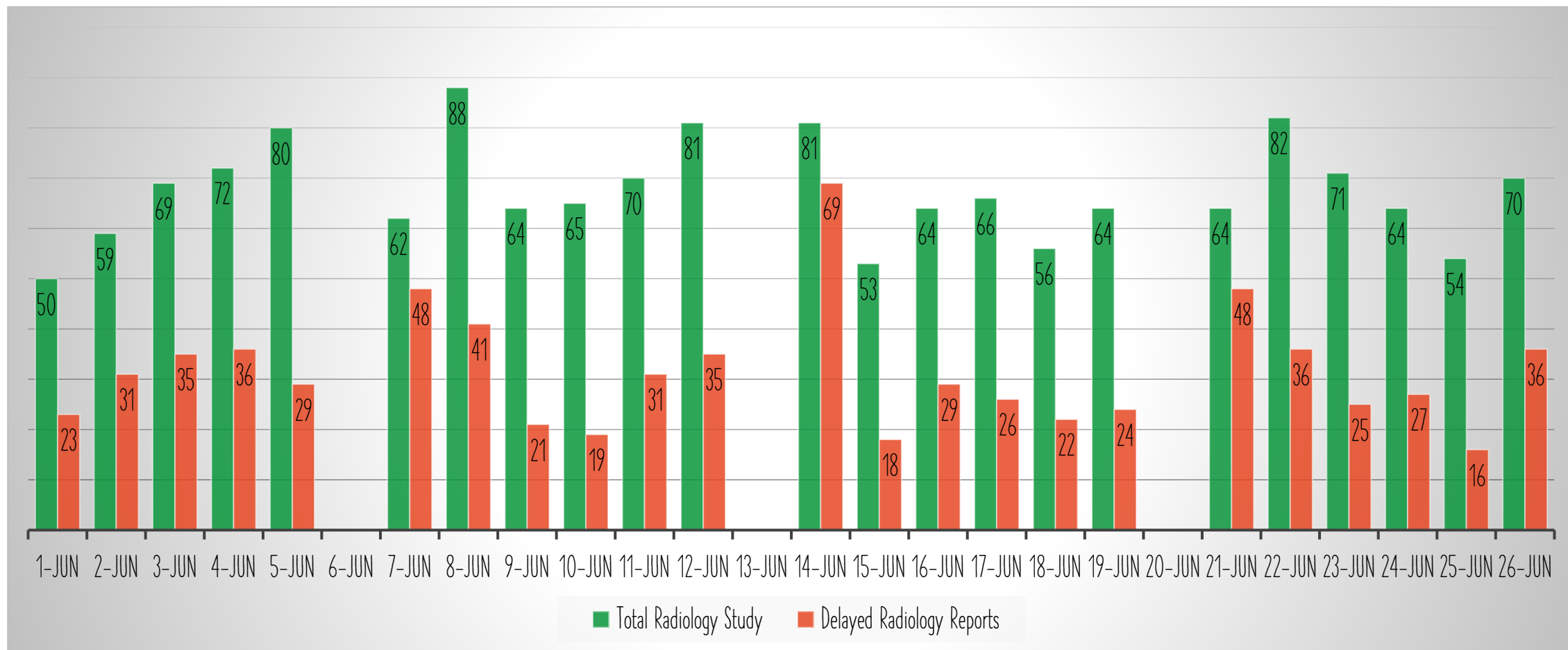
Dictate by Radiologist

To Transcriptionist

Confirm by Radiologist



Total studies and delays :-



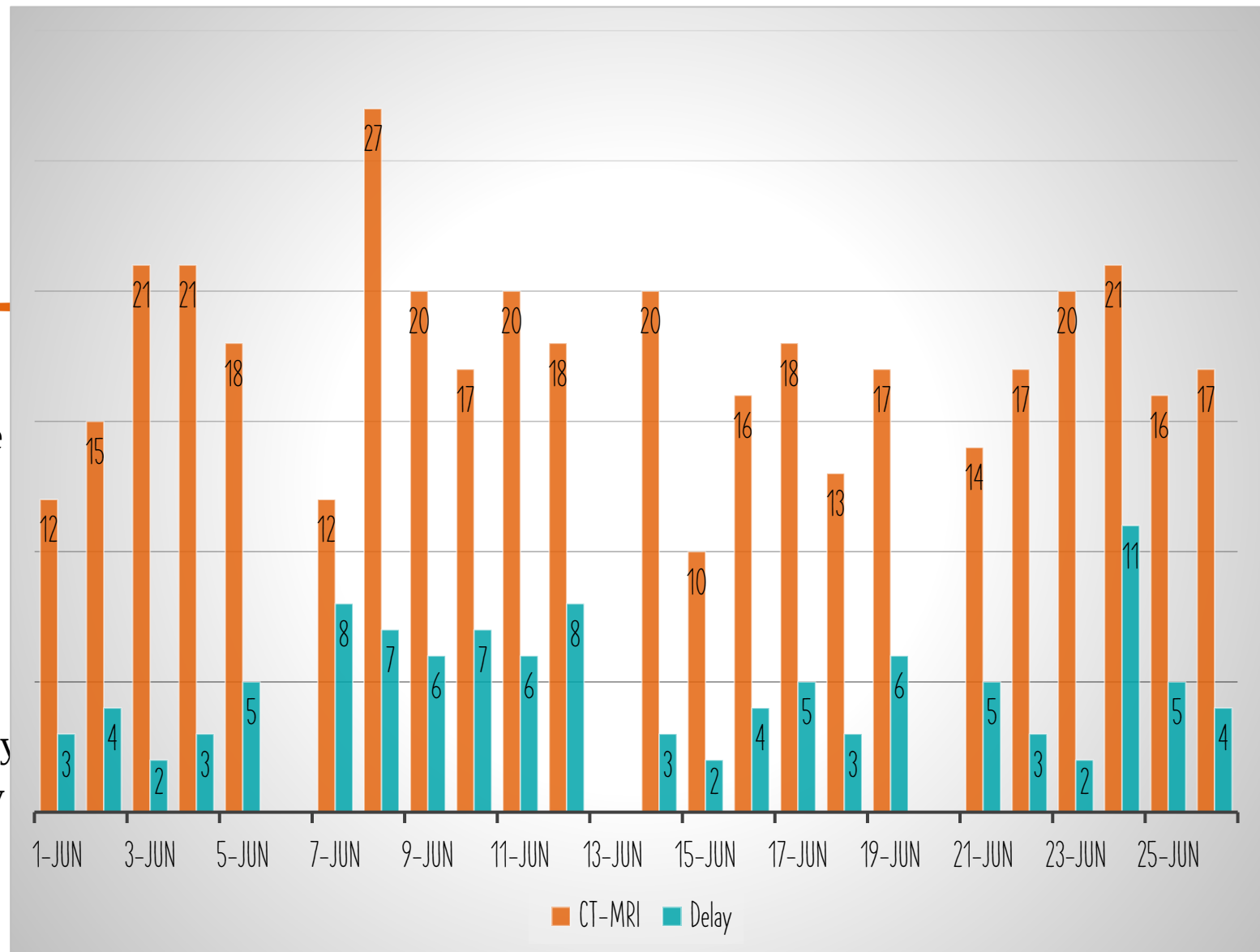
Total Radiology Studies and Delay from 1 June to 26 June.

Date	Total Radiology Study	Delayed Radiology Reports	Delay %
1-Jun	50	23	46%
2-Jun	59	31	53%
3-Jun	69	35	51%
4-Jun	72	36	50%
5-Jun	80	29	36%
7-Jun	62	48	77%
8-Jun	88	41	47%
9-Jun	64	21	33%
10-Jun	65	19	29%
11-Jun	70	31	44%
12-Jun	81	35	43%
14-Jun	81	69	85%
15-Jun	53	18	34%
16-Jun	64	29	45%
17-Jun	66	26	39%
18-Jun	56	22	39%
19-Jun	64	24	38%
21-Jun	64	48	75%
22-Jun	82	36	44%
23-Jun	71	25	35%
24-Jun	64	27	42%
25-Jun	54	16	30%
26-Jun	70	36	51%

- 
- For BMD only 1-2 used to come per day on some days there were no patients for this procedure, so there was not delay in report generation procedure.
 - The graph shows daily studies done in radiology department and delayed reports from 1 to 26 June.
Total 1549 studies has been done from 1 June to 26 June from that 725 reports delayed i.e. 47%.
 - There are more number of delay on Monday like 7, 14, and 21 June cause non availability of radiologist on Sundays.
 - Radiology Studies done on Saturday and Sunday for both days report generation process starts on Monday because Sunday is weekly off for radiologist Doctors.
 - The average number radiology
 - studies done is 67.38 and average number of delay 31.52.

