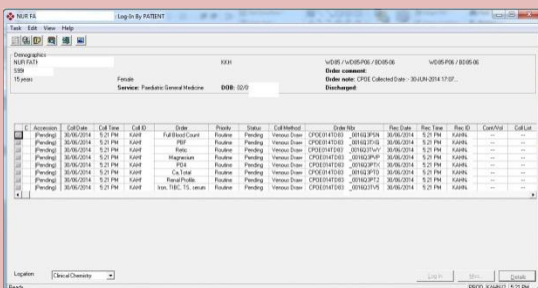


Aim(s)

At KK Women's & Children's Hospital (KKH), majority of the laboratory tests are ordered using the hospital Computerized Physician Order Entry (CPOE) system. A limitation of the Laboratory Information System (LIS) is the need to retrieve and manually match the ordered tests using the CPOE-generated identification number against the ordered tests in the LIS. Errors can occur, for example, if an ordered test was missed out during specimen requisition and therefore tests would not be performed.



Examples
of CPOE
specimens

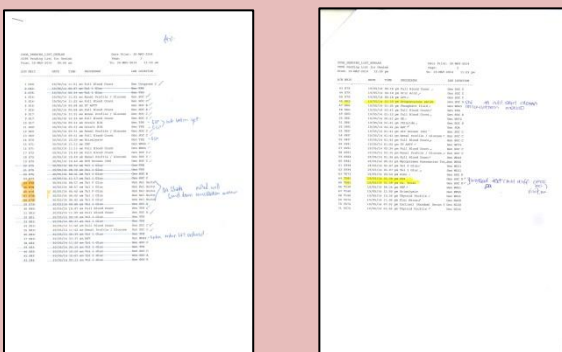


An example
of the Login
Specimen
Screen

In this project, we aimed to reduce missed-out orders in the LIS by implementing a tracking procedure for CPOE specimen collection.

Methodology

A solution was found whereby a reconciliation list was created in the LIS by generating a list of unprocessed specimens already collected by the clinicians. The list had to be based on the time of CPOE ordering and the defining logic in the system was to search for specimens that had been collected but were still pending for more than four hours with no laboratory results. The pending list was to be automatically generated twice a day.

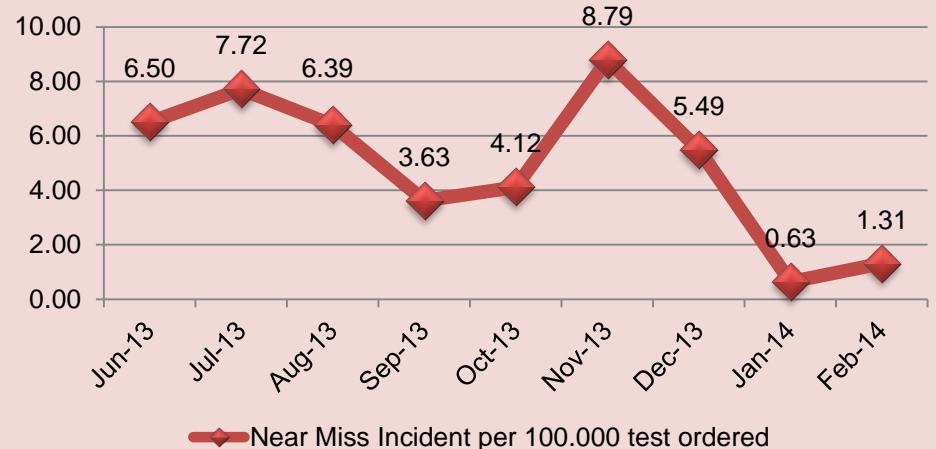


Example of CPOE Pending List

Result

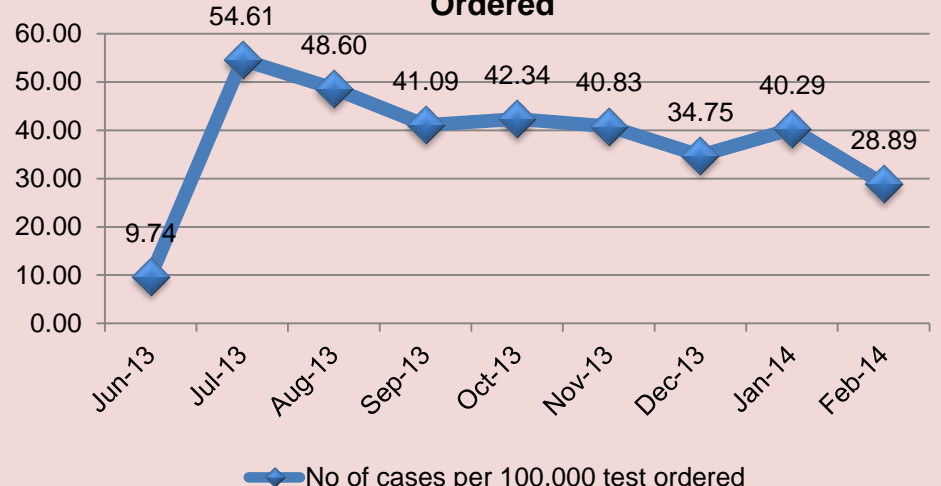
In the survey period (June 2013 – February 2014), 72 near-miss cases were identified (4.97 cases per 100,000 test ordered). Each error would result in requiring the specimen to be retaken, thus causing patient discomfort, unhappiness or even re-visits at the clinics.

Near Miss Incident per 100.000 Test Ordered
Discovered by CPOE Pending List



There were also cases of CPOE labels being printed when the specimens had not been collected or were cancelled subsequently. This formed 552 cases surveyed (38.10 cases per 100,000 test ordered).

CPOE Label Printed but Specimen not Collected
or Cancelled Subsequently per 100.000 Test
Ordered



Conclusion

The reconciliation procedure is a simple yet cost-effective way of managing and identifying near-miss cases that may lead to poor feedback from patients. This initiative is aligned with one of the core values of SingHealth – "compassion"; to improve timely reporting of laboratory results that meets patients' expectation.