

Digitising Hand Hygiene (HH) Audit in SingHealth

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Problem Statement

Traditionally, hand hygiene audit and data collection tool for Cluster-wide Cross Institution Hand Hygiene (CIHH) Audits, as well as institution's internal audit, is primarily conducted using paper and pen. The hardcopy audit tool is as shown in Fig. 1. This makes the process of tabulating and analysis of results a laborious task and is also prone to higher risk of errors.

The IPSQ Audit and Assessment unit explored various ways of streamlining the process and eventually decided to digitalise the audit using a mobile application.

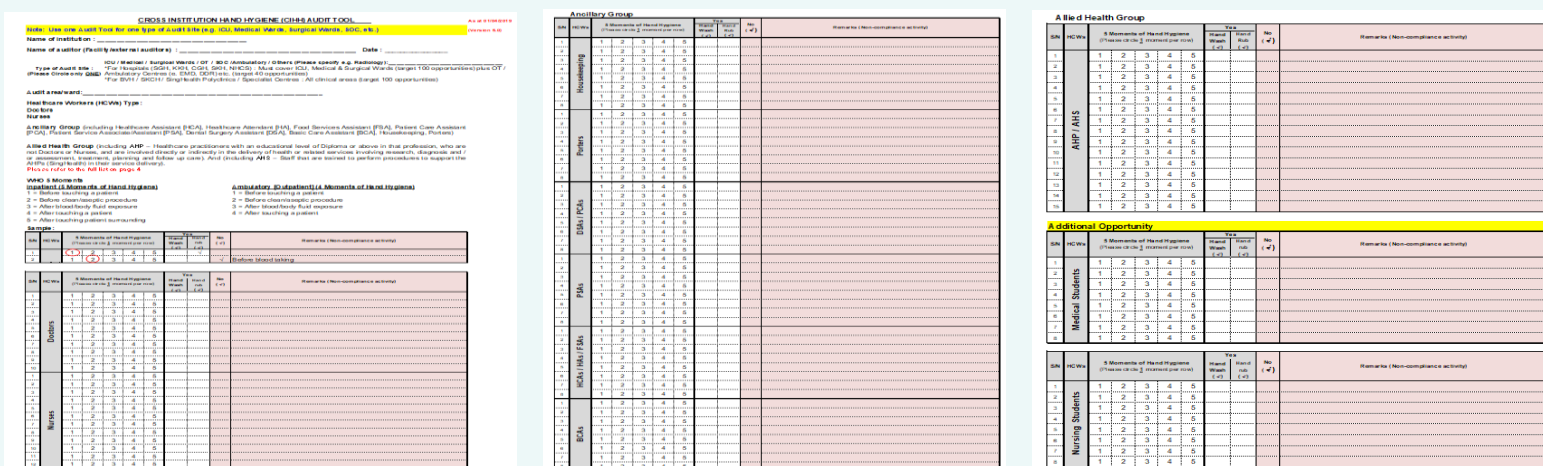


Fig 1 - Hardcopy audit tool

Project Aim

This initiative aims to demonstrate how the SingHealth CIHH Audit Digital Application (App) was successfully implemented across SingHealth and the benefits the App has brought to the audit process operations.