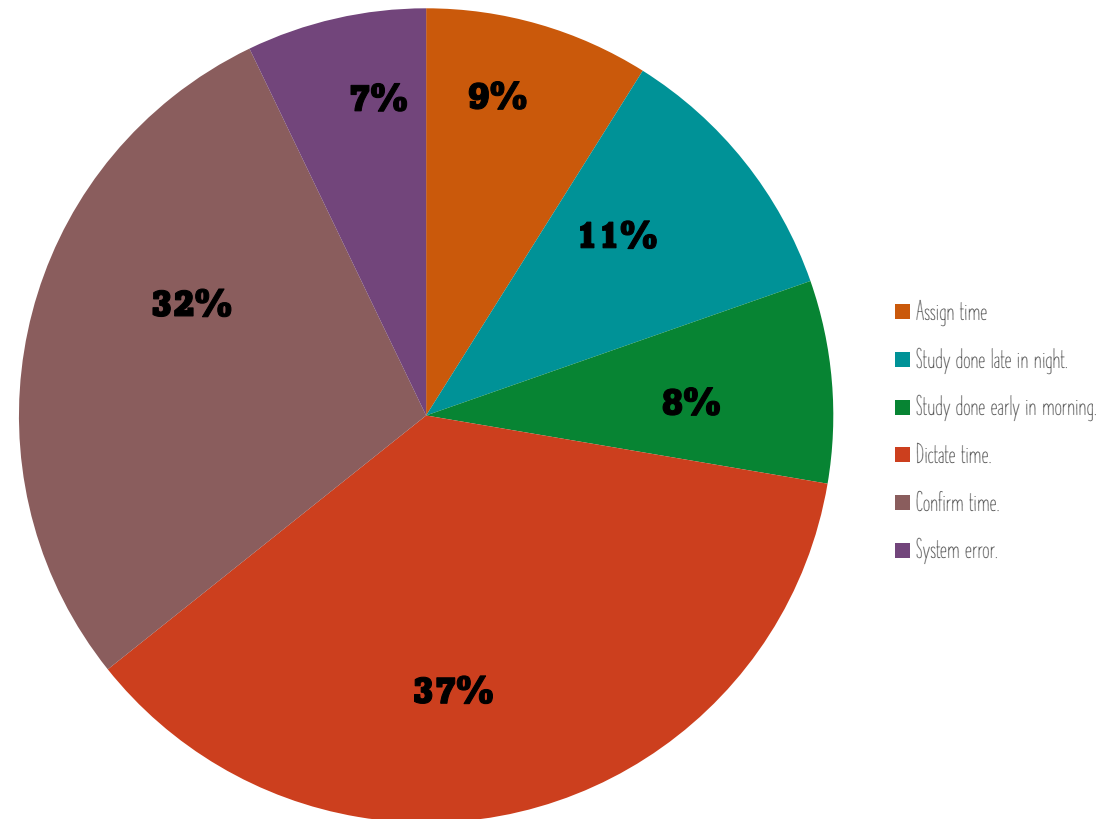
CT-MRI

- Above graph shows the total studies done in CT-MRI during 1 June to 26 June and delayed reports. The blue line shows the total studies done of CT-MRI and the orange line shows the number of delayed reports during the period of 1 June to 26 June. In graph the number of delayed reports are more on Monday cause Sunday is weekly off of radiologist doctor so they dictate all the studies done from Saturday night to Monday mornings on Monday.



Delayed reports of CT-MRI from 1 June to 26 June.

