

Project Title

Automating Children's Emergency (CE) Home Recovery Programme (HRP)
Assessment and Reports

Project Lead and Members

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Organisation(s) Involved

KK Women's and Children's Hospital

Healthcare Family Group(s) Involved in this Project

Medical, Healthcare administration (Data Analytic and Patient Experience)

Applicable Specialty or Discipline

Emergency medicine (Paediatric)

Aim(s)

Systematic approach to review and redesign the process of data processing. Use of automated process also enabled task to be standardised and executable by any staff. This allowed a setup of rotation amongst the data representatives to prevent staff fatigue and ensure sustainable reporting.

Background

See poster appended/ below

Methods

See poster appended/ below

Results

See poster appended/ below

Conclusion

See poster appended/ below

Additional Information

Singapore Healthcare Management Congress 2022 – Merit Award (Operations category)

Project Category

Workforce Transformation

Job-Redesign, Digital Dexterity, Workforce Performance, Workforce Productivity, Workforce Sustainability, Workplace Fatigue

Keywords

Home Recovery Programme (HRP), HRP Assessment And Report, Digital Data Processing, Process Redesign, Data Collation, Preparation And Automation

Name and Email of Project Contact Person(s)

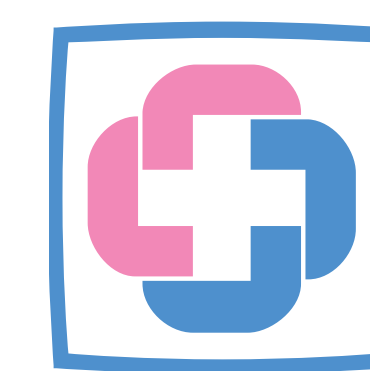
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**Singapore Healthcare
Management 2022**

Automating Children's Emergency (CE) Home Recovery Programme (HRP) Assessment and Reports



KK Women's and
Children's Hospital
SingHealth

Children's Emergency: Dr Sashikumar Ganapathy / Dr Junaida bte Badron / Dr Zaw Lwin
Data Analytics Office: Mark Chuah/ Goh Bee Keow/ Michael Choo
Office of Patient Experience: Amos Lim / Tan Xiang Feng / John Wong / Serene Pok / Irene Chan

INTRODUCTION

As the number of Covid-19 patients increases, Office of Patient Experience (OPE) team took over HRP assessment for MOH reporting to enable CE doctors to better focus on patients' care. OPE team was overwhelmed when the cases increased and fatigue set in while supporting the HRP assessment and report.

Problem:

1. Time consuming : Required up to **6** man hours (including public holidays and weekends) daily!
2. Manual process in collating and processing daily MOH Reporting of HRP cases
 - Call caregivers for HRP assessment
 - Process into required format as per MOH requirements

METHODOLOGY

Two Phased Data processing approach was adopted:

Phase 1 : Digitalization of patient contact and responses for HRP assessment

Before

- a) Contact of patient' caregiver for patient details obtained via individual extraction from SCM
- b) Conduct HRP assessment via individual phone call



After

- a) Retrieval of patient contact details via Ehints report setup eliminated the manual process including efficiently obtaining the patient responses for timely intervention
- b) Set up FORMSG (based on MOH's set criteria) for patient to respond after sending SMS via Bizlive

Phase 2 : Collaboration with DAO on Process redesign of data preparation and automation of MOH report.

Before

- a) Manual assess patient's eligibility for HRP via phone call
- b) Manual assess if patient requires Virtual consultation
- c) Manually complete MOH report to submit patients' details based on (1. Eligible for HRP 2. Not Eligible 3. Uncontactable)



After

- a) Download responses from FORMSG without contacting patient
- b) Algorithm using Excel macro to automatic assess and group patients eligibility status
- c) Automate to produce final MOH required format for immediate dissemination

Phase 2 Process "redesigned"

Collating and processing daily MOH Reporting of HRP cases

Before

Approx 20 minutes via Excel

A) **Step 1:** Sort by age in ascending order

To obtain list of patients 12 months and above
Step 1: Filter by Age (column K) and only select responses "1" and above
Step 2: Filter by Download status (column M) to "Success"
Step 3: Filter by "Would you like a VC?" (column P) to "Yes".

* The remaining patients are patients above 12 months and require VC.
 Email patient name and IC to CE admissions for arrangements of VC.

DELETE ALL THE RECORDS OF PATIENTS ABOVE 12 MONTHS AND REQUIRE VC FROM THIS LIST

B) The remaining patients are those below 12 months and below
Step 1: Go to HRP (column Q) and apply formula below for all records below 12 months
Step 2: Update MOH template accordingly with the respective HRP eligibility generated.

*Formula to enter under column Q.
 =IF(AND(M2="Success",N2="",O2=""),"Eligible for HRP",IF(AND(M2="",N2="",O2=""),"Did not respond to FormSG"))

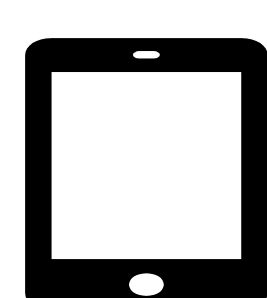
After

Approx 2 minutes via Macro

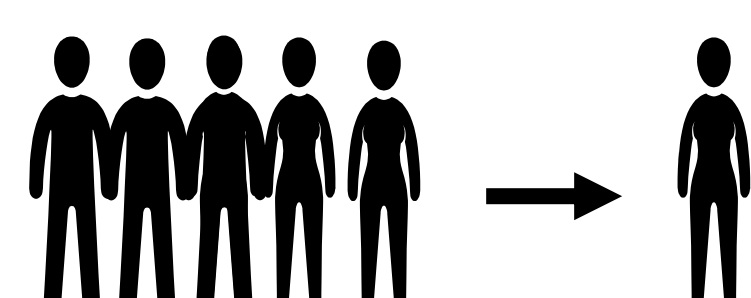
Open up Macro workbook

- Input Call list
- Input FormSG response
- Run macro

RESULTS



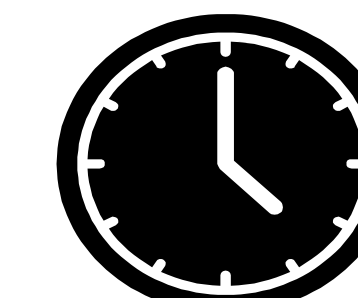
1. **Eliminated** the need to **call** up to about **80 patients** a day.



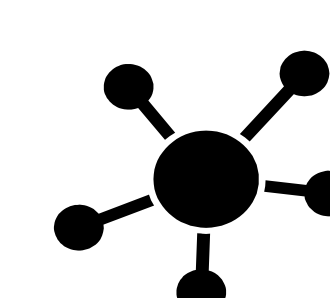
2. Manpower required reduced from **4 to 5** staff per day to **1** staff per day



3. Fast retrieval of patient contact information was done via E-hints report which also **eliminated** scribing errors.



4. HRP assessment process and reporting submission cut down from **6 hours** to just **30 minutes** per day



5. **Scalability** to other support teams to reduce fatigue

CONCLUSION

OPE's collaboration with DAO involved taking a systematic approach to review and redesign the process of data processing. Use of automated process also enabled task to be standardised and executable by any staff. This allowed a setup of rotation amongst the data representatives to prevent staff fatigue and ensure sustainable reporting.