Project "Pause and Reset"- [Phase 1] Designing a Decision Workflow tool to identify meaningful and actionable Department Clinical Quality Indicators (CQIs)

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Background

Feedback from SGH Patient Safety Council Retreat highlighted an interest for meaningful CQIs relevant to clinical practices to facilitate clinical quality improvements. Existing CQIs consists of process and structural with few "outcome" measures. Project "Pause and Reset" was implemented, incorporating a quality and safety framework, to guide the selection of CQIs. Phase 1 encourages departments to adopt performance improvement outcome CQIs. Phase 2 will focus on these CQIs to be introduced into staff reward systems to ultimately advance SGH into a high reliability organisation.
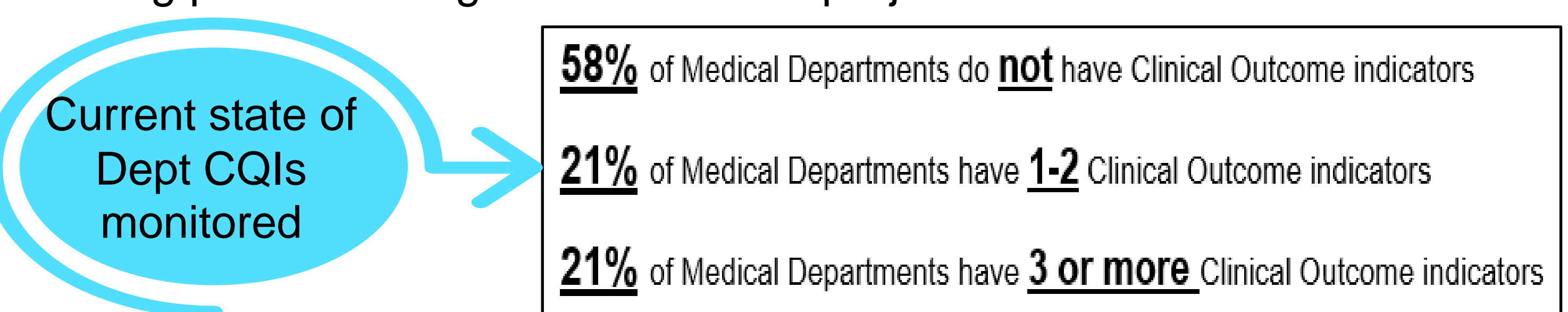
Aim

Designing a Decision Workflow for clinicians to develop and implement meaningful, outcome based and globally benchmarked CQIs in 6 months.

Aim: 100% adoption across all departments by FY2026.

Methodology – Implementing a Decision Workflow

1. Systematic review of "*FY22 Biennial KPI matrix*" to gather learning points to integrate into current project.
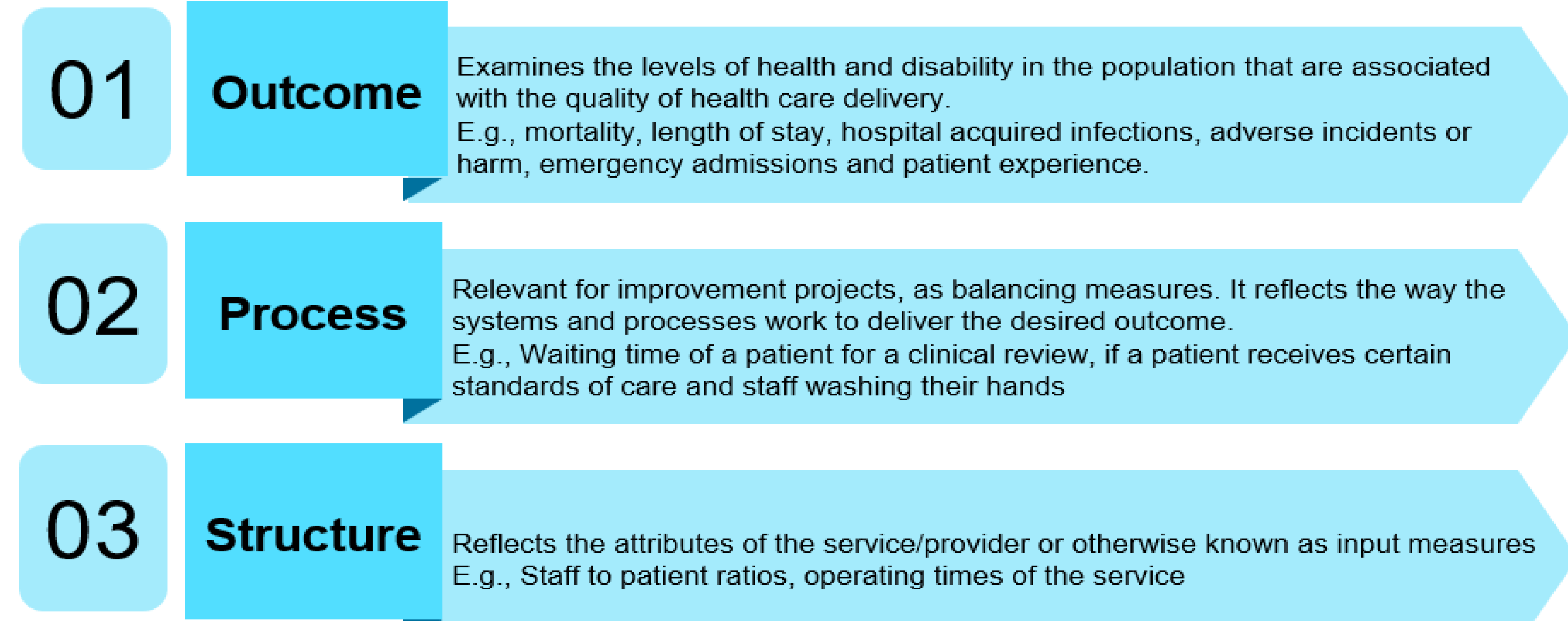
Current state of Dept CQIs monitored

