



# Singapore Healthcare Management 2024

# Implementing Value-Based Care

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ST. ANDREW'S COMMUNITY HOSPITAL

## 1. Problem Statement

- St. Andrew's Community Hospital (SACH) is a service under the St. Andrew's Mission Hospital group. SACH was set up to provide intermediate medical care for rehabilitation and sub-acute care to children, adults, and the elderly; including those with dementia or needing palliative care.
- Since 2017 when the **concept of value-driven care (VDC) was mooted** by the Ministry of Health, clinicians in Singapore have been hard at work improving the quality of healthcare provision – and cross-institution collaboration has been a crucial success factor.
- In 2018, Changi General Hospital (CGH) and St. Andrew's Community Hospital (SACH) collaborated and started the **fast-track referrals for Total Knee Replacement (TKR) and Stroke patients** from CGH to SACH under the joint-value-driven care initiatives to streamline workflow and to reduce LOS at CGH.
- Due to the **lack of guided framework, resources and knowledge in driving improvement work**, there was **no breakthrough in value-driven related outcomes** internally within SACH. In 2021, SACH Senior Management decided to reorganize the Healthcare Performance Office (HPO) and to expand its scope to support value-based related work.

## 2. Project Aim

- To achieve the following objectives **by the end of 2023**:
  - To adopt and implement **VDO framework** with data visualization and PDSA improvement cycle within SACH.
  - To improve **Clinical Quality Indicator<sup>1</sup>** for Hip Fracture and Stroke patients by at least **20%**.

<sup>1</sup> The number of patients who met all quality indicators (i.e. received "perfect care") as determined by the clinicians, divided by the total number of patients.

## 3. Risk & Complexity

- Technical aspects:
  - Combining **various data sources into one dataset** for data visualization requires strong IT support and good data structure.
  - Missing or incomplete patient level data** (e.g. PROMS, complication data, patient experience score, etc.) has to be considered in the calculation of CQI.
  - Due to **complex cost structure and lack of time-based activity costing**, bill size has been used as an estimate.
- Resources:
  - Experience and skillsets** required: lean and clinical QI, design thinking, productivity and costing.

## 4. Potential Solutions

- SACH adopted the **Value-Driven Outcome (VDO) concept and framework**. The framework highlights the importance of **using data** to drive more value in our healthcare system. Refer to Figure 1.

