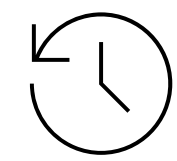


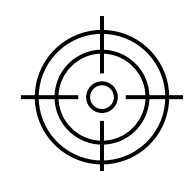
## Project Background

Finding anaesthesia equipment quickly is vital, for safe surgeries. Currently, staff struggle to locate needed items, causing delays and stress during procedures. This not only affects patient safety but also reduces operating theatre efficiency and increases staff workload.



## Previous State

Previously, the process for tracking anaesthesia equipment, including McGrath devices, was informal and inconsistent. All McGrath devices were stored centrally in the Biomedical Engineering (BME) department, making it time-consuming for staff to access them. Communication about equipment locations relied on paper notes and a busy group chat, where critical updates were often missed due to information overload. Paper records were easily misplaced, and essential details were frequently overlooked. This lack of a structured system led to delays in locating equipment, causing inefficiencies and potential disruptions in the operating theatre.



## Objective & Measures

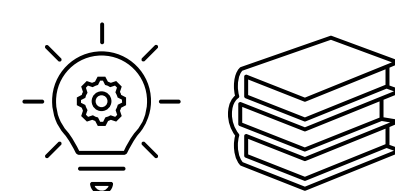
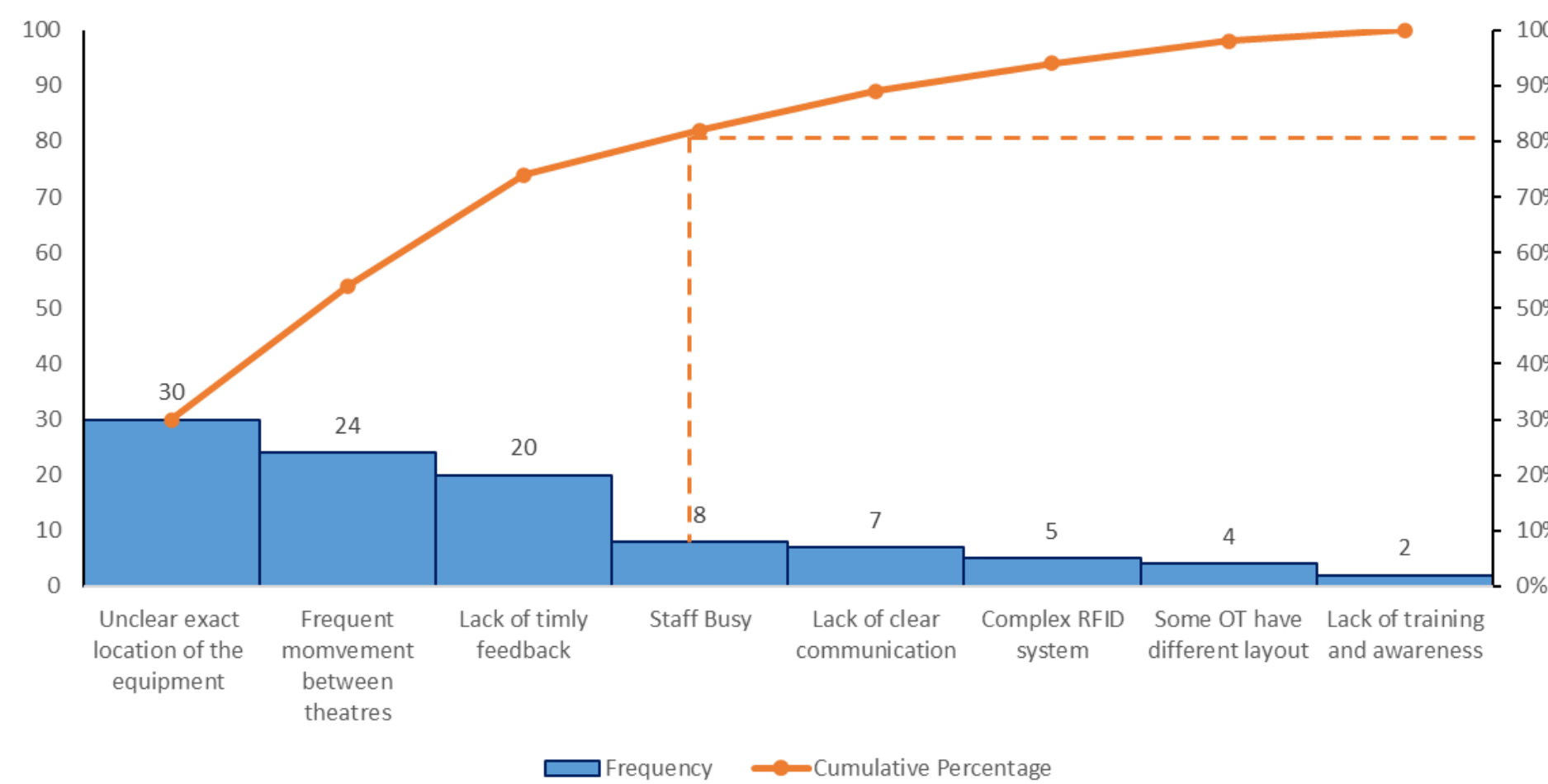
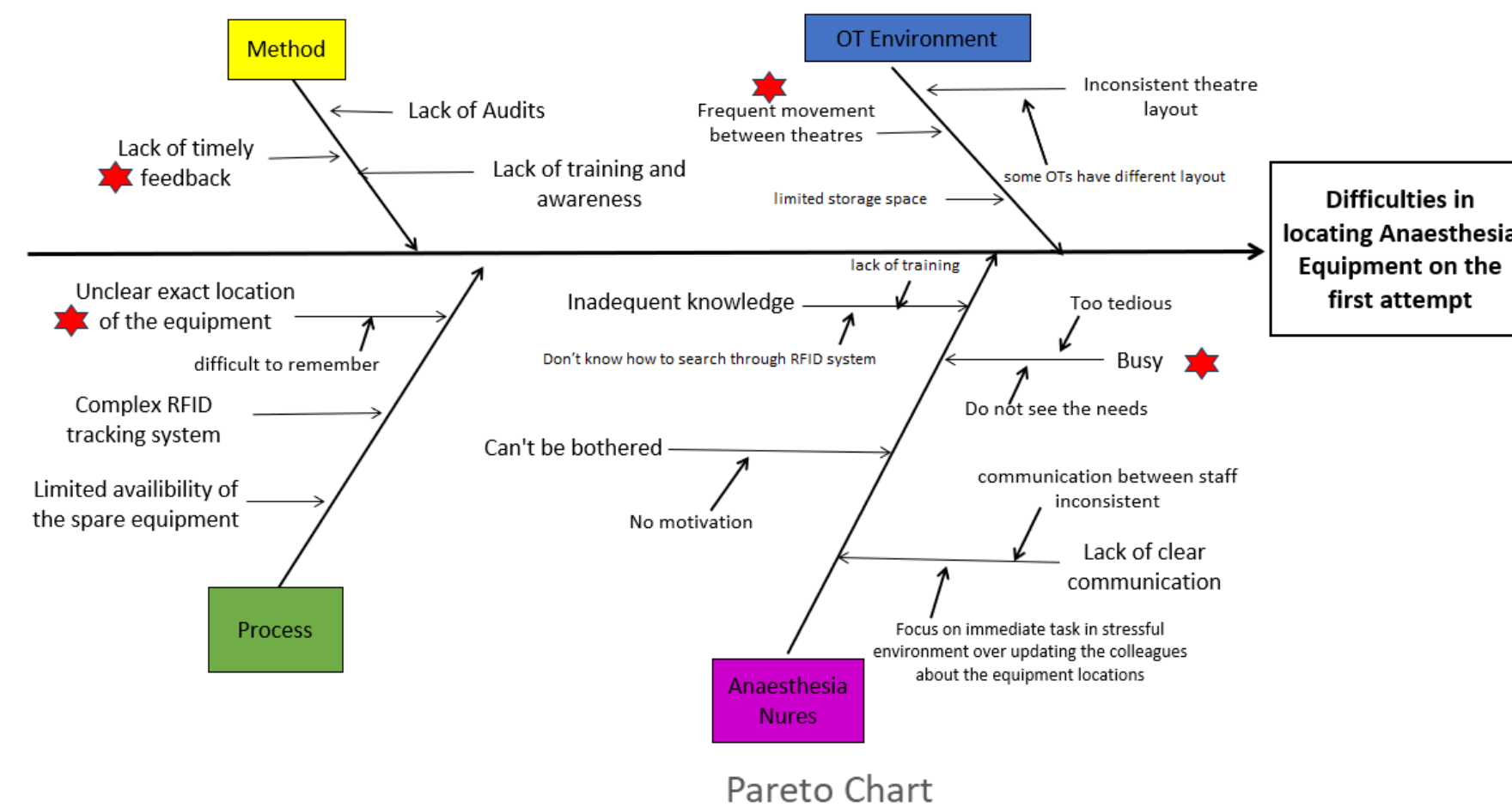
**Primary Goal:** Increase the success rate in accessing anaesthesia equipment on the first attempt during the procedures by 50%.