58% of Medical Departments do **not** have Clinical Outcome indicators

21% of Medical Departments have **1-2** Clinical Outcome indicators

21% of Medical Departments have **3 or more** Clinical Outcome indicators

What went well?

No	Item	Description
1	**Timeline:** Suggest cut off date for submission	Most of the selected departments responded timely while non-responding depts required a non-nego deadline to expedite their respond on top of multiple reminders.
2	**Robustness:** Seek feedback from the KPI stakeholders	Multiple level of approval and feedback obtained prior to launch. More inputs gathered, increasing its robustness. The decision matrix was piloted on existing KPIs to determine potential issues.
3	**Streamline:** KPIs that were less relevant, outdated and duplicated were dropped/revised	Opportunity to remove/revise nonessential legacy KPIs while engagement with depts heads showed how non-performing KPIs are shared/managed at the dept level.
4	**Impactful:** Obtained meaningful outcome KPIs	Generated new impactful KPIs for several depts.
5	**Decision Matrix:** Some good criteria were used to assess each KPI	Eg, feasibility, relevant and impactful and based on a point system.

What could have been better?

No	Item	Description
1	**Engagement:** Mode of Communication	Some clinicians preferred physical meeting over emails to effectively manage all clarifications. Others responded effectively via email. For slow responding depts, suggest a physical meet up.
2	**Engagement** phase and period	Engagement in Jun/dec period received slower response due to holidays. Due to time constraint, phase 2 and 3 were combined, resulting in an overload in response and delays in following up. Consider equal distribution of workload in all available manpower.
3	**Criteria** for the KPIs can be clearer	One of the delay can be attributed to the unclear "criteria", resulting in vague inputs and thereby leading to suboptimal exploration of data analysis.
4	**Lengthy** document due to instructions	Document was very long, and few clinicians were not bothered to complete it. Nonessential items should not be included. (e.g. Less is more)
5	**Management of clinician's expectation** on KPI commitment	To be firm on accepting new KPIs as the "purpose" of monitoring some KPIs was not well justified. The purpose of monitoring should include reasons like "benchmark or references to literature".
6	**Referencing from literature review** on what other hospitals are doing	There are multiple resources/literatures available where we can find relevant KPIs to be monitored. This is a resource available to clinicians for them to suggest meaningful indicators.
7	**Provide a limit** to the number of KPIs added per dept	Some depts provided more than 5 meaningful KPIs and were required to provide strong justification so that "good to have" KPIs can be managed internally by their dept executives.

2. "Pause Plan" Careful selection of non-outcome CQIs to be paused, using the *Donabedian** model to measure quality of care.

01 Outcome
Examines the levels of health and disability in the population that are associated with the quality of health care delivery.
E.g., mortality, length of stay, hospital acquired infections, adverse incidents or harm, emergency admissions and patient experience.

