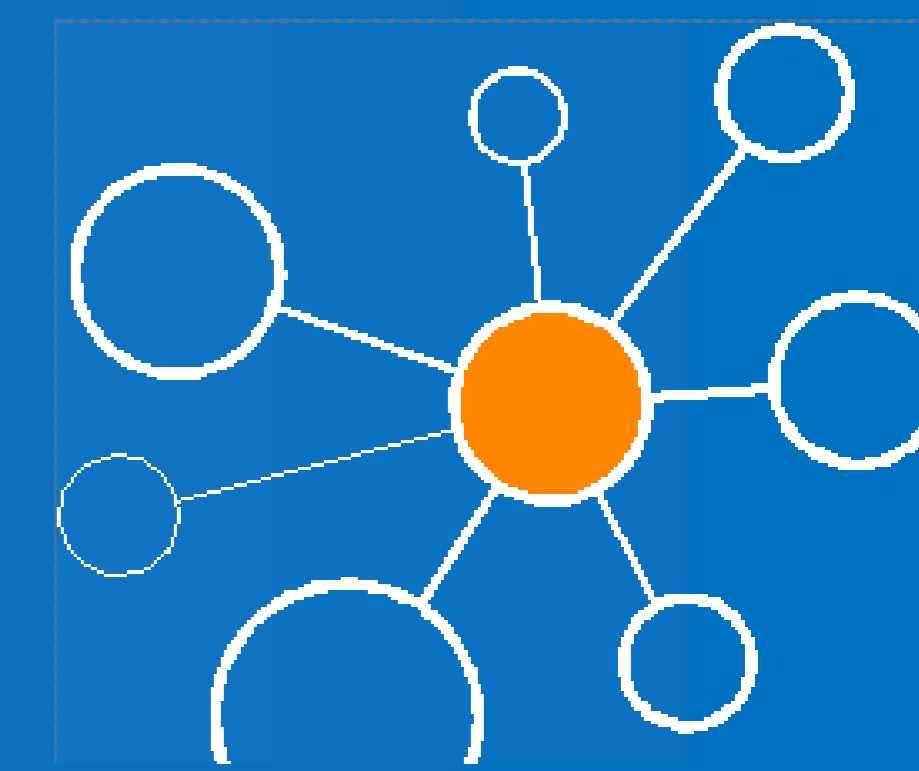


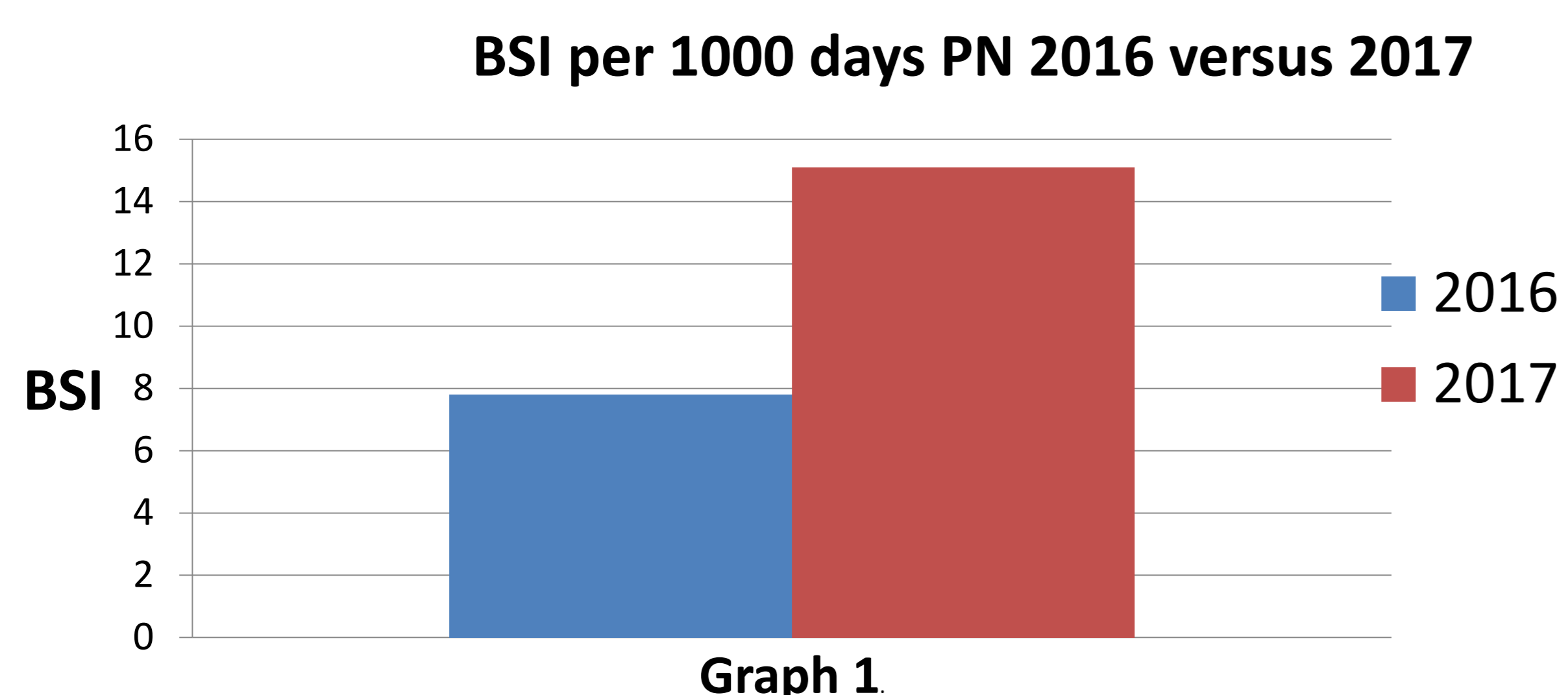
An appetite for improvement: Reducing the incidence of bloodstream infections in patients receiving parenteral nutrition via a central venous catheter.

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Background

Catheter-related bloodstream infection (BSI) is a recognised risk associated with parenteral nutrition (PN)¹. It can be life-threatening, leads to an extended hospital stay and, for patients reliant on PN, it can mean 7-14 days without nutrition. The estimated cost of each catheter-related BSI is £9,000². In 2017 there was a significant increase in BSI rates in our patients receiving PN (Graph 1).



Graph 1.

