

Cost-effectiveness and Outcomes of Early or Same-day Discharge After Elective Percutaneous Coronary Intervention in Heart and Vascular Institute at Johns Hopkins Aramco Healthcare

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Introduction

Same day discharge (SDD) programs have been well recognized in many countries for 12 years.

Research proved that SDD is a safe and feasible clinical practice with significant potential savings to the healthcare system (JACC, 2017 Feb)

Same-day discharge is not the current standard of care in Saudi Arabia, however there are published reports of successful SDD. (AHA, 2019)

SDD programs outside of Saudi Arabia have shown added benefits based on evidence from research done by the investigators. (J Saudi Heart Assoc 2016)

Report Period: September 2019 - November 2020

Total patients in day surgery= 411 Patients

Total PCI day surgery patients= 324

Total percentage of discharged patients through day surgery post Cardiac Catheterization

Angiography and Intervention =66%

Total patients successfully discharged on the same day= 24 Percentage of the same day discharge 2019 & 2020

Total percentage of same day discharge performed = 6%

Justification: The number is considered low due to the quarantine conditions that the country has faced.

Total percentage of same day discharge with Complications = 0%

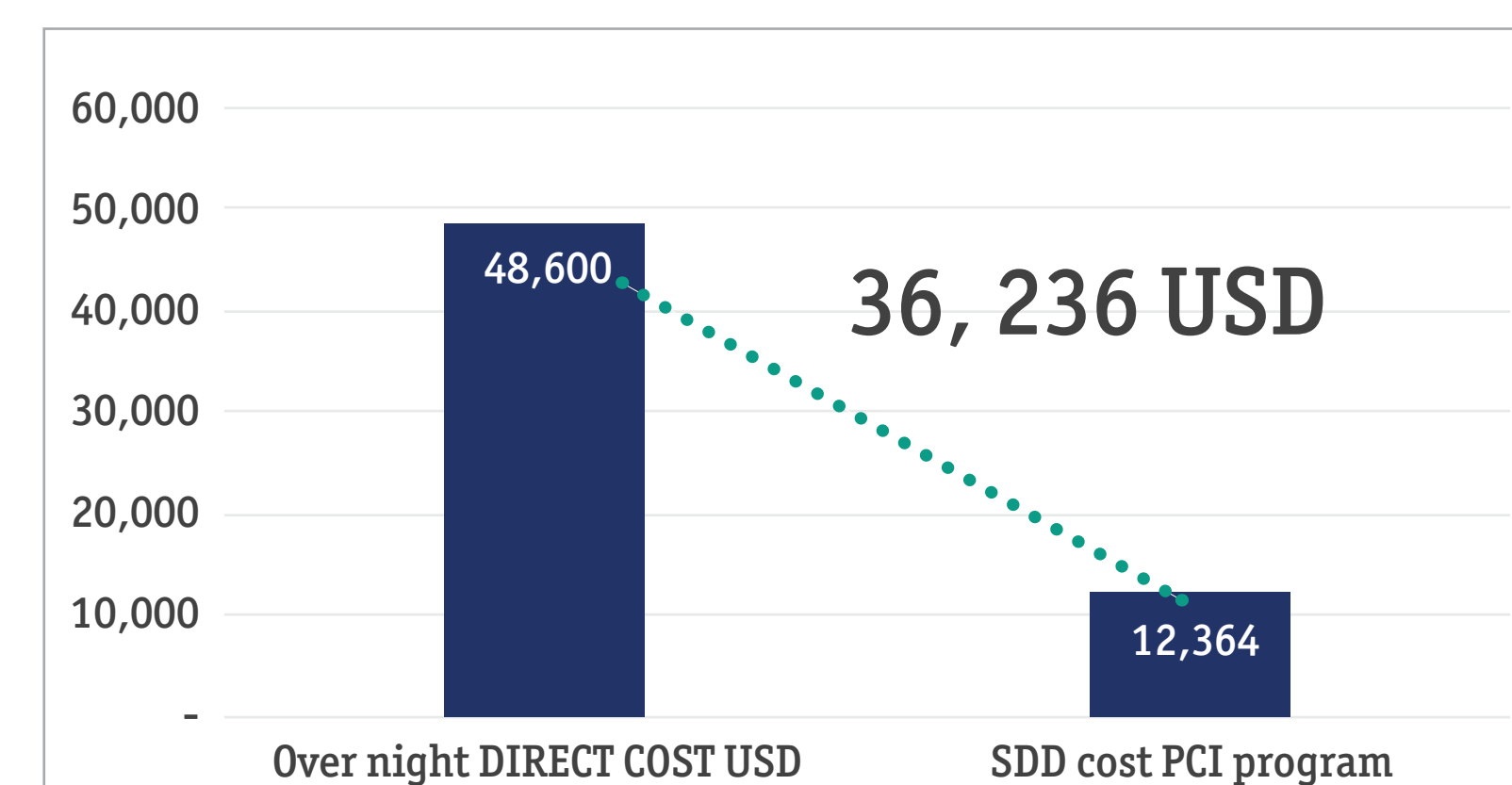
Aim

Same day discharge - Overview

- To evaluate national trends in same-day discharge (SDD)
- Compare clinical outcomes with those among patients admitted for overnight stay undergoing elective percutaneous coronary intervention (PCI) for stable angina.
- Increase patient satisfaction
- Implement a safe clinical practice
- A significant reduction in hospital stay costs
- Improving the inpatient bed management
- Reducing Hospital Acquired Infection (HAI)
- Reduce non-value added operations

The hospital started the system of SDD post PCI for stable Coronary Artery Disease (CAD) patients and showed that for these patients the complication rate was extremely low.

Financial difference between Direct cost and Saved cost after Same Day Discharge



Total percentage of same day discharge monthly performed September 2019– November 2020

