

# National Quality Improvement Conference

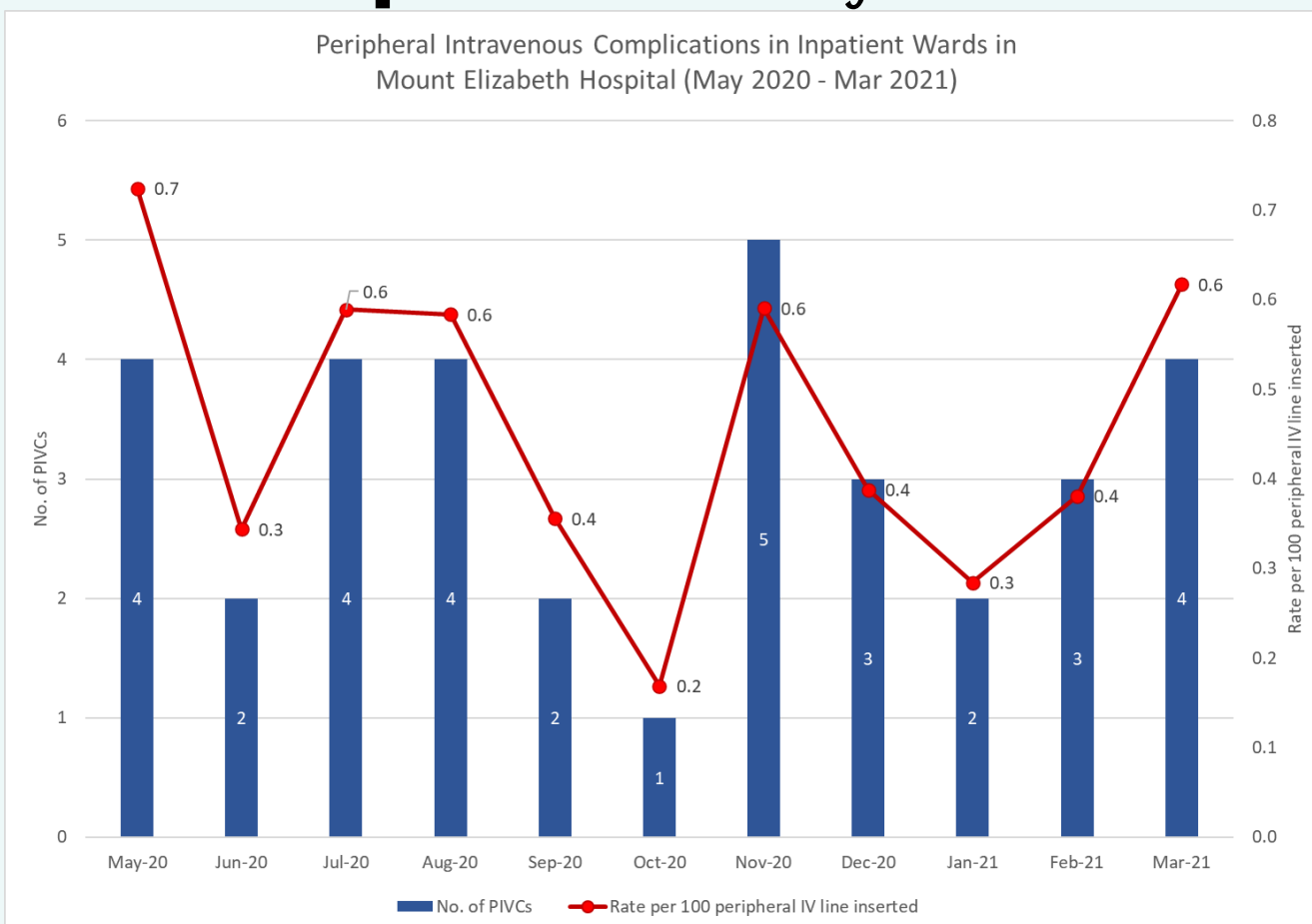
## Reducing Peripheral Intravenous Complication(s) Hospital Wide Inpatient Wards and Extension to Endoscopy Centre

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### Problem Statement

There was a **high incidence rate of peripheral intravenous complications (PIVCs)**, average of **0.5 per 100 peripheral intravenous (IV) line inserted**, across the inpatient wards in Mount Elizabeth Hospital from May 2020 to March 2021



### Potential Solutions

INITIATIVES	OBJECTIVES r/t root cause	Adopt
<i>Hands on sessions &amp; awareness campaign</i>	Increase accuracy of nurses' assessment	😊
<i>Reinforce work instruction</i>	Correct removal technique	😊
<i>Review cannula sizes</i>	Suitable cannula selection according to patient type & infusion	😊
<i>Increase site check for cognitive impaired patients</i>	Increase monitoring for patients with cognitive impairment	😊
<i>Conduct IV cannulation hands on sessions in endoscopy department</i>	Nurses are competent in performing intravenous cannulation	😊
<i>Standardise diluent amount &amp; infusion rate for IV Augmentin</i>	Lower incidences of chemical phlebitis related to IV Augmentin infusion	😊
<i>Enhance securement method by using Tubigrip &amp; Tegaderm Advanced.</i>	Lower incidences of mechanical phlebitis related to poor securement	😊

