

Project Title

Implementing Value-Based Care for St. Andrew's Community Hospital

Project Lead and Members

Project members:

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Organisation(s) Involved

St. Andrew's Community Hospital (SACH)

Healthcare Family Group(s) Involved in this Project

Medical Services, Healthcare Administration

Applicable Specialty or Discipline

Surgery, Orthopaedics, Rehabilitation Therapy, Sub-Acute Care, Healthcare Administrators

Project Period

Start date: 2021 (Expansion of HPO Scope)

Completed date: Dec 2023

Aims

1. To adopt and implement the NUHS Value-Driven Outcome (VDO) framework with data visualization and PDSA improvement cycle within SACH.
2. To improve Clinical Quality Indicators (CQI) for Hip Fracture and Stroke patients by at least 20% by the end of 2023.

Background

St. Andrew's Community Hospital (SACH) provides intermediate medical care for rehabilitation and sub-acute care to children, adults, and the elderly, including those with dementia or needing palliative care. The concept of value-driven care (VDC) was introduced by the Ministry of Health in 2017 to improve healthcare quality through cross-institution collaboration. Since 2018, SACH has collaborated with Changi General Hospital (CGH) to streamline workflows and reduce length of stay (LOS) for Total Knee Replacement (TKR) and Stroke patients. However, due to a lack of a guided framework, resources, and knowledge, there was no significant breakthrough in value-driven outcomes internally within SACH. In 2021, SACH Senior Management decided to reorganize the Healthcare Performance Office (HPO) to support value-based work.

Methods

- Adopt the NUHS Value-Driven Outcome (VDO) framework
- Use data visualization and PDSA improvement cycle
- Combine various data sources for data visualization
- Address missing or incomplete patient-level data in CQI calculation
- Estimate costs using bill size due to the complex cost structure

Results

- Clinical Quality Indicator for Hip Fracture care improved by 26.1% in 2023 compared to 2021
- Clinical Quality Indicator for Stroke care improved by 23.8% in 2023 compared to 2021
- Shortened length of stay (LOS) and wait time to admission despite increased complexity of case mix (subacute cases increased by 10% in 2022 compared to 2018)
- Achieved a total of \$553K cost avoidance per year, contributed by saving 5.8 beds/day

Lessons Learnt

1. Combining data sources and addressing incomplete data are crucial for accurate CQI calculation.
2. The use of a guided framework like NUHS VDO is essential for driving improvements in healthcare quality.
3. Effective collaboration and communication among various departments and stakeholders are key to successful implementation.

Additional Information

National Healthcare Innovation & Productivity (NHIP) 2024 – Best Adopter

Conclusion

The implementation of the value-based care framework at SACH has led to significant improvements in clinical quality indicators and cost avoidance. The continuous focus on data-driven improvement work and stakeholder engagement is crucial for sustaining these outcomes.

Project Category

Care & Process Redesign

Value Based Care, Productivity, Cost Saving, Patient Reported Outcome Measures,
Patient Reported Experience Measures, Access to Care, Transfer Out Rate

Technology

Digital Health, Data Management, Data Analytics, Data Visualisation

Keywords

Value-Based Care, Clinical Quality Indicator, Hip Fracture, Stroke, Data Visualization,
PDSA Cycle

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