CHI Learning & Development (CHILD) System



Project Title

Improving Inpatient Influenza Vaccination Rate

Project Lead and Members

- Dr Nieh Chih Ming
- Dr Calvin Loh
- Lee Su Hui
- Wong Yu Xin
- Ho Yu Tian
- Monica Lim Siew Chin
- Dr Angeline Seah
- Dr Lim Tze Chwan
- Ms Supadhara Ramaiyah

Organisation(s) Involved

Khoo Teck Puat Hospital

Healthcare Family Group Involved in this Project

Allied Health, Nursing, Pharmacy

Applicable Specialty or Discipline

Geriatric Medicine, Infectious Diseases

Project Period

Start date: Feb 2021

Completed date: Jun 2021

Aims

Increasing the percentage of geriatric inpatients' influenza vaccine status upon discharge from ward B56, from 15% to 75% within 6 months.



Background

See poster appended/ below

Methods

See poster appended/ below

Results

See poster appended/ below

Conclusion

See poster appended/ below

Additional Information

Accorded the NHG Quality Day 2022 (Category B: Service Redesign & Delivery) Best Award

Project Category

Care & Process Redesign

Quality Improvement, Workflow Redesign, Productivity, Cost Saving

Keywords

Vaccination, Flu Jab, Influenza

Name and Email of Project Contact Person(s)

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IMPROVING INPATIENT INFLUENZA VACCINATION RATE

Nieh Chih Ming, Geriatric Medicine



Mission Statement

Increasing the percentage of geriatric inpatients' influenza vaccine status upon discharge from ward B56, from 15% to 75% within 6 months.

Team Members

Sponsor:

Facilitator:

Team Leader

Dr Nieh Chih Ming, Consultant Geriatric Medicine,

KTPH

Dr Calvin Loh, Resident Physician Geriatric Medicine, KTPH

Lee Su Hui, Advanced Practice Nurse, KTPH

Wong Yu Xin, Staff Nurse Ward 56, KTPH Ho Yu Tian, Pharmacist, KTPH

Patient discharge from ward 56

Members

Acknowledgement:

Geriatric Medicine, KTPH

Radiology Department, WHC

Ms Supadhara Ramaiyah, Head of Pharmacy

Dr Angeline Seah, Senior Consultant and HOD

Dr Lim Tze Chwan, Senior Consultant and HOD

Monica Lim Siew Chin, Operations, KTPH

Evidence for a Problem Worth Solving

Influenza vaccine uptake within Asia is generally low, and a systematic review focused on Asian countries reported a median uptake of 14.9% among the general population and 37.3% among high-risk groups – far below the WHO target of 75%

National vaccination coverage rate in Singapore for adults >50 years old: 14-20%

Current Performance of a Process

Singapore National Adult Immunization Schedule (NAIS) recommends 1 dose influenza vaccine annual or per season for adults age 65 years and above.