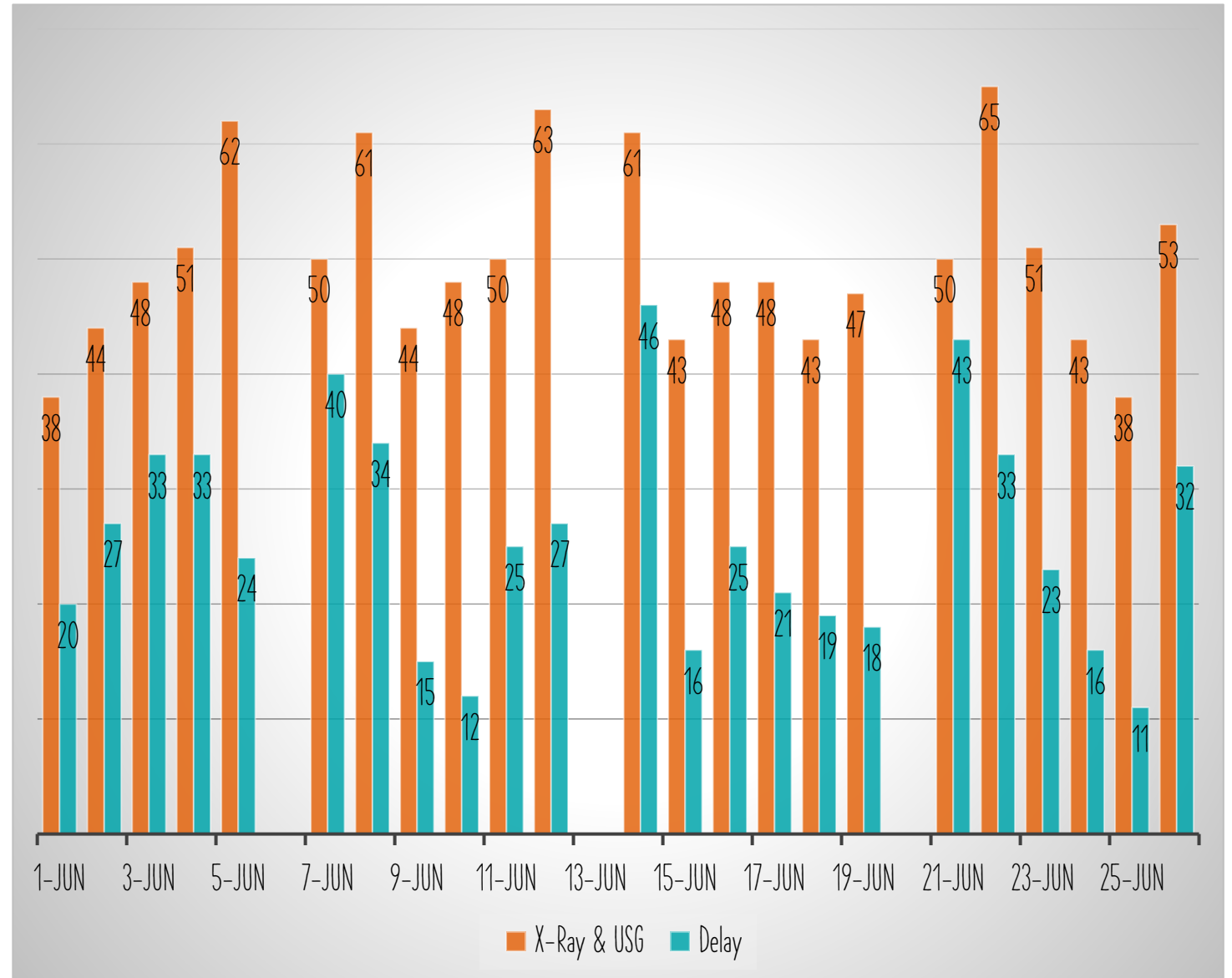
Reasons of delay in CT & MRI Report Generation Procedure



-
- After analyzing the data, found some major reasons for delaying in report generation process for CT-MRI.
 - Reasons with highest percentages are Dictate time and Confirm time that is 69% of the total delayed reports these are the main reason for delaying in report generation process other all reasons are 31% responsible for delayed reports.
 - This usually happens because sometimes doctors are not available. They might be busy with reports or may be study has not been assigned to the on duty Doctor.

