

## **Project Title**

Improving Care for Hip Injury Patients

## **Project Lead and Members**

Project lead: Dr Shobhit Swarup, Consultant

Project members:

- Dr Kanak Naidu, Senior Consultant
- Dr Paul See Poh Lye, Senior Consultant
- Dr Chin Teck Yew, Consultant
- Dr Lohan Rahul, Consultant
- Michael Chin Sze Min, Manager
- Pang Ai Cheen, Nurse Clinician
- Siti Nor Ilyana Binte Kamsol, Nurse Clinician
- Lee Tuan Khong, Senior Manager
- Benjamin Ethan Lim Zhu En, Senior Executive
- Daryl Ng Joo Guan, Executive

## **Organisation(s) Involved**

Khoo Teck Puat Hospital

## **Project Period**

Start date: May 2018

Completed date: On-going

## **Aims**

To better manage Khoo Teck Puat Hospital's Acute & Emergency Care (A&E) patients who have sustained a blunt or traumatic injury to the hip yet not fulfilling the admission criteria to hip fracture unit.

## **Background**

See poster attached/ below

## **Methods**

See poster attached/ below

## **Results**

See poster attached/ below

## **Lessons Learnt**

- Lessons learnt include:
  - Various functional teams can come together to discuss and achieve common objectives that benefit patients and the hospital.
  - The need to constantly engage all stakeholders in managing change.
- The initiative was temporarily put on-hold since Feb 2020 due to the COVID-19 restriction.
- The work team measures the following for review and sharing:
  - Number of patients admitted to EDTU Hip Contusion protocol
  - Number of patients discharged (home, community hospital)
  - Number of patients admitted from Hip Contusion protocol to the inpatient wards
- The team is reviewing the screening process of patients admitted to Hip Pain protocol on a day where the next working day is a Sunday or public holiday.

## **Conclusion**

See poster attached/ below

**Project Category**

Care & Process Redesign

**Keywords**

Care & Process Redesign, Workflow Redesign, Value Based Care, Cost Savings, Right Siting, Emergency Medicine, Nursing, Healthcare Administration, Diagnostic Radiology, Khoo Teck Puat Hospital, Hip Fracture Unit, Operations, Extended Diagnostic and Treatment Unit, Hip Contusion Protocol

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## Improving Care for Hip Injury Patients

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### Background & Aims

This project was initiated to better manage A&E patients who have sustained a blunt or traumatic injury to the hip yet not fulfilling the admission criteria to hip fracture unit. These patients often ended up being admitted to general wards.

The focus of this project was to provide an alternative pathway for patients who may not require admission yet need further assessment before discharge