**Secondary Goal:** To reduce time spent searching for McGrath in OT by 50% within 6 months.



## Root Cause Analysis

- A fishbone analysis revealed that the primary drivers of equipment tracking issues were:
- Undefined storage locations
- Frequent inter-theatre equipment movement
- High staff workload preventing timely updates
- Ineffective communication channels



## Interventions & Initiatives

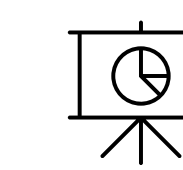
**Au & Pacu & Rn grp**  
Group - 88 members

Voice chat, Add, Search

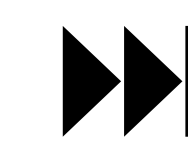
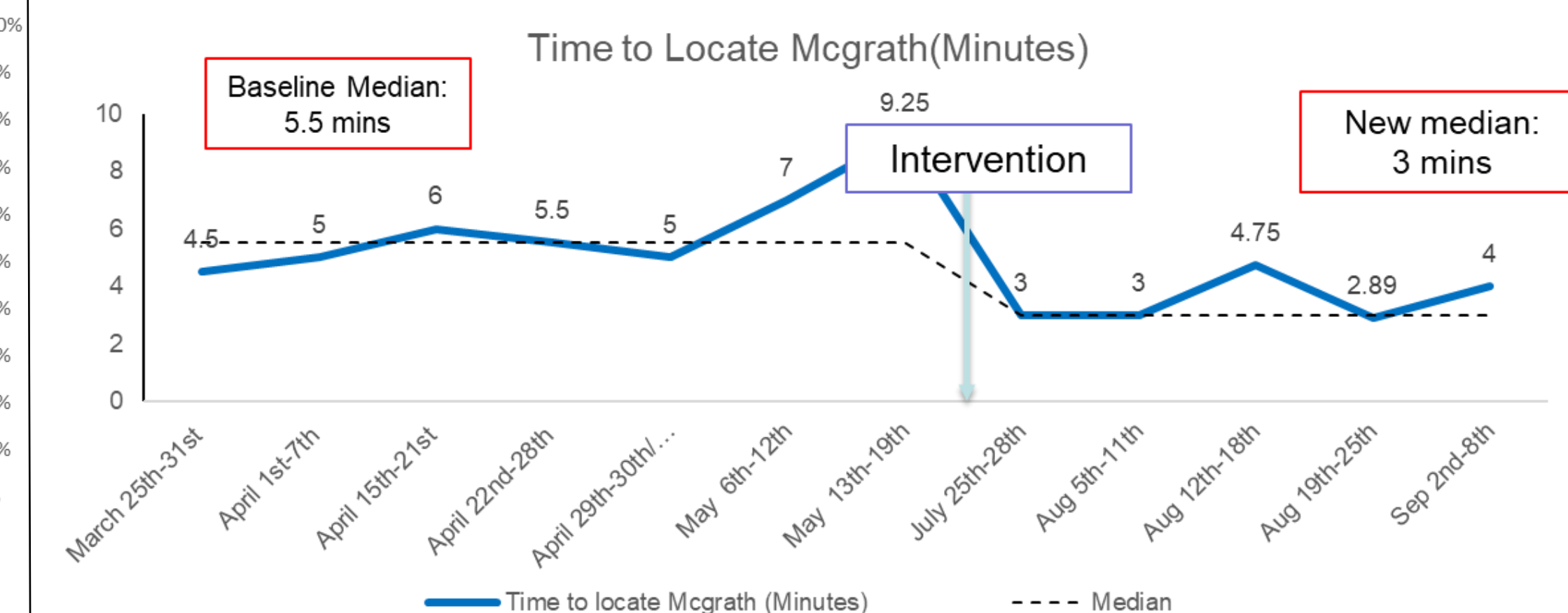
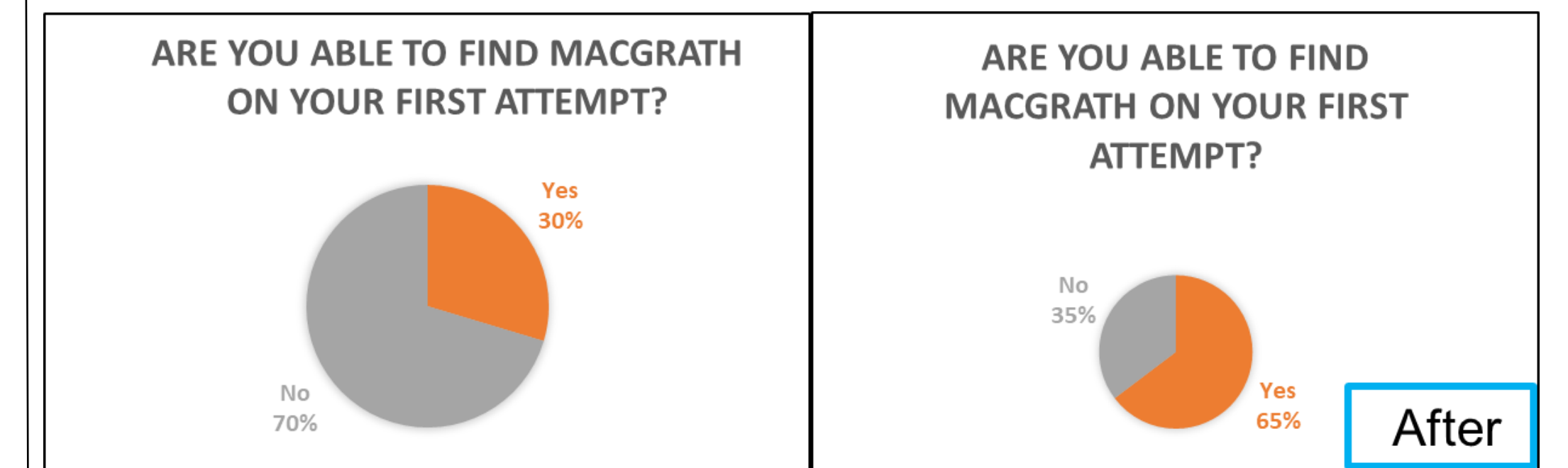
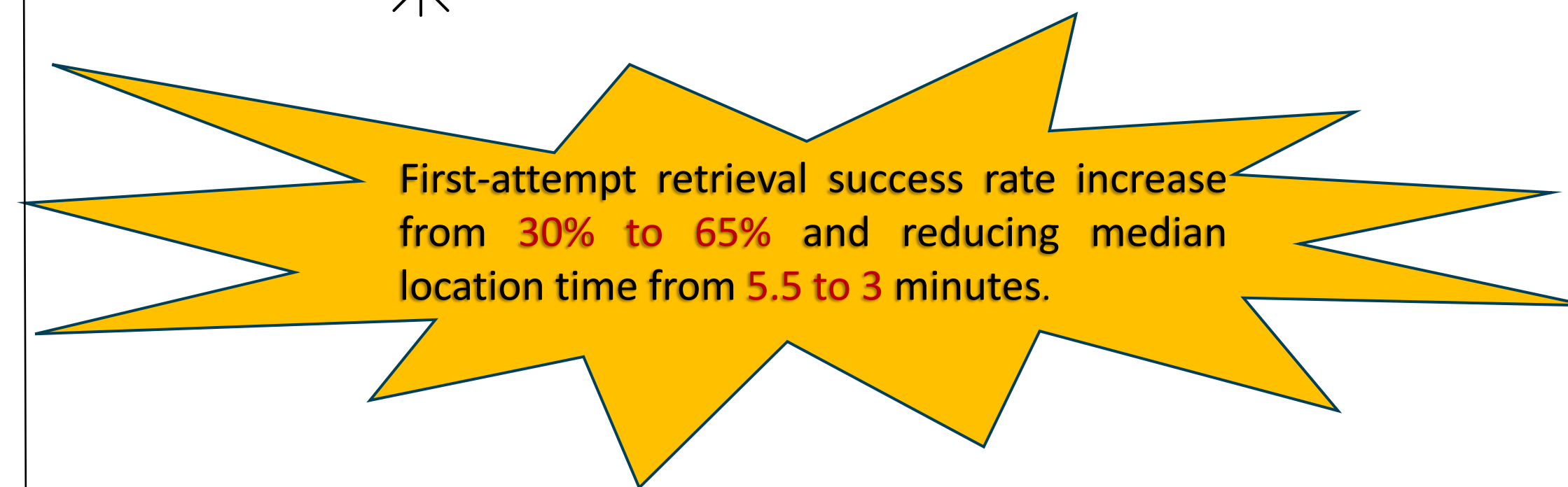
<https://drive.google.com/drive/folders/19jCxuAqv4pQ-KU2NwwolAkQwPKX-7r0>