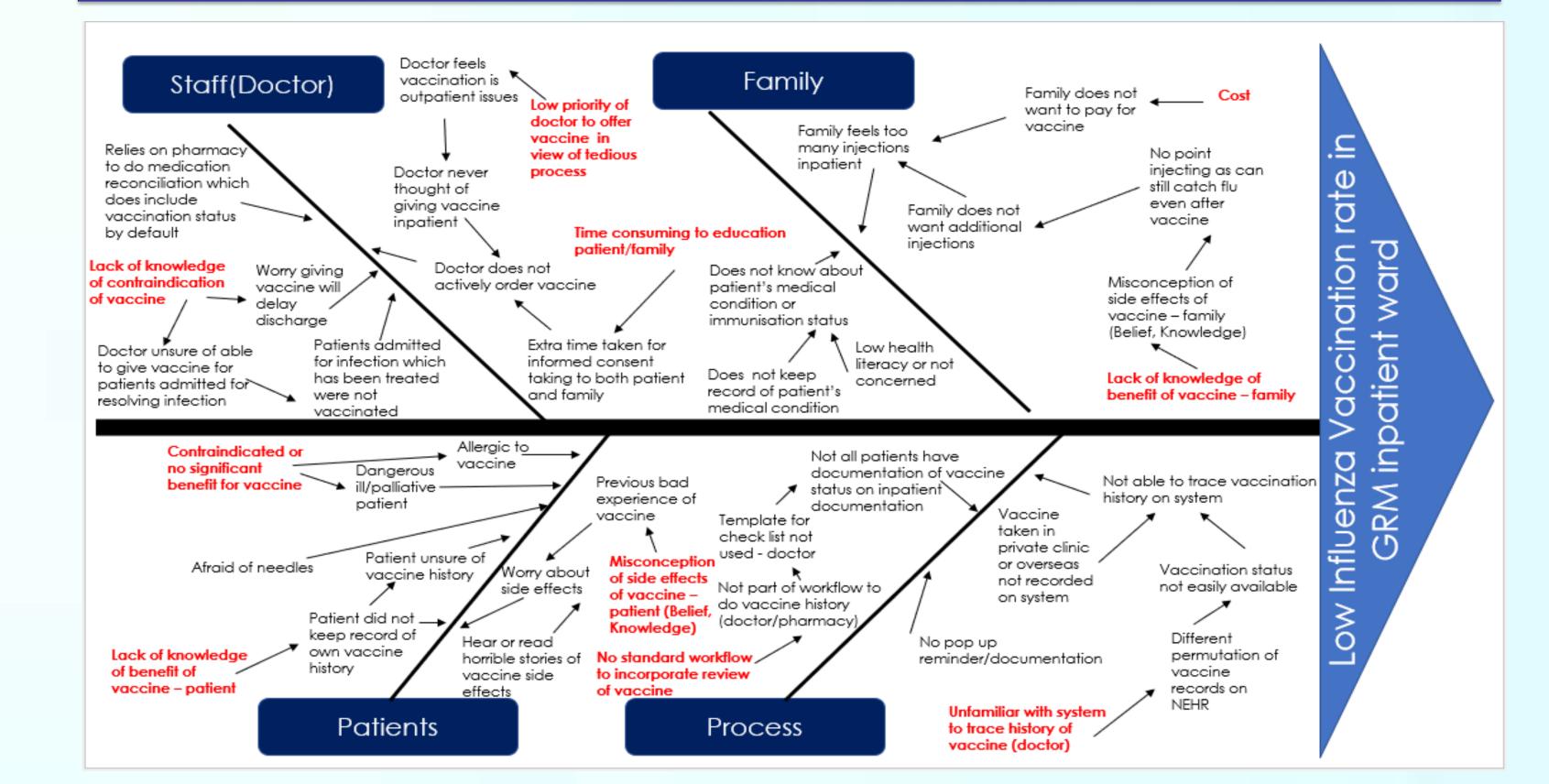
Low influenza vaccination rate in GRM inpatient wards (0-2 patients per week: 0-8%)

Prevalence: 9-30% (average: 15.3%)of patients at GRM ward B56 with up-to-date influenza vaccination status (June 20-Jan 21).

Flow Chart of Process Review of patient's vaccination history (Patient admitted to ward 56 FLOW NEHR, patient/family/NH) –by doctor Orientation to patient/family by nurse Confirm patient eligible for influenza CHART vaccine(has no influenza vaccine given the past 1yr, no contraindication)by Clerking and ordering investigations/management by doctor Verbal consent taking from patient/family by doctor Medication reconciliation by ward pharmacist Order influenza vaccine on SCM by doctor Daily review and management by inpatient team (Dr, nurses, allied Vaccine received supply at ward from **MICRO** pharmacy **FLOWCHART** Verification and administering of Discharge planning vaccine to patient by nurse Documentation on electronic system for