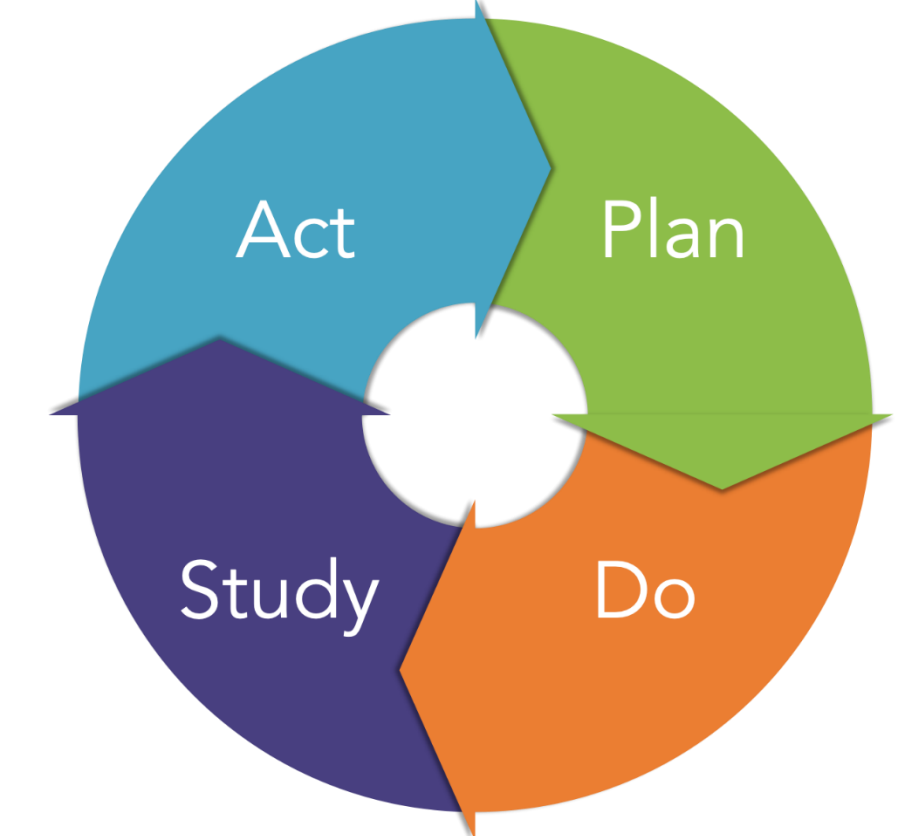
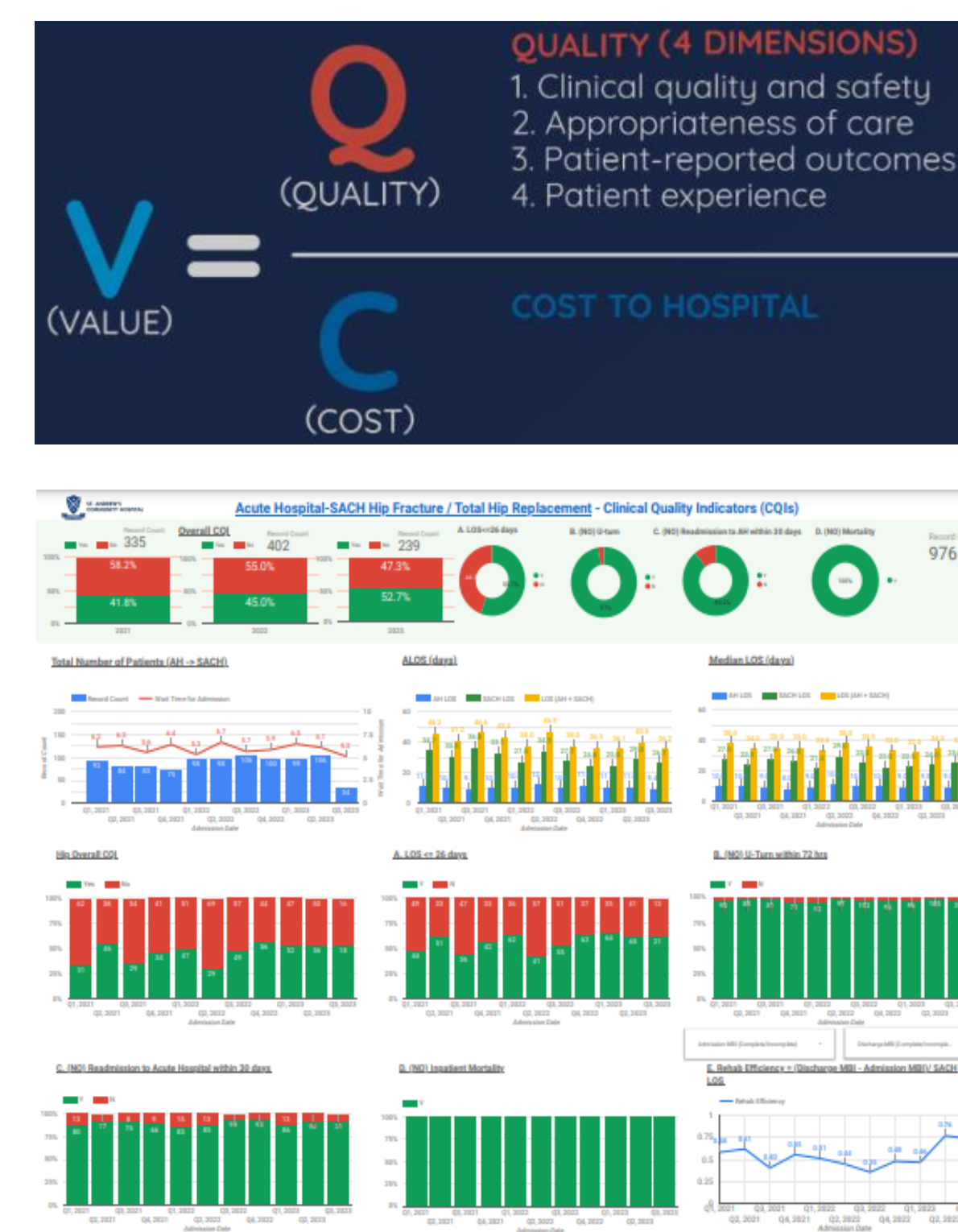


Figure 1. Application of VDO framework with data visualization and PDSA improvement cycle in SACH

## 5. Outcome & Impact

- Clinical Quality Indicator** for Hip Fracture and Stroke care improved by **26.1%** and **23.8%** respectively in 2023 as compared to 2021. (Figure 2)