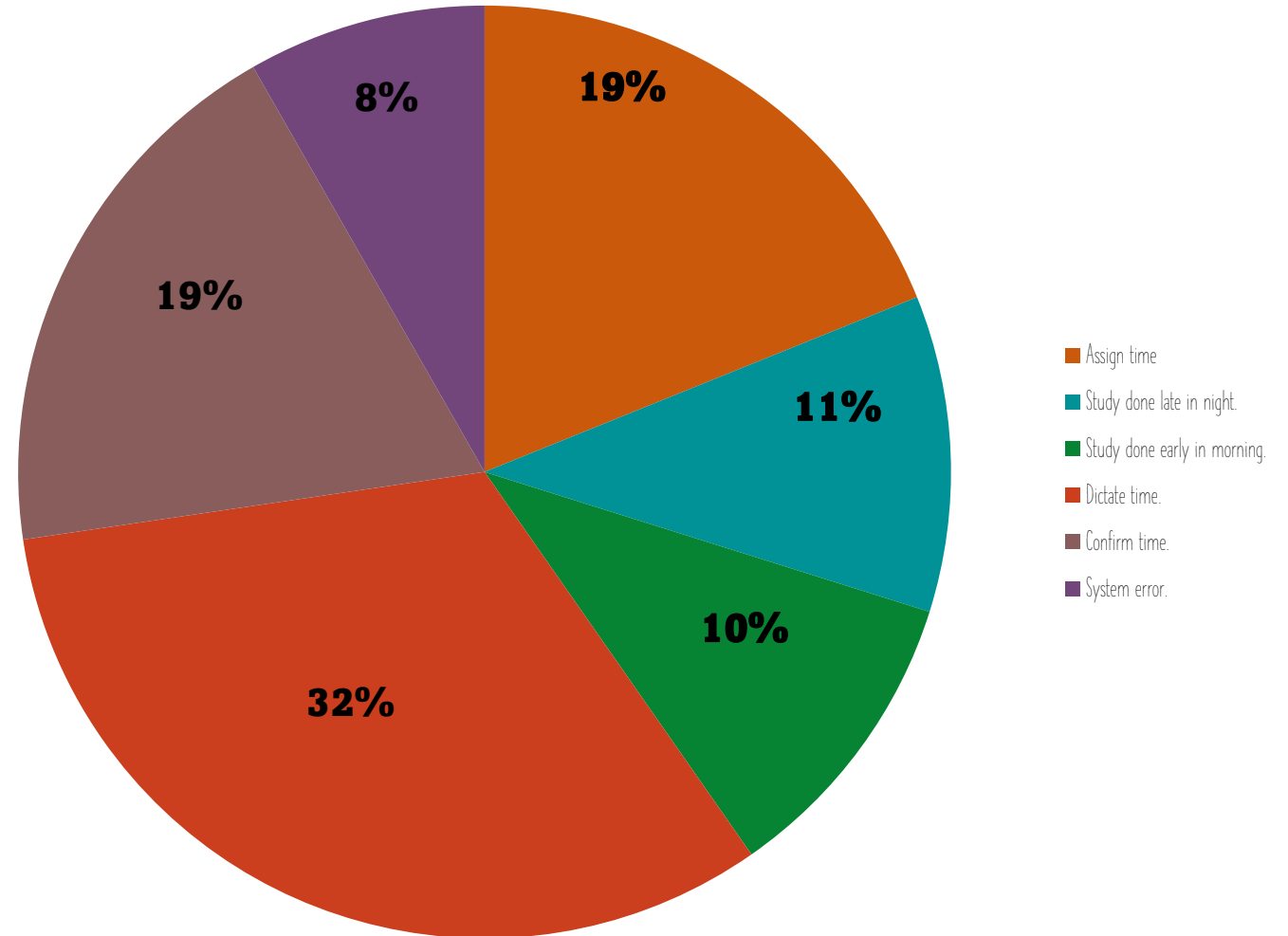
X-Ray & USG

- Above graph shows the total studies done in X-Ray & USG during 1 June to 26 June and delayed reports. The blue line shows the total studies done of X-Ray & USG and the orange line shows the number of delayed reports during the period of 1 June to 26 June. In graph the number of delayed reports are more on Monday cause Sunday is weekly off of radiologist doctor so they dictate all the studies done from Saturday night to Monday mornings on Monday.