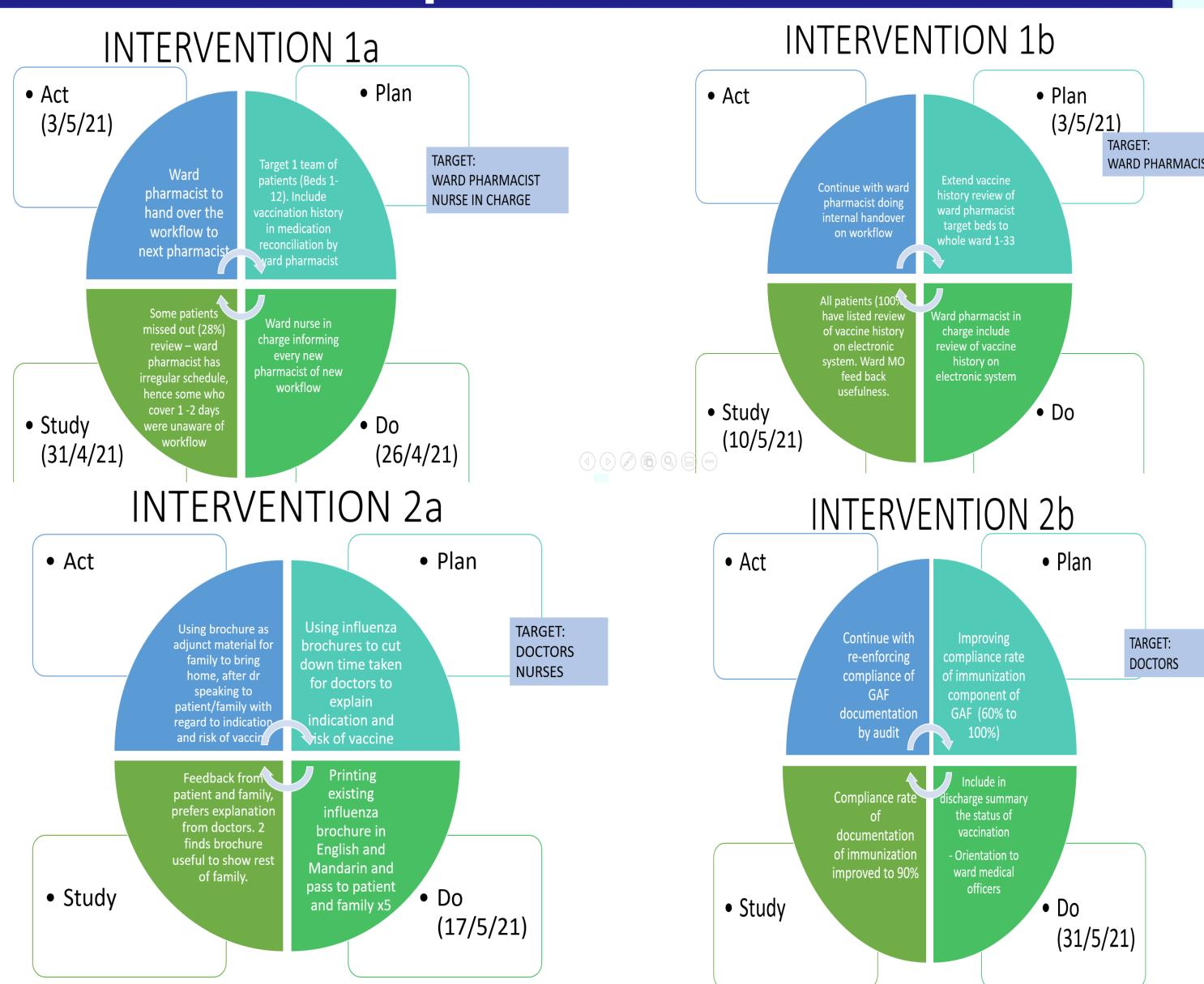
Cause and Effect Diagram

vaccination by nurse



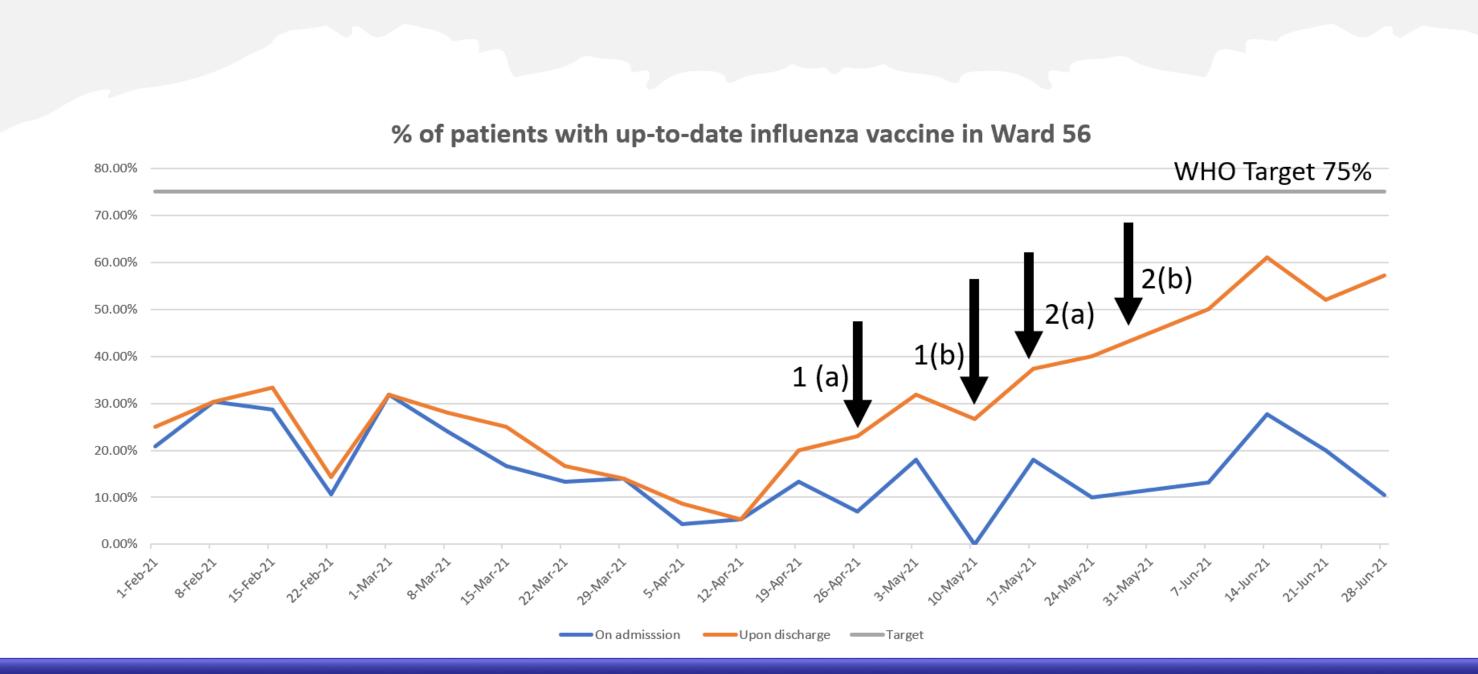
Pareto Chart Root Cause1: No standard workflow to incorporate review of immunization status - pharmacist/doctor Root Cause 2: Low priority in ordering vaccine inpatient in view of tedious Pareto Diagram Root Cause 3: Time consuming and tedious process - doctor Root Cause 4: Lack of knowledge of benefit of vaccine – patient and family Root Cause 5: Misconception of side effects of vaccine – patient and family Root Cause 6: Unfamiliar with system on tracing history of vaccine - doctor Root Cause 1 Root Cause 2 Root Cause 3 Root Cause 5 Root Cause 6





Results

FINAL RUNCHART



Cost Savings

Influenza vaccine significantly reduces pneumonia and influenza-related hospitalization, with vaccine effective ness of 25-53%.

Study for cost effectiveness for adults aged >65 yield cost saving USD\$15,300 per quality adjusted life -year (QALY)

A review of the cost-effectiveness of adult influenza vaccination and other preventive services. N.M.Dabestani et al. Preventive Medicine, Vol, 126. September 2019

Problems Encountered

COVID restrictions affected workflow. The target ward was converted to COVID ward in November 2021 which affected subsequent sustainability.

Strategies to Sustain

SUSTAINABILITY

- Incorporating Geriatric Assessment Form (GAF) into department's Medical Officer (MO) orientation (IMPLEMENTED)
- Electronic template for GAF
- Formalizing pharmacist workflow into SWI SPREAD
- Pneumococcal vaccination rate (IMPLEMENTED)
- Extend to other Geriatric Medicine inpatient wards