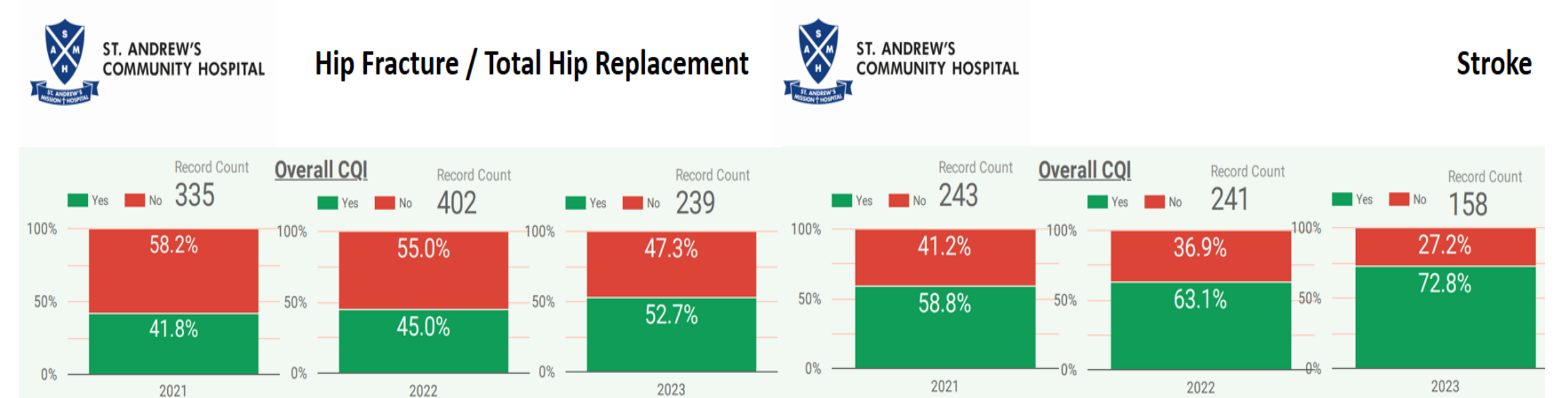


Figure 2. Clinical Quality Indicators for Hip Fracture and Stroke

- Through attention to various clinical care path streams, there has been **progressive shortening of length of stay**, with resultant **shortened wait time to admission** (Figure 3). This is despite increased complexity of case mix as evidenced by an increase in subacute cases by 10%<sup>2</sup> in 2022 compared to 2018.

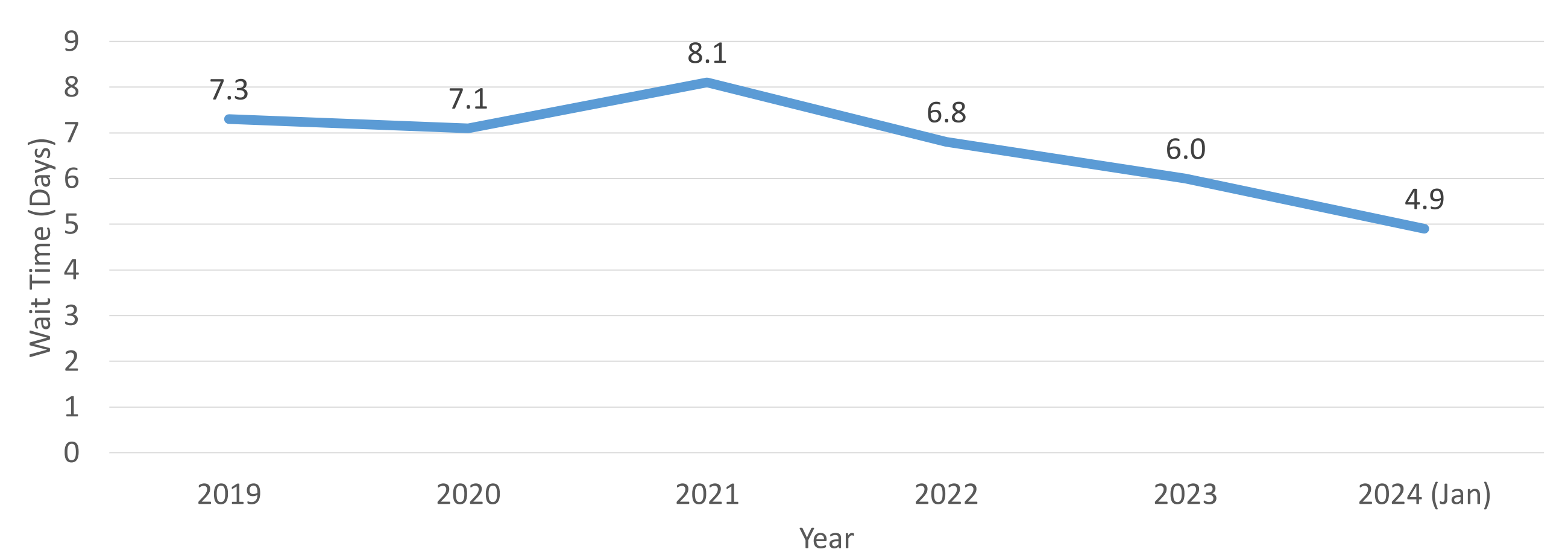


Figure 3. Wait time (days) from referral to admission

- Achieved a total of **\$553K cost avoidance per year** contributed by **5.8 beds saved/day**.

<sup>2</sup> MOH Data shared at 12th MOH-CH Roundtable on 13th Feb 2024.