Lessons Learnt

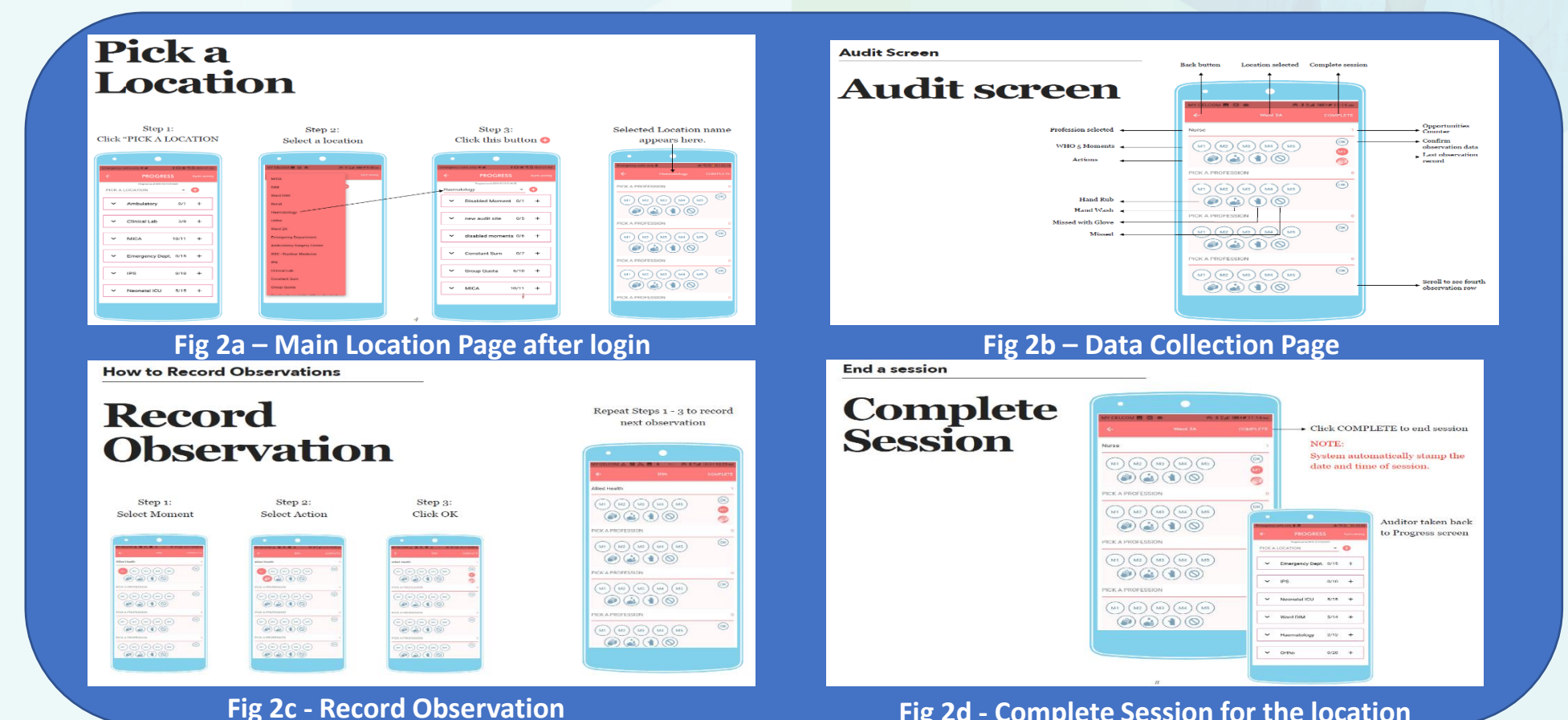
IPSQ adopted the agile concept & methodology in managing the project.

The concept allows for iterations and a collaborative approach in driving the project review and flexibility in accommodating changes in project requirements. Partners and stakeholders from Infection Prevention Workgroup who are Institution Infection Prevention Chairs and Institutions' representatives who were Hand Hygiene (HH) Champions, CIHH auditors and Infection Prevention Nurses were engaged.

With strong buy-in and working towards a common goal, the cross-institution representatives participated in the conception, initiation, analysis, design, construction, testing and implementation with IPSQ, App Vendor and IHIS (now known as Synapxe).

Potential Solutions

In a 17-month journey, the App was successfully conceptualised, developed, tested and it went live in January 2020. The overall functions and interface is intuitive (Fig 2a-2d) and data is live.



Users who are the CIHH auditors, Institution internal HH auditors as well as staff from Infection Prevention Offices in the Institutions were trained (Fig 3).



Fig 3 - Users' Training

Outcomes & Impacts

The App was well received by institutions across SingHealth with 100% adoption rate. Time in managing the audit operations in each CIHH audit has been reduced from 300 minutes to 180 minutes (67% improvement). With 44 CIHH audits a year, the time savings in operations is approximately 5,280 minutes. This excludes the time savings from the other 11 Institutions; estimated with another 20% improvement.

The audit data was stored in a central Cloud database for enhanced integrated data analysis and benchmarking.

Conclusion

The App was successfully developed within 17 months with 100% adoption rate from the SingHealth Institutions. More than 5,280 minutes of time has been saved from the audit process operations per year. The benefits that the App brings makes Hand Hygiene audit using digital application the new norm.