

Singhealth-EHA-Carestream Intelligent Automated Work Distribution System

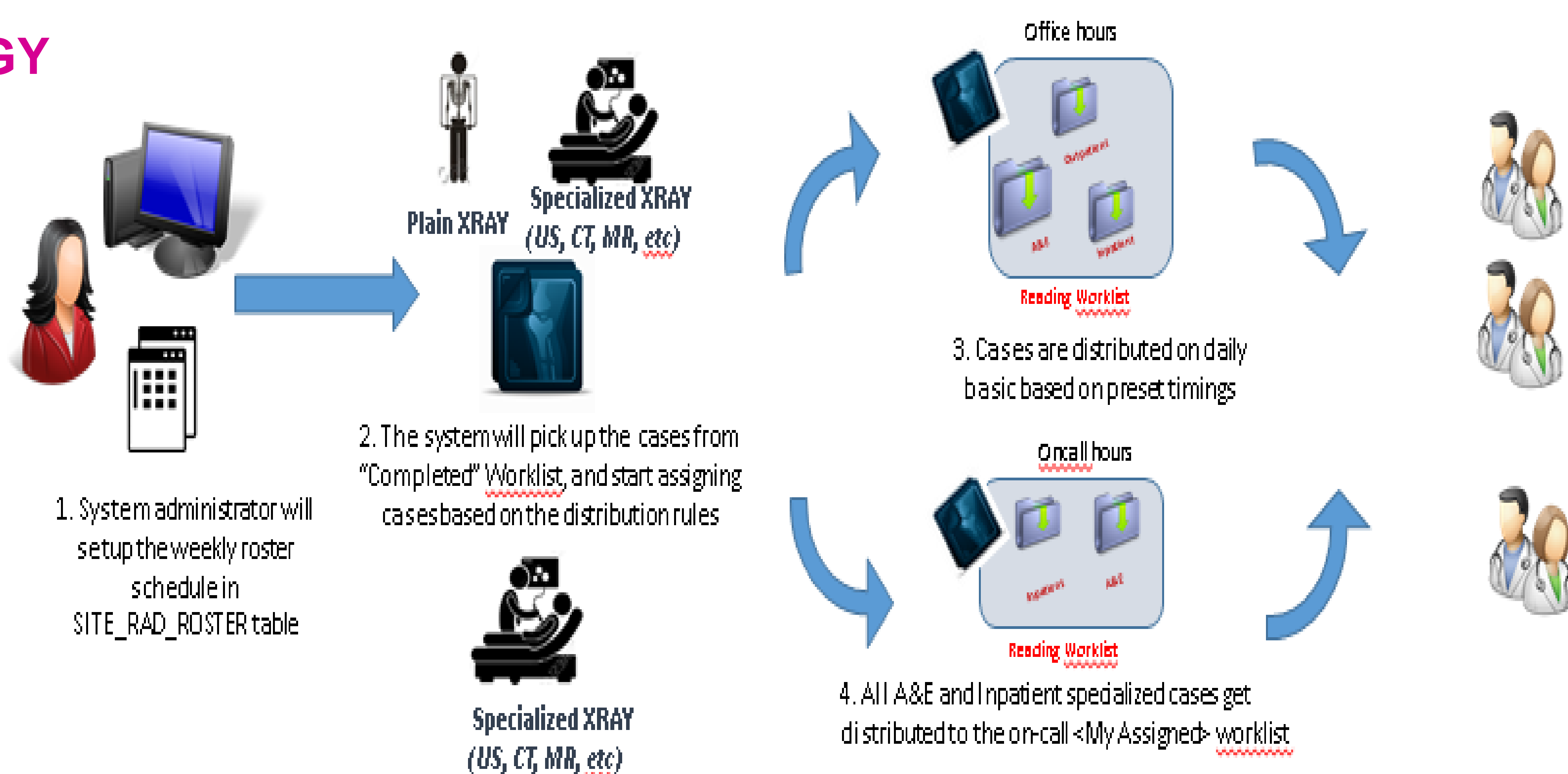
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AIMS

The Department of Radiology, CGH is a small department of radiologists serving the needs of a 1000 bed regional hospital. To ensure timely and accurate reports, all studies were manually assigned by radiographers and administrators to specified radiologists based on patient type, report priority, subspecialty skills, radiologist availability and load balancing rules. This process however was time consuming for staff doing the distribution.

The objective of this project was to develop a narrow Artificial Intelligent module in the Radiology Information System (RIS) that could automate the distribution of imaging studies based on user defined rules.

METHODOLOGY



MEASURES

The system was jointly developed with Carestream Health (CS) as part of the 2012 Singhealth-EHA RIS/PACS project and implemented in March 2016.

Data on radiologist, radiographer, administrator user satisfaction, productivity gains and changes in reporting turnaround time (RTAT) were measured. 82.8% of surveyed radiologists agreed that the system improved the way they worked and there was more equitable distribution of studies. 77.1% agreed that there was a reduction in errors in distribution. Radiographer user acceptance improved from 67.7% just after implementation to 95.0% when the survey was repeated a year later after the system was allowed to function with minimal human checking and bugs were addressed.

An estimated 0.5FTE of radiographer time and 0.23FTE of administrator time were saved. RTAT for specific studies such as CT improved by about 10%.

CONCLUSION

The CS Intelligent Automated Work Distribution system in RIS successfully automated the previous manual process of load balancing, saving time for radiographers, administrators while improving radiologist and radiographer work satisfaction and ensuring timely patient care.