Sep	Oct	Nov	Dec	Jan	Feb	March	April	May	June	July	August	Sep	Nov	Total
2	4	3	1	1	2	1	0	0	1	1	0	1	1	18
28	40	43	36	26	31	10	1	5	17	13	11	16	21	298
7.1%	10%	6.9%	2.7%	3.8%	6.4%	10%	0%	0%	5.88%	7.69%	0%	6.25	4.76%	6.0%

Methodology

A multidisciplinary team was formed which included interventional cardiologists, coronary care unit staff, hospital administrators, pharmacists, quality staff and IT staff. Discussion with these individuals allowed them the opportunity to share their insights, examine concerns, and ensure the success of the program.

- Identify each group's role in the SDD PCI program and how their responsibilities would change
- Their input is essential because patients who qualify will have a different care pathway in JHAH
- The post procedure staff nurses would need to adjust their care to facilitate the patient's discharge within 6 hours

Inclusion criteria for selecting PCI patients for SDD

Baseline demographic factors:

- Age < 65 years
- Living within 40 km from the center
- Blood sugar < 250mg/dl
- Creatinine clearance > 60ml/min
- Absence of active congestive failure
- Stable CAD
- LVEDP < 30
- Absence of significant valvular disease

Angiographic factors:

- PCI not involving unprotected left main, proximal bifurcation, vein graft lesion, or single vessel supplying the heart.
- Use of up to 2 stents.

Procedural factors:

- Absence of major complications or significant hemodynamic shifts.
- No GP IIb/IIIa infusion following procedure.
- Uncomplicated vascular access with successful deployment of closure device.

Post-procedural factors:

- Ability to ambulate for 5 minutes in the absence of any significant pain and access site bleeding.
- A working cell and home phone line for a post-procedure follow-up call.
- A family member/ friend to drive them home

Results

Between September 2019 - November 2020 We can confirm that the safety of SDD following PCI has been demonstrated provided that it is performed in selected patients with low risk.

- SDD was successfully performed in 24 patients
- Total overnight direct cost for 24 patients= 48,600 USD
- Total SSD direct cost for 24 patients=12,364 USD
- Total costs saved after SDD for 24 patients= 36,236 USD

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