



Background

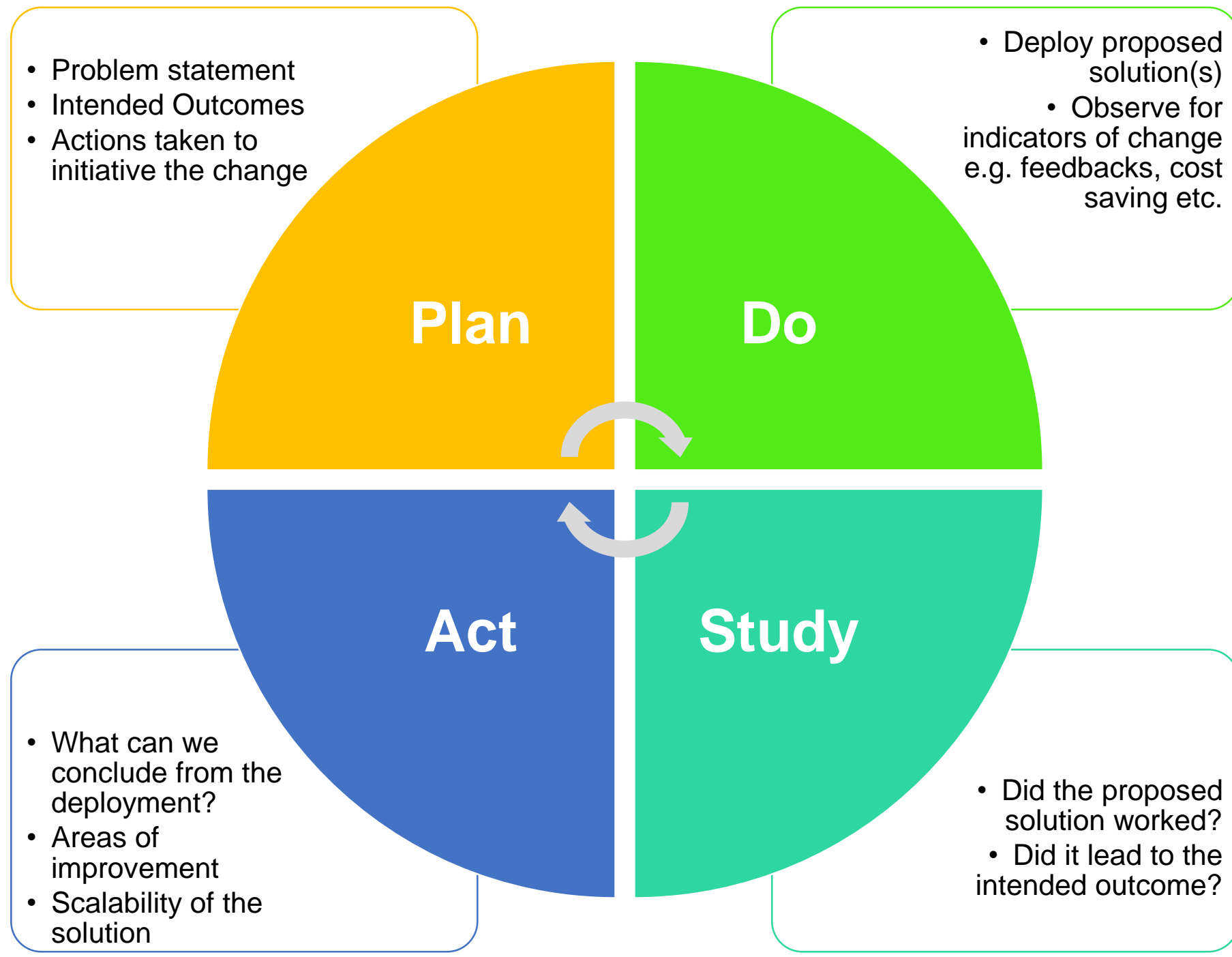
Since the detection of the first Coronavirus Disease 2019 (COVID-19) in December 2019, the disease has spread rapidly worldwide, impacting the world at an unforeseeable rate. Given the highly contagious nature of the Severe Acute Respiratory Syndrome Coronavirus (SARS-CoV-2), previous disease outbreak management plan were inadequate to mitigate the risk involved. There is an urgent need to review and update the measures and practices to mitigate the risk of healthcare workers acquiring COVID-19. This is especially important for healthcare institutions, where the risk of contacting the virus is much higher in contrast to other industries. This study serves to provide a basis for future disease outbreak management to build on, improving the healthcare institutions' capability in managing such crisis.

