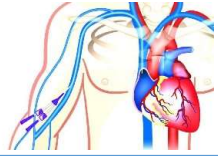


QIP PICC line performance in the Department of Medicine for Elderly



Mariana Kostova, Gillian Beck, Maren Hunter, Greg Waddell

Background

Vascular access service available in Glasgow Royal Infirmary has been providing peripherally inserted central lines for approximately last 3 years. We felt it suitable to evaluate the outcomes in the department of Medicine for Elderly. Our main aim is to prolong the half life of PICC line in situ in the next 2-3 years of the service and to improve staff and patient's experience.

Method

We conducted an audit in the department for the last year (end of 2019 till January 2020) to identify PICC line outcomes so far. Then we used the QI methodology including a process map and driver diagrams to highlight main areas of concern. As there are several professionals involved in utilising and management of each PICC line in the department (FY1 doctors, nurses, vascular access team), we conducted a survey in each of these groups to assess their experience and to identify their learning needs. After that we conducted 30-min training sessions for FY1s and Nurses addressing all areas of concern.

Conclusion

Staff were all keen to be trained. Short 30-min training sessions were proven to be efficient in improving their confidence and refreshing their knowledge. However, for FY1s we found that formal training sessions might be more efficient prior to starting the job. We will continue to test different change ideas and to collect feedback on those from staff. We will re-audit in 6-mths to assess the PICC line half-life and complications rate.

Results

AUDIT

- **99** adults in the DME had PICC lines, **27 of them had multiple PICC lines inserted.**
- PICC line stayed in situ in **average of 15.5 days** (Median 13 days) and the longest 53 days

Reasons for Removal n=119		
No Longer Required	57	48%
Patient Died	20	17%
Dysfunction / Poor Flow	18	15%
Displaced / Accidental Removal	13	11%
Infection / Phlebitis / Bacteraemia	8	7%
Leakage / Bleeding / Haematoma	2	2%
Other (PICC swap for contrast)	1	1%

8 PICC lines removed due to infection concern. 4 of those cases were with SEPSIS where one of the possible sources was felt to be the PICC line.

2 WEEKS AFTER (2nd CYCLE)

- 10 FY1 responded to survey:
- FY1s remained confident in their knowledge (**average 8.2**)
 - **70%** applied knowledge/skills gained in training session
 - **90%** will recommend the training to future FY1s

Survey results

Nursing Staff (24 RNS, Feb'20)

BEFORE TRAINING:

- **6 were** able to describe at least 4 core aspects of PICC line management
- **10 were able** to describe at least 4 core aspects of PICC dressing changes
- **11** had never removed a PICC line or couldn't describe how to do so
- **7** would simply **call the doctor** if the line was blocked
- Many of them were untrained and low in confidence
- Poor usability of guidance at the point of need

AFTER TRAINING (9 RNS attended):

- More **confident** (average 8.34 vs 5.67 before)
- **8 felt training sufficient** for daily duties
- **22% were able** to describe all basics of PICC line maintenance
- **5 managed to describe removal** of PICC line

SURVEY RESULTS:

FY1s (36 doctors, April'20):

- **94%** in doctor survey felt they did not have sufficient training in PICC line management prior to post
- **Only 12% were confident** in their knowledge to manage PICC complications

SURVEY RESULTS:

AFTER TRAINING 1st CYCLE (19 FY1s trained, 13 responses collected):

- **ALL** were confident in their knowledge (Average 8.38)
- **8 know** where to find further guidance on PICC line management
- **11 found the training sufficient** for their daily duties