### Project Aim

Reduce peripheral intravenous complications rate **to less than 0.5 per 100 peripheral IV line inserted in inpatient wards by December 2022.**

MEASURE

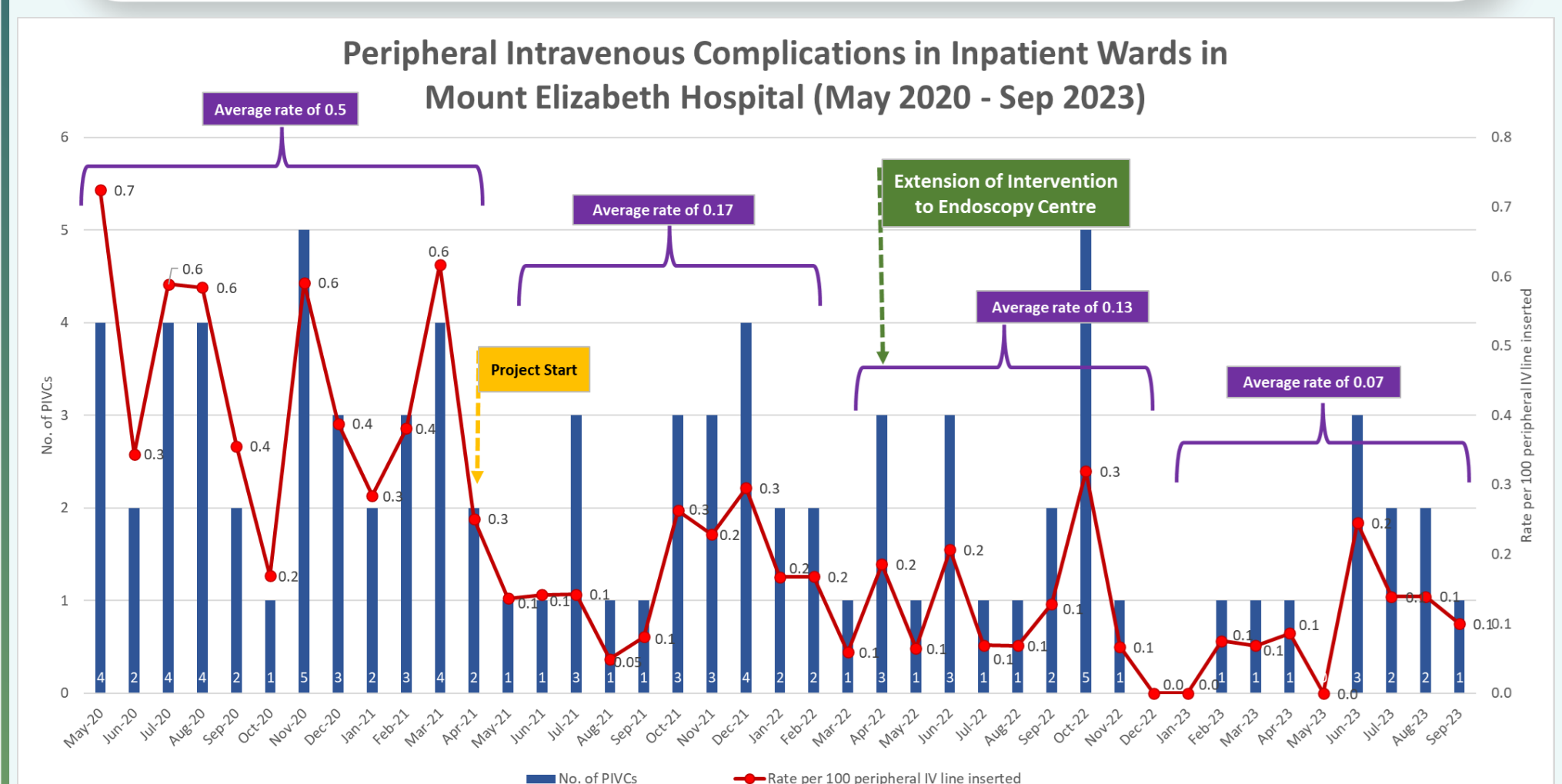
$$\frac{\text{Number of peripheral intravenous complications}}{\text{Number of peripheral intravenous line inserted}} \times 100$$

### Lessons Learnt

- Gaining stakeholders trust**
  - Provide ample practice for clinicians to familiarize
  - Providing adequate resources increases clinicians confidence in the technical skills of the procedure*
- Introducing new methods**
  - Remove options that serve similar purpose but are less efficient
  - This encourages nurses to use recommended products as they are easily obtained.*

**Root Cause Analysis** + **Evidence Based Solutions** = **Significant Impact**

### Outcomes & Impacts



**In December 2022, average rate was 0.13**

- Cost savings related to treatment and service recovery estimated at \$12 000 per year.
- Higher patient satisfaction. Lesser risk of prolonged hospitalisation.
- Nurses are more confident. Reduced legal risk implications.
- Establish quality standards & organisational reliability.

SPREAD

**PROCEDURE = SEDATION = HIGH RISK for PIVC**  
Initiatives spread to Endoscopy Centre in April 2022.  
After implementation, the PIVC rate decreased from 4.5% (Feb 2022) to 0.1% (May 2023)