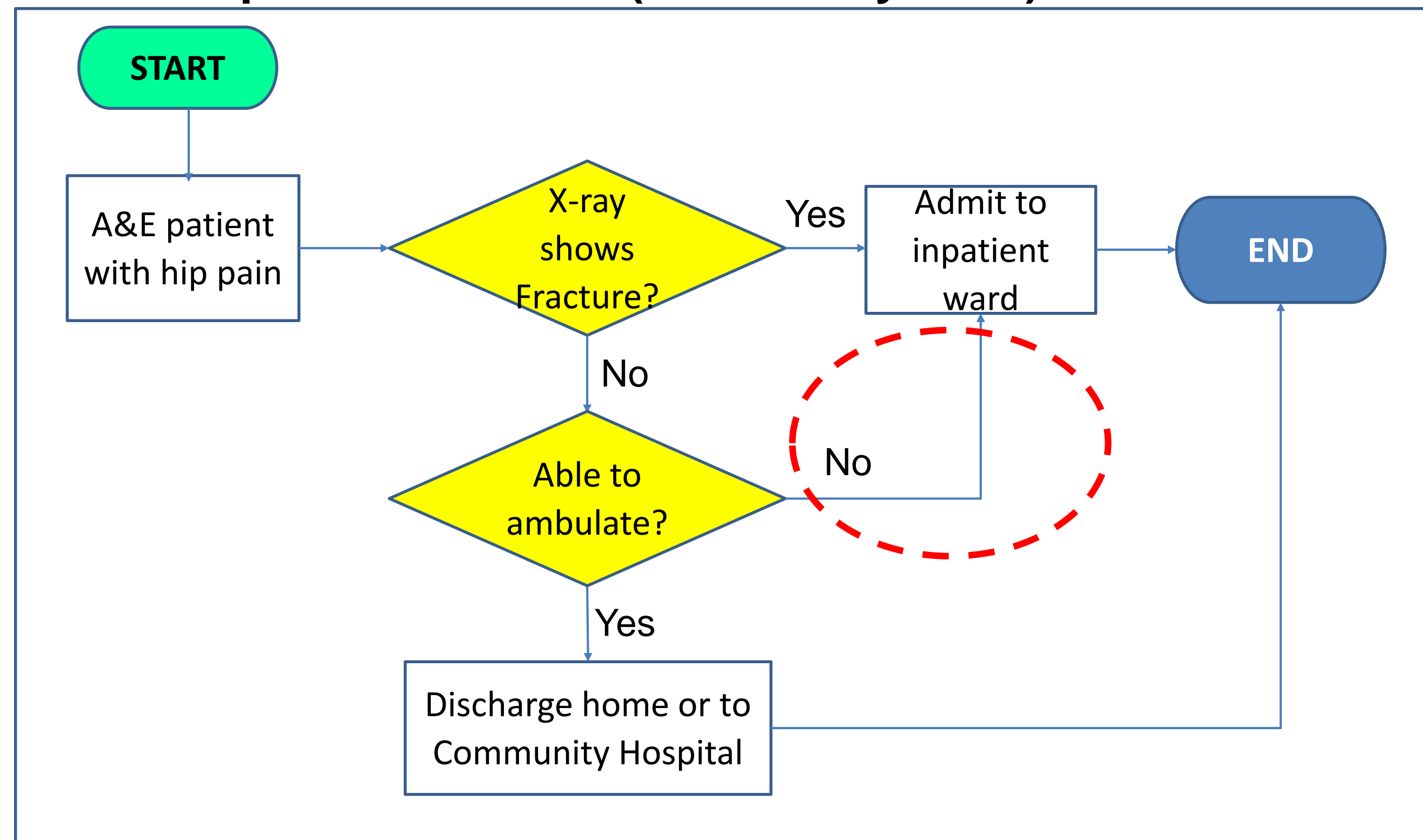
The main aim of this project is to reduce unnecessary admissions to inpatient wards, hence

