

Implementation of a Closed-Loop Notification System for **Significant Abnormal Results** to Improve Patient Safety & Care

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1 Aim

Critical results require timely communication to the clinicians to help ensure appropriate intervention is carried out. An existing policy in Singapore General Hospital (SGH) governs the immediate notification of critical results (Panic Values). For significant abnormal results that do not require immediate communication, early intervention or action may still be required to prevent adverse outcomes. As such, to ensure patient safety and enhance clinical quality, a Critical Results Management (CRM) team was formed to manage the closed-loop notification of significant abnormal radiology and histopathology results.

2 Methodology

Significant Abnormal

Results Finalization

Results are finalized by reporting departments, i.e. Department of Diagnostic Radiology (DDR) & Department of Pathology.



1st Notification Email

CRM team sends 1st notification email to Ordering Clinician & Consultant-in-charge on significant abnormal radiology & histopathology results.



Closed- Loop Notification

Notification loop is closed when an email response is received from either of the clinicians within 3 working days.



Radiology Results (Inpatient & Emergency Cases)

For inpatient and emergency cases, the team dispatched hardcopy reports of significant abnormal radiology results to the respective nursing stations. The staff signs for receipt of the reports, which are subsequently distributed to the relevant clinicians, thereby closing the notification loop.



1st Reminder Email

The CRM team sends a reminder email to the Ordering Clinician and Consultant-in-charge on the 4th working day if there is no email response.



Escalation Process

An escalation process is in place to ensure that the notification loop of any outstanding unacknowledged results is closed.

Within **21** Calendar Days

3 Results

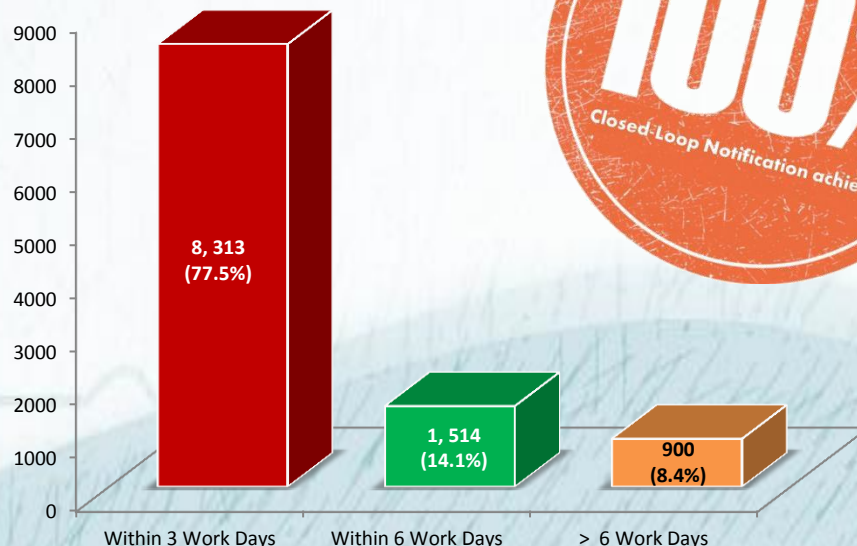
The closed-loop notification system was implemented in phases as follows:

- Radiology Results (November 2012)
- Histopathology Results (November 2013)

As of 31 May 2014	Total Number of Emails Notifications sent
Significant Abnormal Radiology Results	9, 284
Significant Abnormal Histopathology Results	1, 443
TOTAL :	10, 727

Time taken* to close Notification Loop

■ Within 3 Work Days ■ Within 6 Work Days ■ > 6 Work Days



4 Conclusion

The CRM team helped to improve management of significant abnormal results that do not fall within critical values but still require timely attention by the clinicians to ensure appropriate intervention for optimal patient care.

* Statistics shown is from date of implementation till 31 May 2014.