02 Process
Relevant for improvement projects, as balancing measures. It reflects the way the systems and processes work to deliver the desired outcome.
E.g., Waiting time of a patient for a clinical review, if a patient receives certain standards of care and staff washing their hands

03 Structure
Reflects the attributes of the service/provider or otherwise known as input measures
E.g., Staff to patient ratios, operating times of the service

Reference: *Donabedian, A (2005) Evaluating the Quality of Medical Care, The Milbank Quarterly,83(4):691-729*

3. "Reset Plan" Developing a Decision Workflow that focuses on outcome and outcome-validated process CQIs, evaluated by *importance*, *scientific soundness*, and *feasibility*.
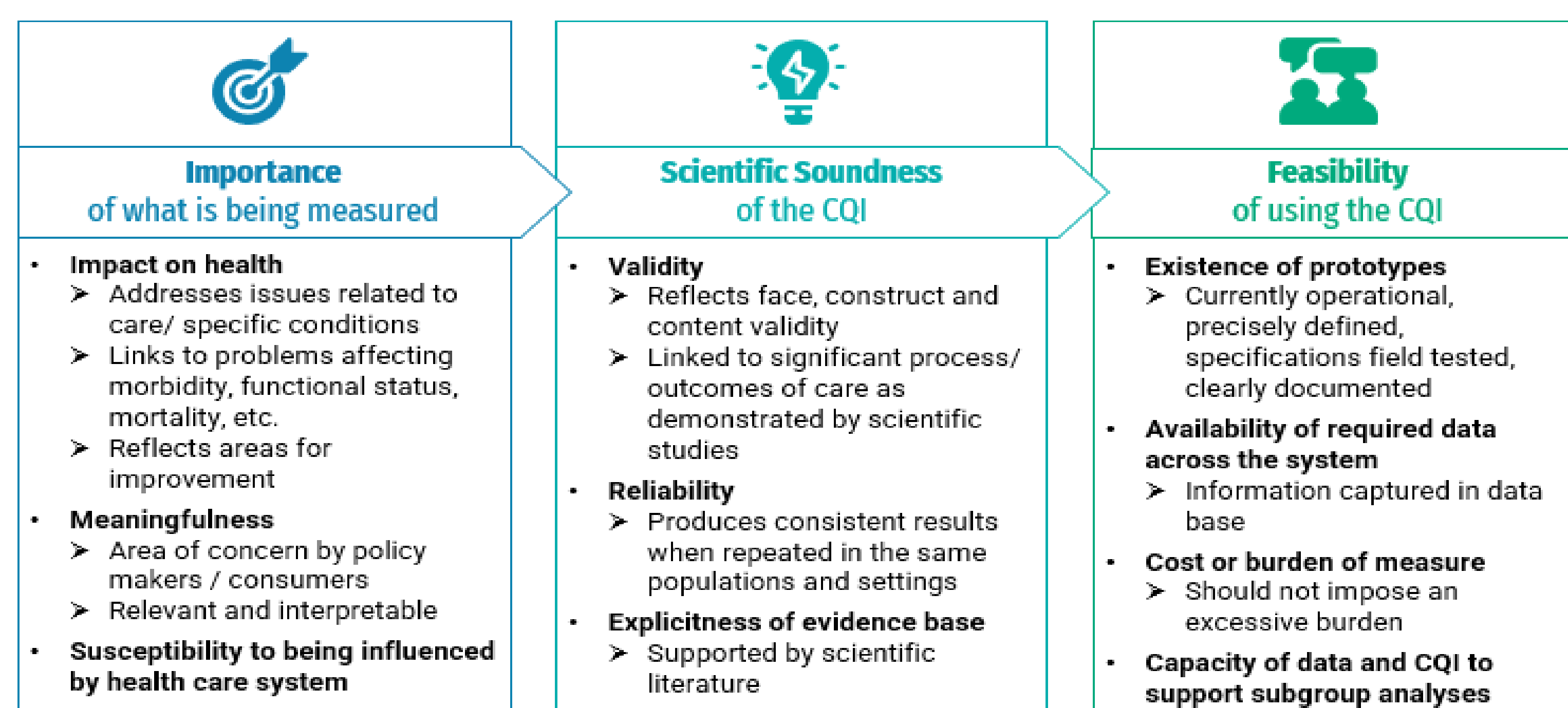
- Decision Workflow derived from scientific literature
- Obtain buy-in from senior management on the principles outlined in the Decision Workflow
- Non-outcome CQIs will be self-monitored by departments

4. Communication: Engagement of all Department Patient Safety Officers to gather feedback on the principles outlined in the Decision Workflow.

