

Project Title

But First, Breathe: STOP Pneumonia in It's Track

Project Lead and Members

Project lead: Rainier A. Olendo

Project members: Rommel Quimzon, Pauline Jessel Briones, Maneni Pfokehii

Organisation(s) Involved

St. Andrew's Nursing Home (Buangkok)

Healthcare Family Group(s) Involved in this Project

Allied Health, Ancillary Care, Nursing, Medical

Applicable Specialty or Discipline

Medical Social Workers, Respiratory Therapy, Pulmonology

Project Period

Start date: September 2021

Completed date: July 2024, Ongoing

Aims

1. To reduce Pneumonia incidence rate per 1000-resident days by 30% over 3 years from Sept 2021 at SANHB.
2. To train over 75% of direct care staff to be skilled and knowledgeable in Pneumonia prevention and management.

Background

See poster appended/below

Methods

See poster appended/below

Results

See poster appended/below

Conclusion

See poster appended/below

Project Category

Care Continuum

Intermediate and Long Term Care & Community Care, Nursing Home Care

Preventive Care, Community Health

Keywords

Care Bundles, Risk Assessment Tool, Staff Training, Staff Competency, Standard Operating Procedures (SOP), Pneumonia Prevention and Management, Incidence Rate

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But First, Breathe: STOP Pneumonia in It's Track St. Andrew's Nursing Home (Buangkok)

Rainier A. Olendo, Rommel Quimzon, Pauline Jessel Briones, Maneni Pfokehii

BACKGROUND

Pneumonia is the leading cause of hospitalization and death in the nursing home settings and the second leading principal cause of death in Singapore as per Ministry of Health statistics. Data shows that from the year 2020 to 2022, 18% to 20% of deaths are caused by Pneumonia.

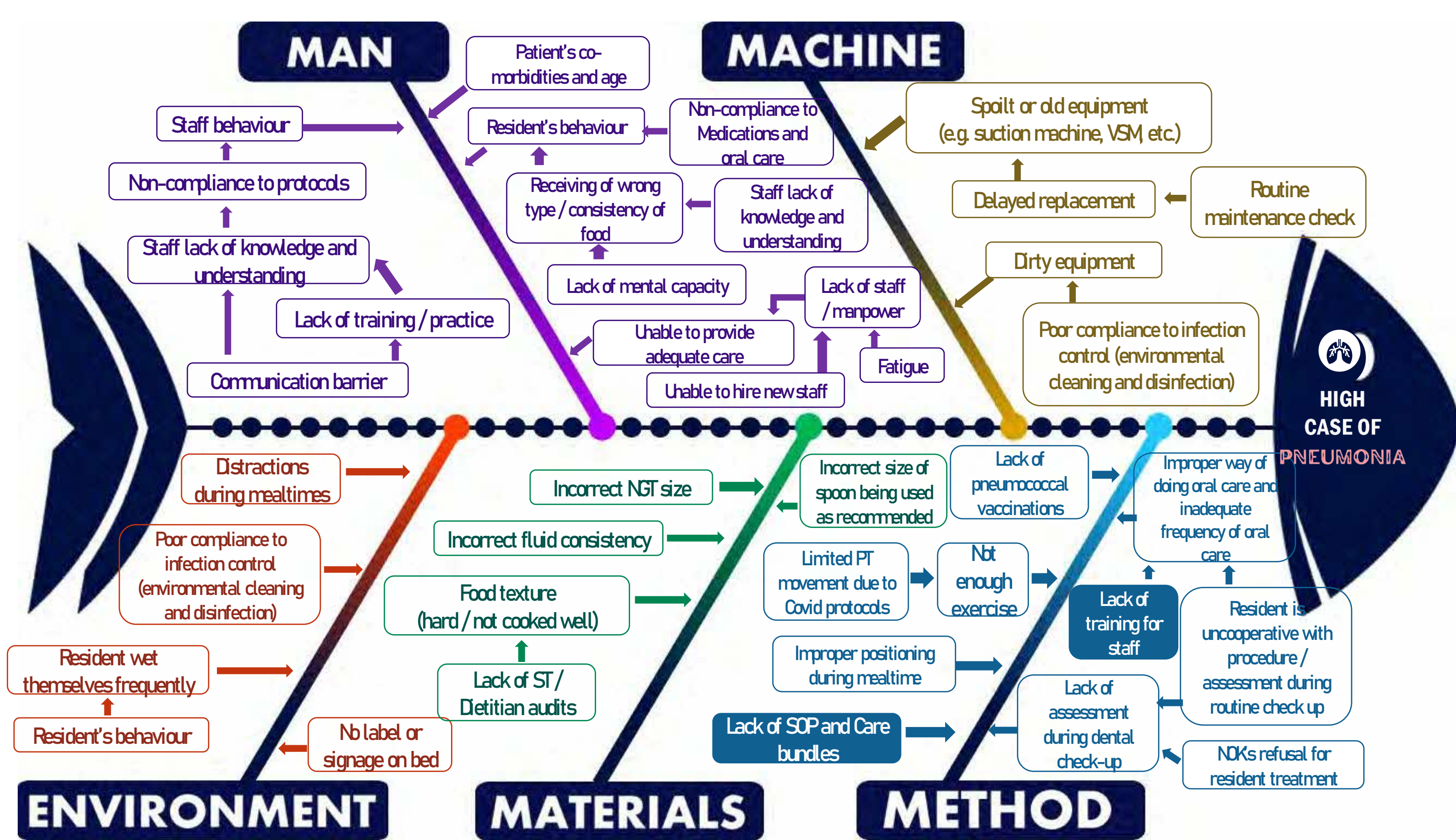
At St. Andrew's Nursing Home Buangkok (SANHB), a 300-bed nursing home for psychiatric and dementia residents, there were 32 cases of Pneumonia between January and June 2021 which all required hospitalization. This equates to incidence rate of 0.6 cases per 1000 resident days. In collaboration with Agency For Integrated Care - Quality And Productivity Division (AIC-QPD), SANHB embarked on a journey to reduce the Pneumonia incidences in the nursing home.