Anaesthesia Equipment Tracking - [https://docs.google.com/spreadsheets/d/1-VZqfQlrym3Sib7HoJnlAYLZGnQf8CMsTWOP8A\\_rPDQ/edit?usp=sharing](https://docs.google.com/spreadsheets/d/1-VZqfQlrym3Sib7HoJnlAYLZGnQf8CMsTWOP8A_rPDQ/edit?usp=sharing)

Created by SKH OT-Ng Siew Fong, 8/20/15



## Results & Follow Up



## Conclusion & Sustainability

Implementation of QR code tracking significantly improved equipment location efficiency, reducing search time from 5.5 to 3 minutes and increasing first-attempt success rates from 30% to 65%. This system has enhanced theatre workflow and staff satisfaction.

Project sustainability is maintained through standardization of the QR system across all anaesthesia equipment and integration into daily theatre operations. Regular staff training during department orientation ensures consistent usage, while monthly data monitoring and feedback collection enable continuous system refinement to meet user needs.

Plan

Do

Study

Act

- Implement QR codes to track anaesthesia equipment locations in theatres, reducing search time and improving access. Current RFID tracking is inconvenient, with staff often struggling to locate equipment
- Place QR codes on nine different types of anaesthesia equipment, allowing staff to scan and update locations.
- Provide a central link for real-time access to updated equipment locations.
- Evaluate staff feedback on McGrath, search times, and incidents of misplaced McGrath before and after implementing QR codes to measure improvement in locating anaesthesia equipment efficiently
- Since successful implementation in McGrath management, the QR system is standardized for the rest of the anaesthesia equipment, provide ongoing training. Adjusted processes based on data and staff feedback for continuous improvement.