Automated Flagging and Tracking for Incidental and Modified Radiology Reports for ED Patients

William G. Geiger, MS, Johns Hopkins Medicine

Background/Problem Being Solved
How to consistently communicate Incidental findings and modified results for ED patients across a multi-hospital enterprise.

How to improve communication between the Radiologist, ED providers, the PCP and the patient while reducing workload for Radiologists.

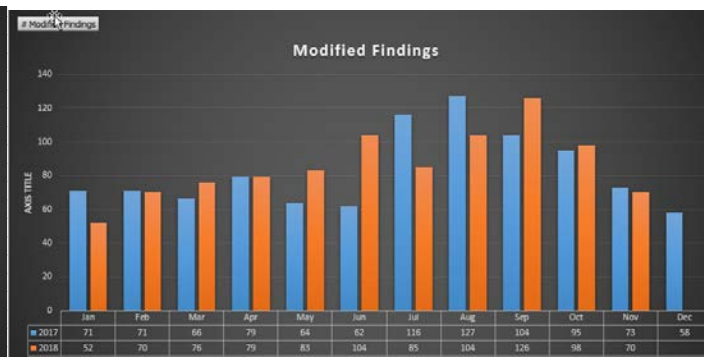Our goal was to provide an automated workflow that leveraged our existing systems.

Interventions
The pre-existing Incidental and Modified reporting process that was not standardized across all sites. Additionally, the radiologist would have to report the finding in the dictation system as well as complete several completely separate screens within the HIS. Since the information being dictated into the report was exactly the same as what was being entered into the HIS it was quickly understood that the existing workflow was inefficient.   We started by leveraging existing report flagging templates within our dictation system that allowed for users to easily adopt the new flagging procedures. The HL7 Engine was then adding a dedicated CE segment to the result message based on the strict text in the OBX segments before it was transmitted to our HIS.

Once received by our HIS the result was automatically marked with the flag acuity in the patient chart, the ED Discharge summary, the After Visit Summary, as well as the intersystem result notification sent to the ED Provider in the HIS. The PCP also receives a care report marked with the flag as well. The patient also receives a letter denoting a finding that warrants additional follow up as most ED patients are quickly discharged.

Outcome
A significant increase in Incidental and Modified findings being reported were noted following a phased go-live beginning in March 2018. We also achieved near full adoption by users as this solution required less effort from users and utilized their existing workflows.

Incidental Findings

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2017		1		3				11	9	3	5	6
2018	2		50	390	497	502	429	593	621	622	510	

Modified Findings

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2017	71	71	66	79	64	62	116	127	104	95	73	58
2018	52	70	76	79	83	104	85	104	126	98	70	

Conclusion

In conclusion, we were able to improve communication between the Radiologist and ED Providers as well as PCPs by automating the incidental and modified reporting process. We were also able to take it a step further and notify the patient that follow up is required even as many patients are discharged from the ED shortly after being seen.

Statement of Impact

By leveraging the built-in functions of our existing systems to their fullest we were able to improve patient safety and communication for a necessary but often overlooked Radiology reporting function.

Keywords

incidental findings, modified findings, HL7, HIS, automation, integration, reporting, communication