PROJECT GOALS

- To reduce Pneumonia incidence rate per 1000-resident days by 30% over 3 years from Sept 2021 at SANHB.
- To train over 75% of direct care staff to be skilled and knowledgeable in Pneumonia prevention and management.

ANALYSIS

In September 2021, nursing home champions attended a 5-day workshop by the AIC with various Subject Matter Experts in pneumonia prevention and management. An Ishikawa diagram was used to identify the root causes for high incidence rate of Pneumonia. We then used a pareto chart to identify areas to focus on which are lack of Standard Operating Procedures (SOP), staff trainings and care bundles.



SOLUTIONS AND IMPLEMENTATION PLAN

Based on multiple root causes identified, we developed care bundles and Pneumonia risk assessment tool to help staff screen residents and identify who are high risk of Pneumonia. Lectures and trainings were done to staff every Sunday for 5 consecutive weeks per ward. We started in Ward 1B and made it as our pilot ward. Progressively, the team were able to train the staff per Wards to equip them with the right knowledge and skillset. Furthermore, the management were able to procure Pneumonia vaccines for the residents to strengthen their body defense.

To monitor our progress, we submit our Pneumonia cases every month to AIC. These include any diagnosis made in the Nursing Home or in hospital discharge summary with the term "Pneumonia" in it. Nosocomial, aspiration, community acquired, and Covid-19 Pneumonia are all counted.

Conversely, Upper Respiratory Tract Infection (URTI) or Chest infection are excluded.

SOLUTIONS AND IMPLEMENTATION PLAN (CONTINUED)