- reducing the costs for patients
- improve the bed day savings for the hospital

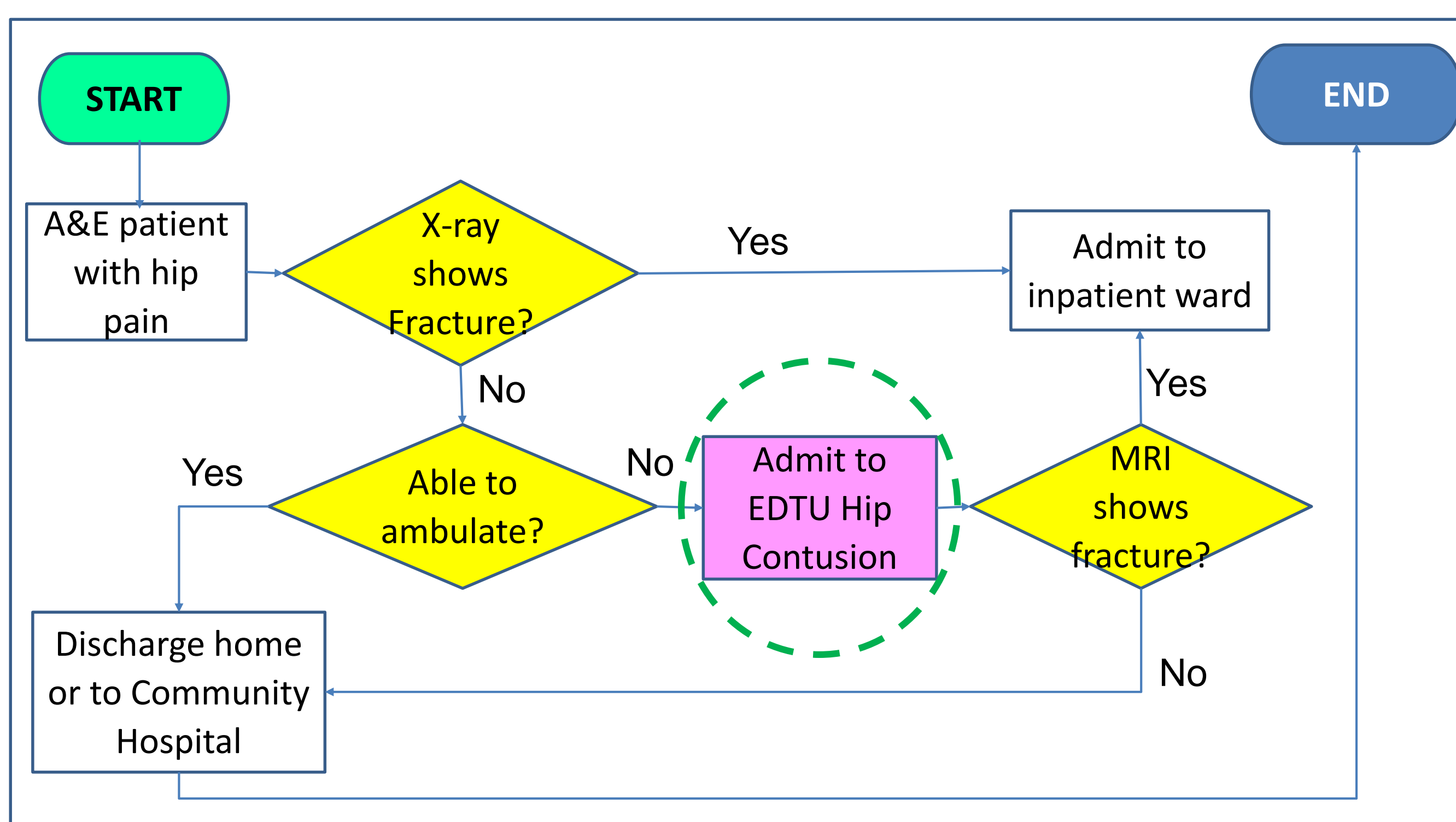
### Methodology

Stakeholders (A&E, DDR) formed a work team, reviewed data of A&E Hip injury patient and their disposition, and proposed an alternative workflow

#### As-Is: Hip Pain workflow (before May 2018)



#### To-Be: EDTU Hip Contusion Workflow (From May 2018)



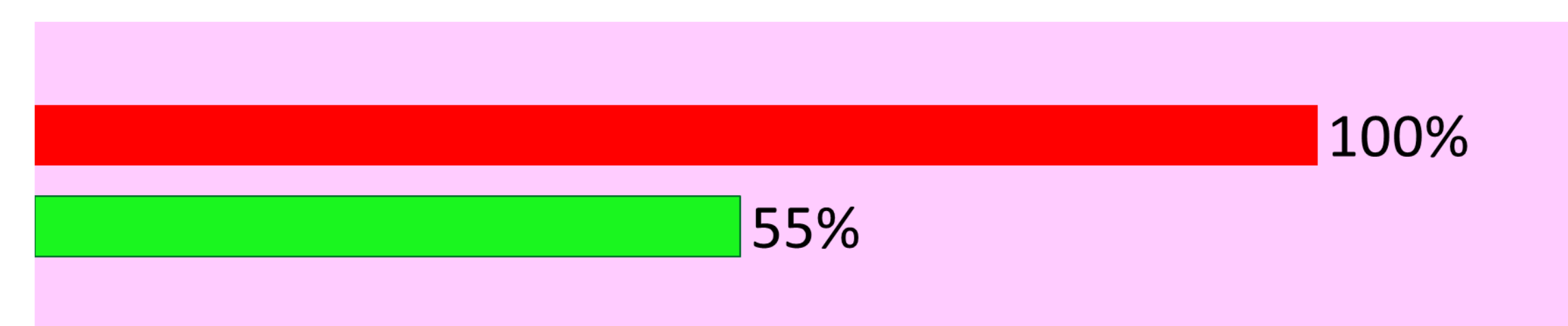
Key features:

- Timely assessment at EDTU short-stay ward
- Dedicated MRI slot within 24 hours (weekday only)

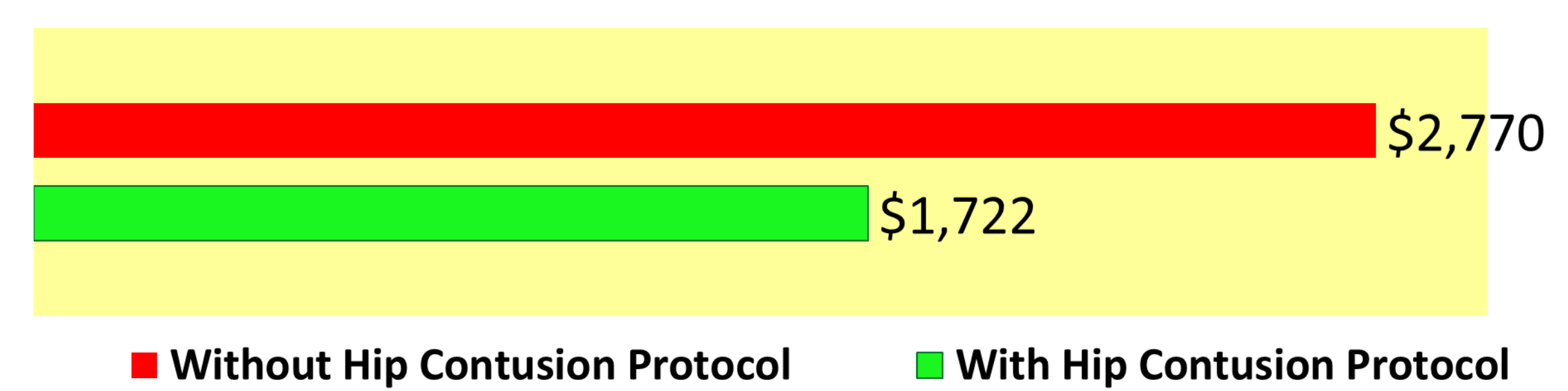
### Results

From May 2018 to Feb 2020:

A) Percentage of A&E Hip Pain patients (non-ambulatory) who were admitted to inpatient wards



B) Average bill size(subsidised) of A&E Hip Pain patients who were admitted (non-Hip Fracture cases)



### Project Impact

<b>BETTER</b>	39 patients discharged from Hip Contusion = 39 x 5.6 LOS= 218 bed days
Bed Day Savings	<b>218 bed days @ \$650 per bed day = \$141,700</b>
<b>FASTER</b>	MRI leadtime: Within 24 hours at EDTU vs up to 3 days at Inpatient Wards
Faster Diagnosis	<b>Improved diagnosis time by up to 200%</b>
<b>CHEAPER</b>	Average bill size (subsidized) per patient is reduced from \$2770 to \$1772
Patient Cost	<b>Overall savings per patient: \$1048 (38%)</b>
<b>SAFER</b>	Out of the 39 patients discharged from Hip Contusion Protocol, 1 returned for admission
Readmission rate	<b>Readmission rate = 3% (compared with Inpatient readmission rate of 12.4%)</b>

### Sustainability

Since implementation in May 2018, the Hip Contusion protocol is well-received by stakeholders and has been made a standard protocol at EDTU

The work team:

- tracks the indicators in the results section for review and improvement
- reviews the screening process to improve the protocol for patients who are admitted before weekend and public holidays

### Conclusion

The Hip Contusion protocol demonstrated the good team work of the various functional teams which is in line with NHG River of Life / Unified Care Model: Living with Illness. The project delivers values at reducing patient cost, and reducing YH's cost-to-deliver outcomes. Patients benefited from the faster diagnosis, had good outcome with a lower readmission rate.