Project Aim

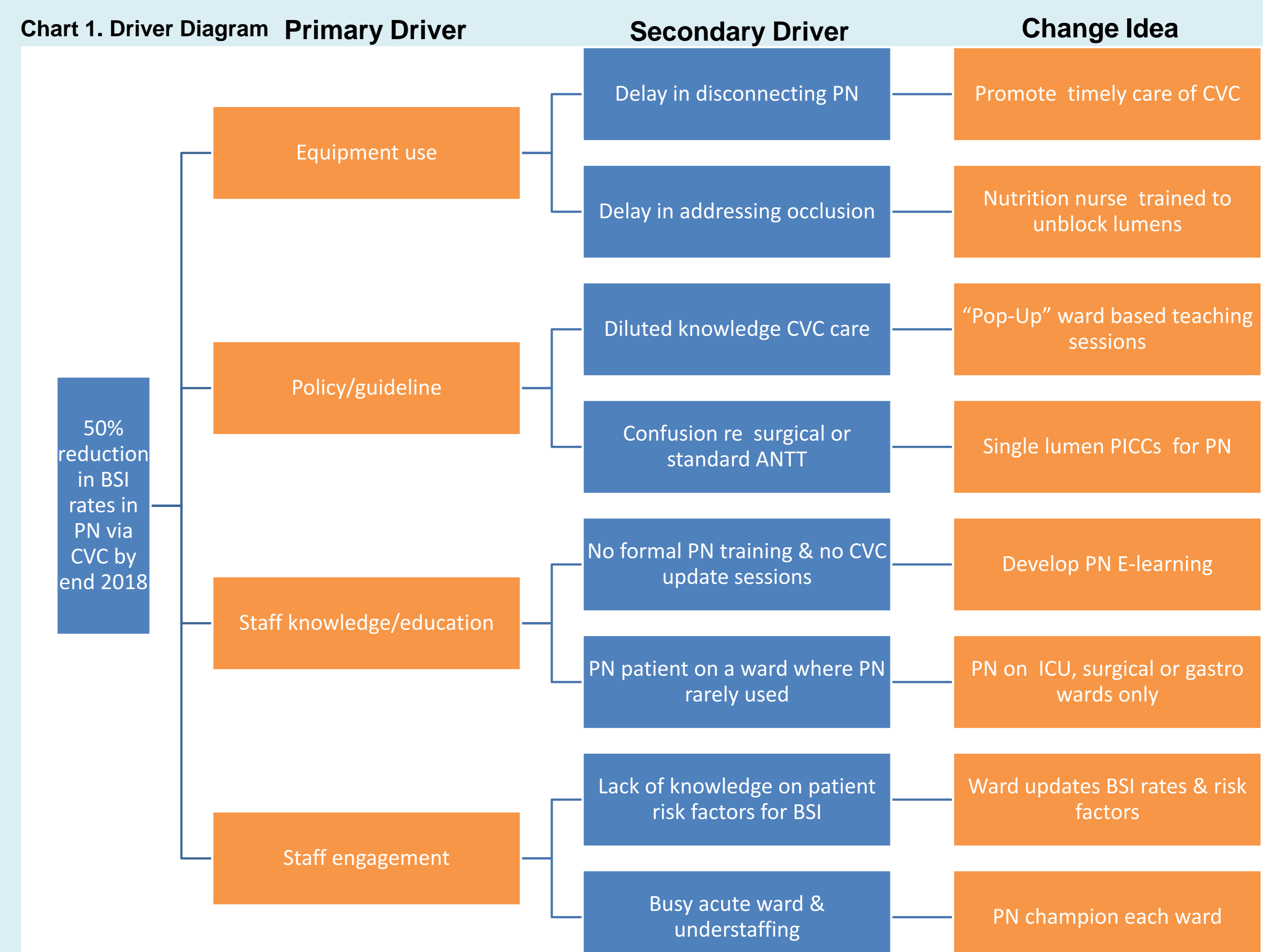
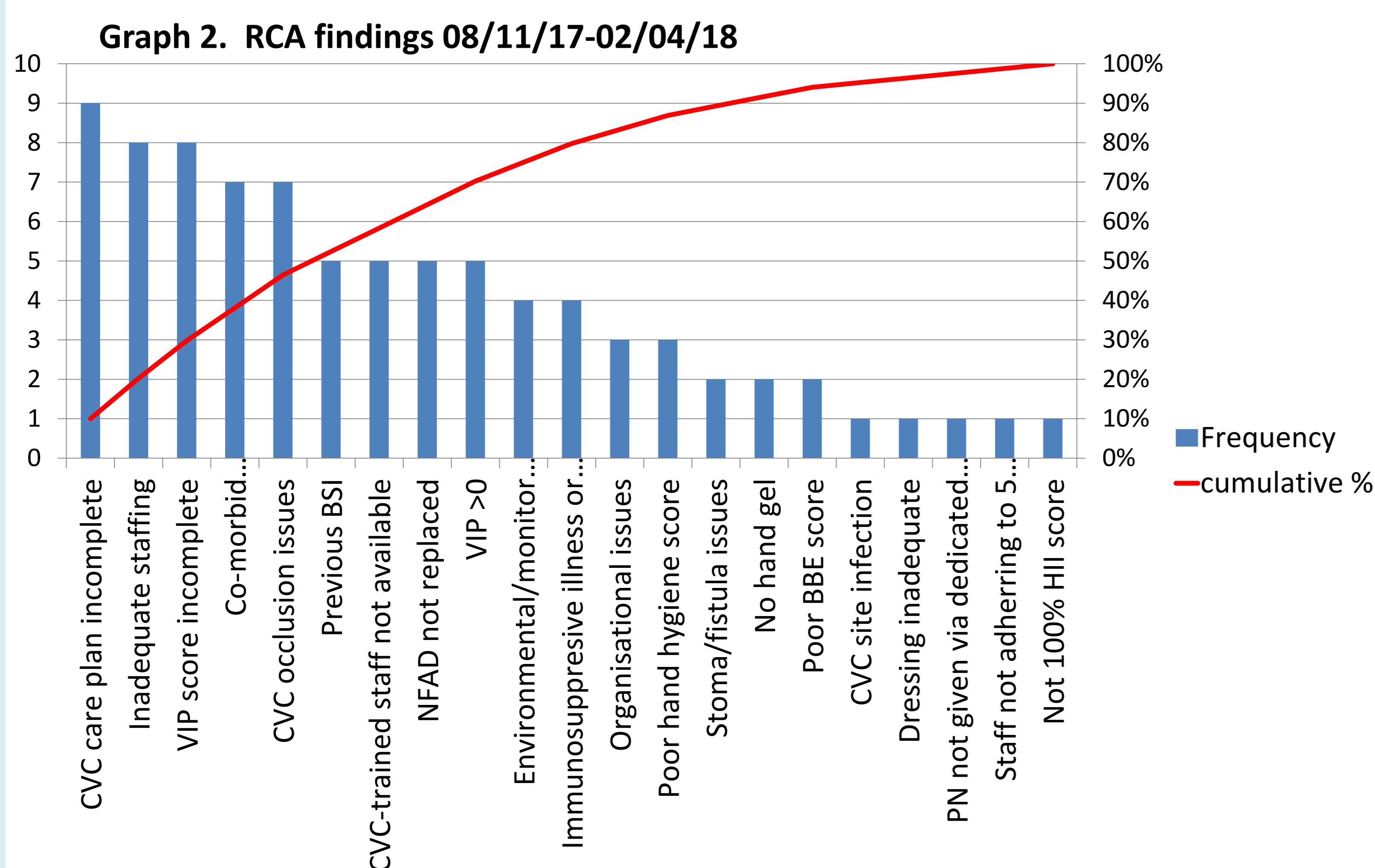
50% reduction in the incidence of BSI associated with a CVC in patients receiving PN in an adult ward by end of 2018.