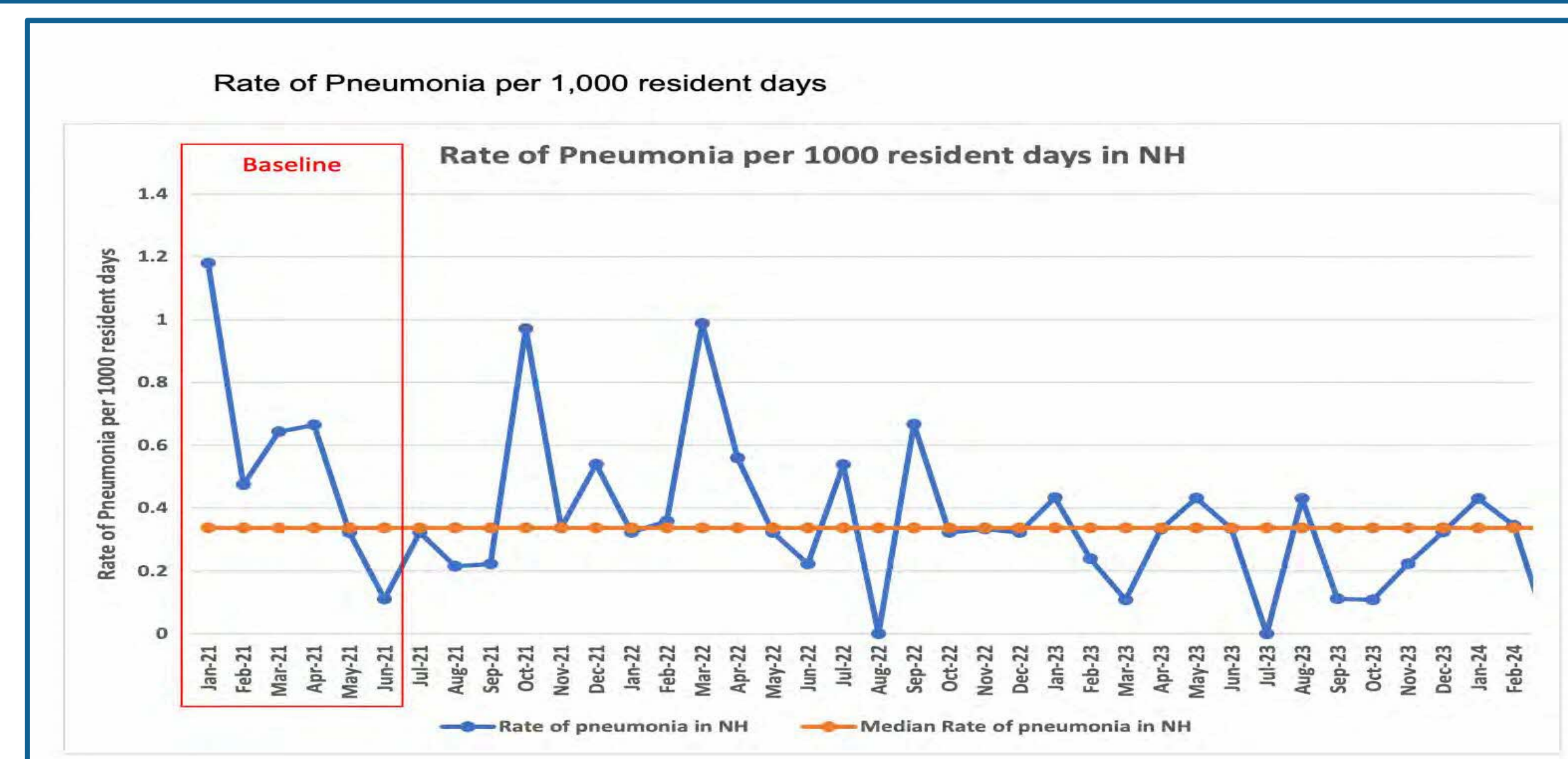
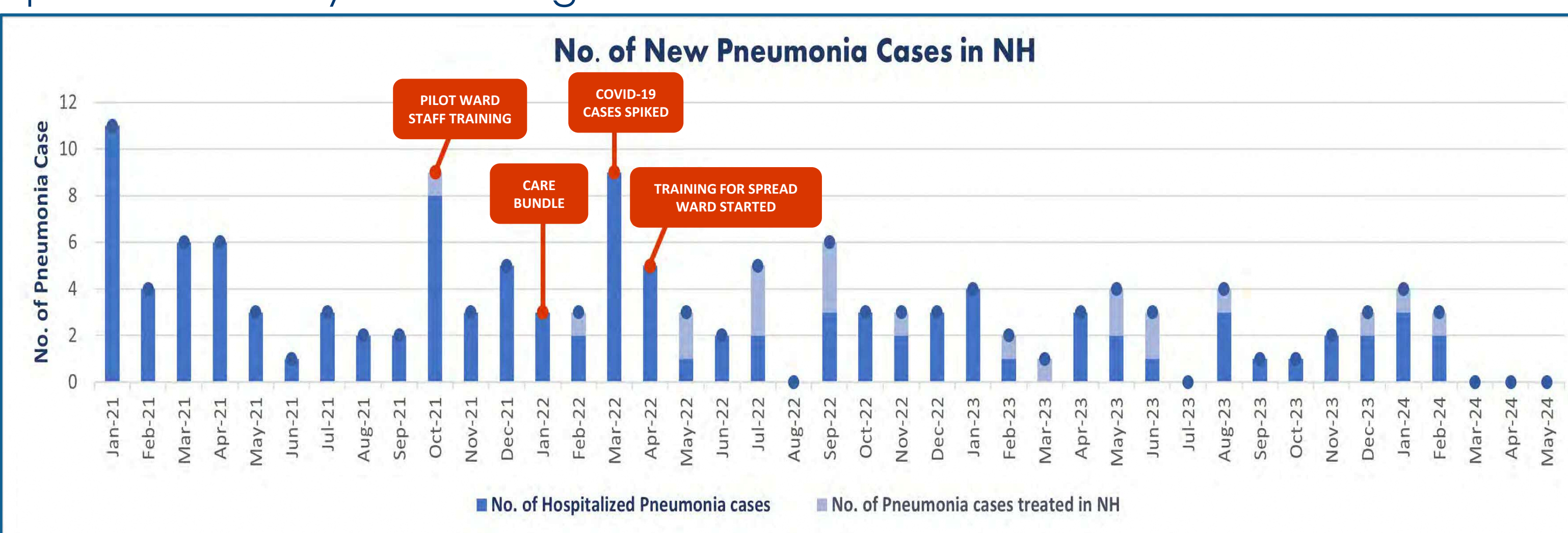
PNEUMONIA PREVENTION CARE BUNDLE



BENEFITS / RESULTS

Primary outcome: The project's goal was met as the Pneumonia incidence rate in the whole nursing home was reduced by 40.3%. Baseline data from January to June 2021 was 0.6 cases per 1000-resident days, now the median incident rate is 0.33.

Secondary outcome: Staff Competency and residents' vaccination. 95% of staff were trained in Pneumonia prevention and management, exceeding the 75% target. Furthermore, 58% of our residents were able to receive the Pneumococcal vaccine since the approval of the vaccine procurement by our management.



SUSTAINABILITY

- To ensure sustainability of the project, the team will continue to:
- Screen the residents for risk of Pneumonia (high or low).
 - Lectures and training to all new staffs and updates for old staff.
 - Continuous procurement of pneumonia vaccines to residents.
 - Develop new Champions for each ward.
 - Continue monitoring Pneumonia statistics in the nursing home.