- 2 engagement sessions with feedback attained
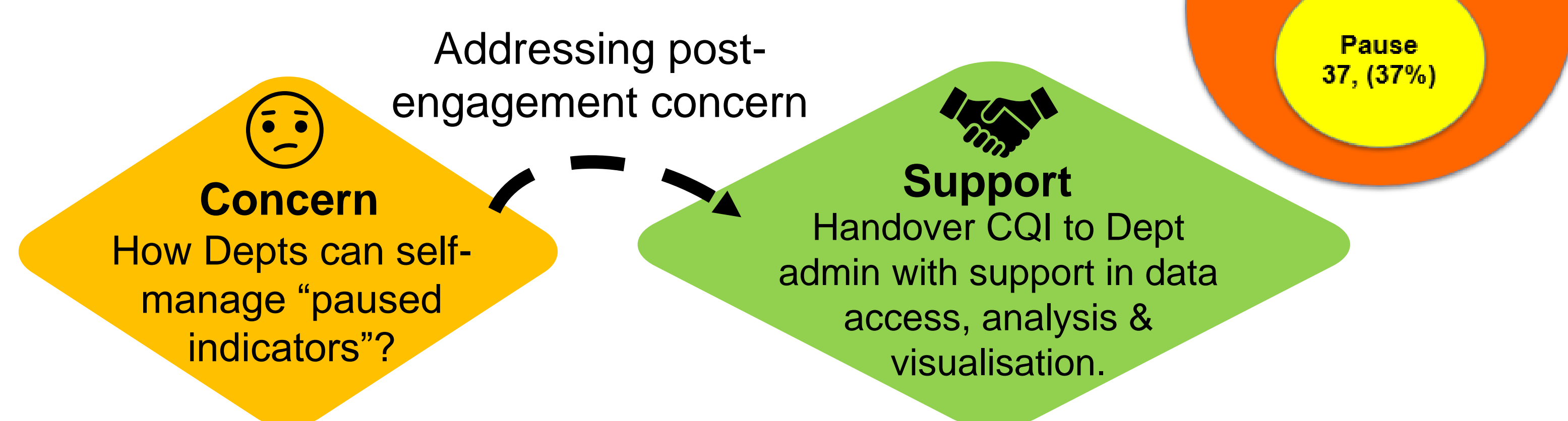- FormSG with user guide to gather inputs for reset of CQIs

Results

Decision Workflow tool for streamlining existing CQIs

Importance of what is being measured
- **Impact on health**
  - Addresses issues related to care/ specific conditions
  - Links to problems affecting morbidity, functional status, mortality, etc.
  - Reflects areas for improvement
- **Meaningfulness**
  - Area of concern by policy makers/ consumers
  - Relevant and interpretable
- **Susceptibility to being influenced** by health care system

Scientific Soundness of the CQI
- **Validity**
  - Reflects face, construct and content validity
  - Linked to significant process/ outcomes of care as demonstrated by scientific studies
- **Reliability**
  - Produces consistent results when repeated in the same populations and settings
- **Explicitness of evidence base**
  - Supported by scientific literature

Feasibility of using the CQI
- **Existence of prototypes**
  - Currently operational, precisely defined, specifications field tested, clearly documented
- **Availability of required data across the system**
  - Information captured in data base
- **Cost or burden of measure**
  - Should not impose an excessive burden
- **Capacity of data and CQI to support subgroup analyses**

Reference: *Envisioning the National Health Care Quality Report by Committee on the National Quality Report on Health Care Delivery, INSTITUTE OF MEDICINE 2001.*

Engagement rate by departments is **74%** with **86.4% (19 out of 22)** departments agreeing to pause the non-outcome CQIs.

Department CQIs: 100

Pause 37, (37%)

Addressing post-engagement concern

Concern How Depts can self-manage "paused indicators"?

Support Handover CQI to Dept admin with support in data access, analysis & visualisation.

Dissemination of decision workflow for optimal outreach

User guide

Clinical Quality Indicators: How they are developed and maintained
Your comprehensive guide on the process of developing and implementing clinical quality indicators.

Revised 14 May 2024
Singapore General Hospital — Office of Patient Safety & Quality (OPSQ)

FormSG

Clinical Quality Indicator Decision Workflow
10 mins estimated time to complete

Instructions
1. Please submit **one response per clinical quality indicator.** If multiple indicators are related, please provide a single response for them.

Division of Medicine
Division of Surgery & Surgical Oncology
Division of Musculoskeletal Sciences
Division of Anaesthesiology & Perioperative Medicine

Select an option

Sustainability and spread

A workable Decision Workflow to identify meaningful and actionable department CQIs is proven effective during the hospital wide clinician engagement with positive responses and no objections on the roll-out. Next, all departments will initiate review of existing indicators and creating new outcome CQIs. The Decision Workflow can also be easily adopted and implemented by other healthcare institutions.