

Project Title

Vertical Integration of Hardware and Software Automation in Pharmacy (VIP)

Project Lead and Members

Project members: Lim Shi Zong Nigel, Norjanah Binte Alias, Norfadhilah Binte Samsuri, Chloe Chong Kai Li, Chong Zhi Yan, Menakah Alagappa, Siti Nurul Hudah Binte Salleh, Ng Mui Kiau, Lim Geok Choo, Awadah Binte Sabahrudin, Fung Kar Yen

Organisation(s) Involved

Ng Teng Fong General Hospital

Healthcare Family Group(s) Involved in this Project

Allied Health, Ancillary Care

Applicable Specialty or Discipline

Pharmacy

Project Period

Start date: January 2022

Completed date: December 2023

Aims

The first-of-its-kind in local public healthcare institutions (PHIs), Automated Code Red Alert (ACRA) system was piloted in Ng Teng Fong General Hospital (NTFGH) in 2020. This automated alert system, along with ICU Outreach nursing (ICUORN) service, improves care escalation by automating the identification of clinically deteriorating patients while in GW, and triggers notification to the appropriate clinicians, thus reducing cardiac arrests in GW and unplanned ICU admissions. The combination of ACRA triggering system and ICUORN service aims to improve compliance rate to timely and appropriate care escalation and facilitate efficient intervention during clinical deterioration in the GW.

Project Attachment

See poster appended/ below

Background

See poster appended/ below

Methods

See poster appended/ below

Results

See poster appended/ below

Lesson Learnt

Limits and boundaries are meant to be challenged in the pursuit of innovation.

While RPA has demonstrated considerable success, significant effort will still be required for RPA to become the norm, as current healthcare IT infrastructure may be outdated and incompatible with RPA. Furthermore, the concept of patient data and privacy will always be at the forefront, which may diminish the overall impact of RPA until we find a way to balance efficiency with privacy.

Lastly, while vertical integration was challenging to implement, especially since our pharmacy had to acquire non-pharmacy related skills and tools, the benefits are innumerable. We managed to equip our staff with future ready skills to tackle the challenges of tomorrow through our vertical integration efforts, completely transforming both the pharmacy and our people.

Additional Information

National Healthcare Innovation & Productivity (NHIP) 2024 – Best Practice (Workforce Transformation category)

Conclusion

See poster appended/ below

Project Category

Technology

Digital Health, Data Analytics

Workforce Transformation

Job Redesign, Digital Workforce

Keywords

OPAS, Digital Literacy, Vertical Integration

Name and Email of Project Contact Person(s)

Name: Mr Lim Shi Zong, Nigel

Email: nigel_lim@nuhs.edu.sg