Delayed reports of X-Ray & USG from 1 June to 26 June.

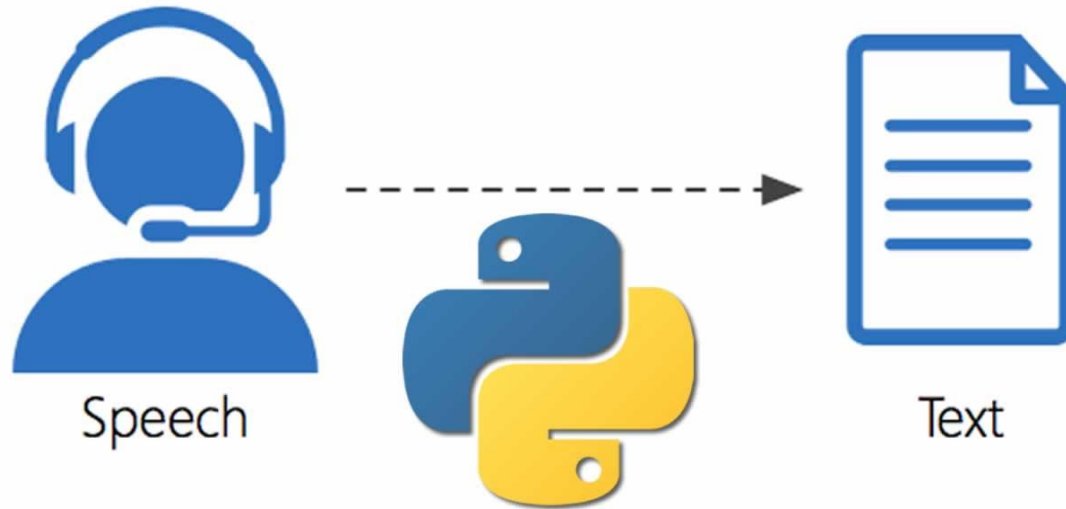
Reasons of delay in X-Ray & USG Report Generation Procedure



-
- After analysing the data found some major reasons for delaying in report generation process for X-Ray & USG.
 - Reasons with highest percentages are Assign time, Dictate time, and Confirm time that is 70% of the total delayed reports these are the main reason for delaying in report generation process other all reasons are 30% responsible for delayed reports.
 - Dictate time and confirm time is depend on radiologist doctor and Assign time depend on radiology technician it is fault of technician. After asking to technician that why there is delay in assign time. He answered that sometimes he is not able to send the images to doctor and also not able to assign the study.

Recommendations

Implementation of SRS



- As the Dictate time is more for that we can implement AI based SRS(Speech Recognition System). Traditionally, the process of report creation begins when the radiologist dictates the case, creating an audio report. This is sent to the medical transcriptionist, who types the dictated material, creating a preliminary report. Then the preliminary report reviewed by radiologist then accept or confirm the report. This process does take lot of time.
- After Installation of SRS the radiologist would be able to dictate the case and edit it if necessary, then confirm it all at once. This procedure will reduce the report generation time by 30-40 minutes.