Outcome measure = Number BSI

Balancing measure = per 1000 days PN

Method

A root cause analysis (RCA) tool was developed to investigate all BSI associated with PN. Findings and recommendations were reported to ward managers to direct action planning. The pareto chart (Graph 2) analyses RCA findings identifying the most prevalent factors on which to focus improvements. The driver diagram (Chart 1) categorises RCA findings into primary and secondary drivers guiding change ideas to reduce BSI rates.

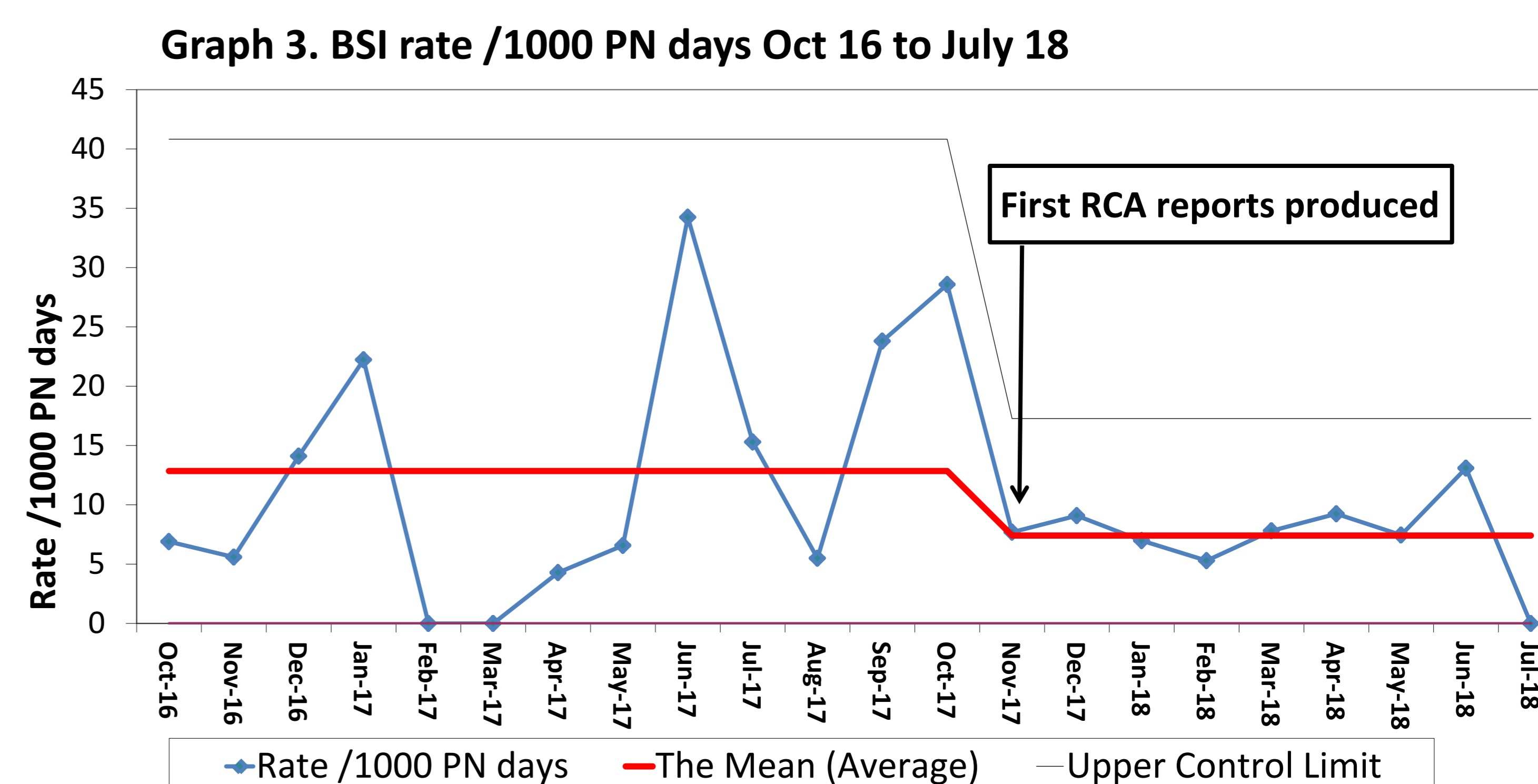


Interventions

- RCA and feedback for all BSI in PN
- Single lumen PICCs where possible for PN since Jan 2018
- Ward based *pop-up* teaching sessions: identifying and reducing risks of BSI in PN.
- Ward update sessions on BSI rates and findings from RCAs
- Posters for wards - knowledge gaps identified from nurse questionnaires
- Trial use of *Curo's port protectors*² in patients receiving PN for >28 days
- Safety Huddles to include patients with CVCs
- Improved and updated PN nursing care plan

Results

49.6% reduction in BSI rates to end July 2018 (Graph 3).



Future plans

- E-learning module for PN
- Ward nurse peer-review sessions for CVC access technique
- Trial ward based refresher CVC access sessions
- Business case for use of *Curo's port protectors*
- Business case for a second nutrition specialist nurse

References (1) Pironi L, Arends J, Bozzetti F, et al ESPEN Guidelines on chronic intestinal failure in adults. *Clinical Nutrition*. 2016; 35 (2) 247-307. (2) NICE - Curo's disinfecting cap for needleless connectors. Available from: <https://www.nice.org.uk/advice/mib143/chapter/The-technology> [Accessed 24th August 2018].