

# Zero Harm with Antithrombotic: Quality Aim Project

## King Faisal Specialist Hospital and Research Centre – Riyadh

### BACKGROUND



**High Reliability Organization –HRO** journey was started in our organization in Nov 2017, since that time we strived to enhance the safety in different quality domains. Thus the organization started zero harm journey and selected a couple of Quality Aim projects. Zero harm with antithrombotic was one of those Quality Aim projects under Safety domain. Antithrombotic is considered a high alert medication due to the increased number of reported medication errors related to it. These errors carry a potential high level of harm, including bleeding, therefore, it was considered to be a top priority for enhancing its safety.

Original status: At the start of HRO, an automated incident report was generated from the safety reporting system for the period between; March 2017 till March 2018, using certain key words, and found a total of 116 incidents. The team reviewed the report and agreed that there was no scientific baseline data as we can't depend on a voluntary reporting system that can't capture all related harm. Thus the decision was to work on a charts audits (513 charts were audited using a designed audit sheet). Also Institute for Safe Medication Practices (ISMP) antithrombotic self-assessment was carried over. In addition, a literature review had been conducted to enlighten our team.

### Project Aim

The project target was to reach **20%** harm reduction with antithrombotic by Dec 2021 with a sustainment plan

### Timeframe

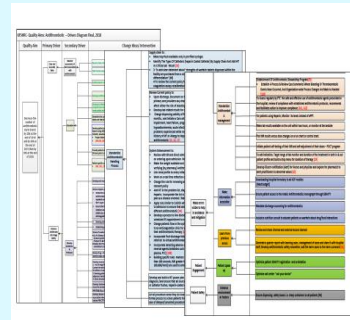
The project was initiated on April 2018, changes were implemented gradually between July 2019 to April 2022

### Approach

**Key Driver Diagram (KDD)** was our approach and improvement framework was **"I-ACT"** which is a hospital specific improvement model based on FOCUS-PDCA, LEAN, IHI improvement model

**Main process improvement:** All project interventions were aligned to the action hierarchy of effectiveness

**Project team members:** Quality Management, Pharmacy, Medical Affairs, Nursing, Health Informatics, Medication Safety, Laboratory, Drug Information Center and others.



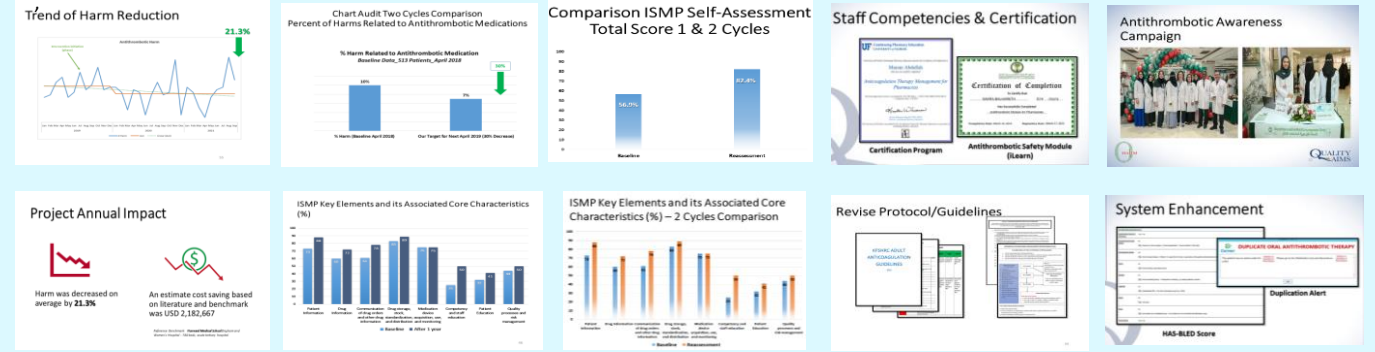
### PROJECT INTERVENTION STRATEGIES

1. Enhance the antithrombotic management in the hospital to minimize as much as possible all related harm
2. Standardize antithrombotic management and monitoring
3. Update and develop antithrombotic related guideline and protocols
4. Enhance patient safety by focusing on related engineering factors
5. Make errors visible to help in avoidance and mitigation by making information accessible
6. Enhance staff and patient awareness by targeted education and training and to increase patient engagement – speak up

### RESULTS

**Outcome measure:** At the end of the project, Antithrombotic harm event was decreased on average by 21.3%, ISMP self assessment score were improved by 50%, an estimated cost saving based on literature and benchmark was USD 2,182,667.00.

**Process Measure:** 100% completion of clinicians certification, 98% completion of on line safety module.



### ACHIEVEMENTS

- Antithrombotic medication stewardship program
- ISMP Antithrombotic Self-Assessment module –First & Second Cycles
- Chart audits baseline and post implementation data for related harm events
- Automated antithrombotic harm event Key Performance Indicator
- Antithrombotic Awareness Campaign
- Acquisition of INR-POCT home and hospital devices

- ICIS system enhancement
- Guidelines and protocols creation and update
- Hospital Wide Heparin Flush Guideline
- Review supplies – Heparin coated catheters
- Patient 's education materials
- Antithrombotic certification
- Antithrombotic Safety training module on i-learn
- Enhance patient accessibility to "Takhasusi" application

### CHALLENGES

1. System Complexity and functionality in terms of integration and different processes
2. Lack of accurate baseline data
3. ISMP self-assessment is time consuming
4. Antithrombotic management is a multidisciplinary process with multiple team involvement
5. Required budget allocation

### SUSTAINABILITY

- 1- Establishment of antithrombotic stewardship program with specific charges under the hospital formulary and therapeutic committee
- 2- Launching of an automated antithrombotic harm event Key Performance Indicator (KPI)
- 3- Development of an automated antithrombotic management system in the Hospital HIS to enable clinicians for better antithrombotic management
- 4- Introduction of hospital and home INR-POCT devices