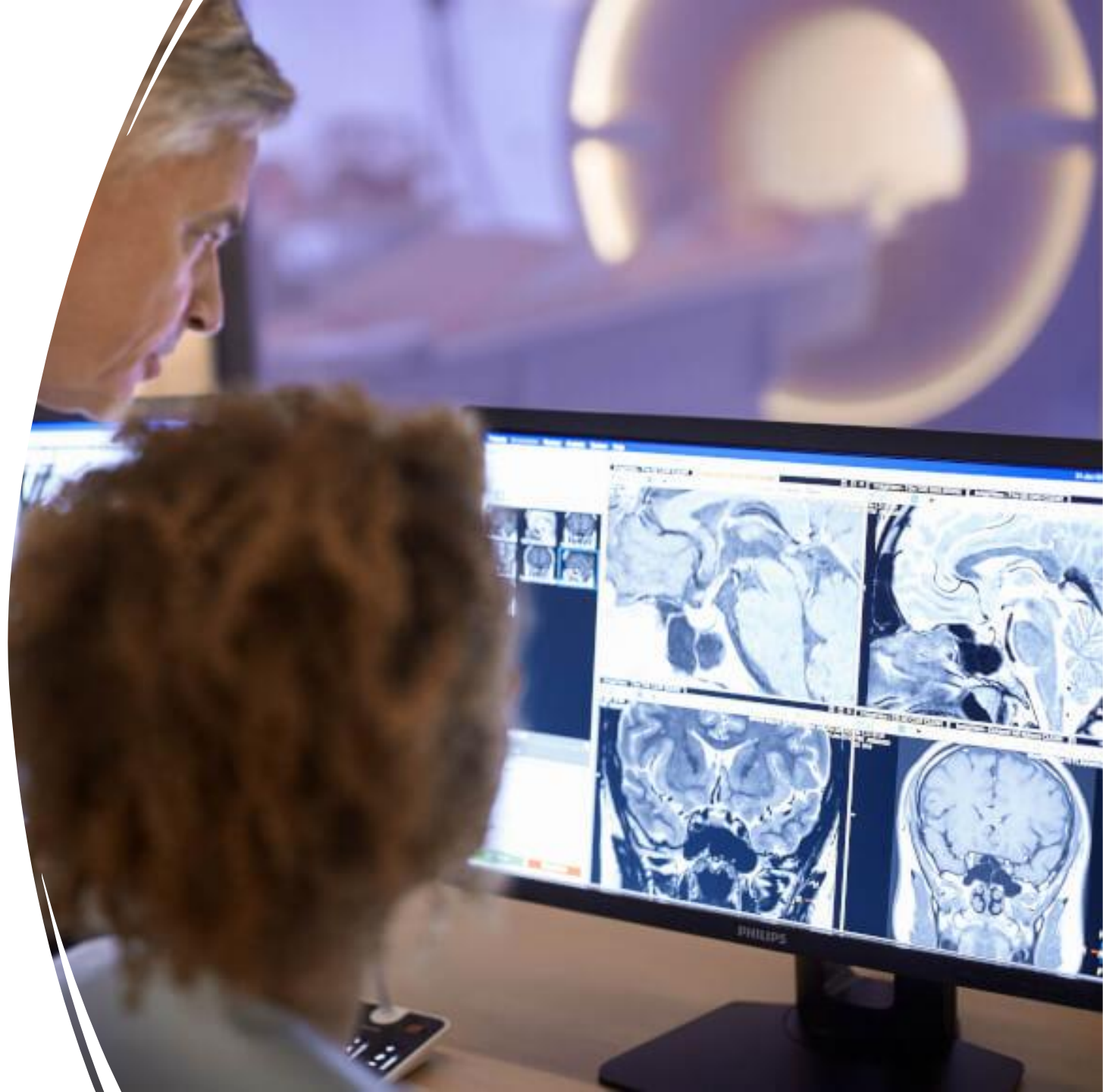
Distribution of Work

- After analyzing the data from 1 June to 26 June 2021, it was found that many technicians assigned the study to only one or two radiologists so it created problem as one radiologist had increased workload as compared to others. The solution for this is to distribute the studies to all radiologist equally so that there won't be delay in generation and dispatching of reports



Confirmation rights

- There is rule when one radiologist dictates the case then only that radiologist who has dictated case can only confirm the report after completion typing of that report by the medical transcriptionist , no other radiologist has that right to confirm that report. As the confirm time is one of the huge reason of delaying in report generation procedure the IT team can allow or give rights to all radiologist to confirm each others reports.





Radiologist on Sunday

- As there is higher number of delay in reporting on Monday to tackle this issue we can hire some new radiologist to work on Sunday or ask few to radiologists to work on Sundays also.



Conclusion

- After all the results were studied carefully some of the reasons of delaying in generation report in radiology department are dictate time, confirm time, unavailability of radiologist on time, and assign time. Out of these reasons according to the findings all these reasons can resolved to avoid delay and reduce the report generation time, which in return will improve the overall further patients' treatment. Our major focus should be on avoiding the unnecessary delays like assign time and confirm time. To avoid these delays, we should improve communication between the coordinators.
- Technological advancement would be going to help a lot to increase the overall efficiency without any sacrifice in quality of reports.



Thank You