Aims

- 1. To deploy and evaluate the proposed management protocol for disease outbreak events in SGH
2. To identify the key determinants that ensure the successful management of disease outbreak situations

Methodology

1) Plan, Do, Study, Act (PDSA)



2) Four Key Agile Principles

Four Agile Principles: 1) Individuals & Interactions Over Processes and Tools, 2) Working Software Over Comprehensive Documentation, 3) Customer Collaboration Over Contract Negotiation, 4) Responding to Change Over Following a Plan. Each includes an icon and a list of key points.

The Plan, Do, Study, Act (PDSA) and Agile Values were adopted to address the objective set for this project. Given the urgency and novelty of the COVID-19 situation, the AGILE values offers the team the flexibility and opportunity to address the needs in a timely manner. The PDSA methodology was used to refine various stages/aspects of the screening process, while ensuring complying with the screening criteria and safety requirements from MOH and the hospital.

Key Determinants of Success

Table with 4 columns: Operations, Start of Screening Operations at SGH (Jan 2020), Introduction of SafeEntry & Social Distancing (May 2020), Full Laptop Deployment Across Screening Stations (Sep 2020). Rows include Objective, Method of Screening, Result(s), and Lesson(s) Learnt.

Technology

Digitalized Travel Declaration Form. Background: Since the start of DORSCON Orange, it is compulsory for all patients and visitors entering SGH to complete the TDF. Challenges faced: Long queue and waiting time at stations, Large quantities of forms printed and stored, Retrieval of particular form for investigation is time consuming. Solution: Electronic Travel & Symptom Declaration Form (eTDF), Leveraging on Sharepoint database for storage and ease of retrieval based on search parameters.

Manpower

Tiered Approach for Screening Staffing: Background: Given the daily volume of patients & visitors entering SGH and the requirement for all to complete TDF, manpower is a critical factor that determines the success of the screening operation. Phases: Quick Response (Jan'20 - Feb'20), Mixed Staffing (Mar'20 - Aug'20), Fully External Staffing (Sep'20 till date), Outsourced Model (Proposed Future Model). Challenge(s) Faced: Evening Shift & weekend duties are less popular amongst volunteers, Unstable staffing e.g. last min dropouts without replacement, Temp staff are generally less committed in contrast to internal staff, High operational cost, Lengthy procurement process, Operational requirements may differ from contractual requirements defined.

User Experience

Initiatives taken in response to the feedback: Background: Given the nature of the operations, feedbacks from various stakeholders such as patients/visitors, both internal and external staff and management are important to set the team on a continuous improvement cycle. 1) Lack of Guidance/ Knowledge on Screening Criteria, 2) Signage to improve communications. Solution Deployed: Improving visibility of the declaration requirements, Screening questions printed in English & Mandarin are placed at counters to tackle the language barrier issues.

Conclusion

Given the novel nature of the COVID-19 situation, the team was successful in adapting from previous disease outbreak protocol to formulate appropriate measures to address the requirements needed for the screening operations. In preparation for future disease outbreaks, key determinants such as operational, manpower, technological and user experience factors should be emphasized as they are critical for the success of the disease outbreak operations. Various learning points formulated over the screening operations were also documented. These information and knowledge gathered are critical as it serve as a framework for future user to refer to when the need arises.

Acknowledgement

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