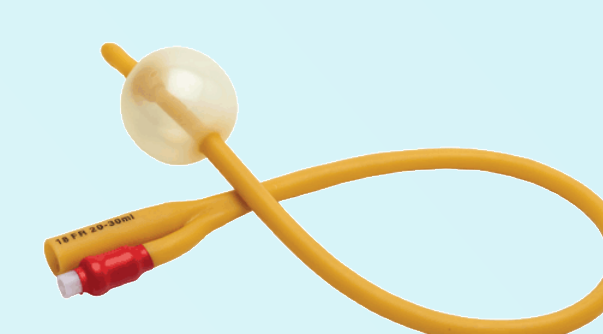


Asya Veloso Costa, Asiya Zhunus, Bradley Storey, Mohammed Salik Sait, Sidrah Shah, Farzaneh Sanei, Jensy Mathew, Marta Heitor  
Princess Royal University Hospital, London

## Project Aims

- 1) Ensure all patients on M3 & M7 have an EPR order for catheter insertion and monitoring
- 2) Reduce weekly rate of catheter days on M3 & M7 by 25% (catheter days per 100 bed days)
- 3) Improve overall documentation of catheter insertion in clinical notes in this observed group



By improving documentation and reducing unnecessary catheterization, we hope to reduce overall risk of infection and promote patient comfort and experience.

## The Problem

### NICE GUIDELINES [QS61] (1):

- Clinical need for catheterization should be reviewed regularly and the urinary catheter removed as soon as possible.
- Catheter insertion, changes and care should be documented.

Duration of catheterization is directly linked to the risk of developing a catheter-associated UTI. Furthermore, Public Health England has announced a national aim to reduce the incidence of Gram negative bacteraemia by 50% by March 2021 (2), and targeting catheters is one of the first steps. These issues are particularly relevant to the elderly population at PRUH.

### HOW GOOD ARE WE AT PRUH?

Documentation surrounding urinary catheters at PRUH is poor. We have noticed occasions where patients are catheterized but there is no documentation as to when, where, or why the catheter was inserted. Despite there being an EPR order for catheter insertion and monitoring available, this was not being used on wards. The decision to TWOC is one that should be discussed on a daily basis, but we were not seeing this from the documentation. Furthermore, we noticed that patients were often catheterized for prolonged periods of time when they no longer required one.

### STAFF SURVEY

- (22% of nurses did not feel they had an active role in deciding when to TWOC patients)
- 17% admitted to forgetting to document catheter insertion
- All nurses aware of EPR order and how to use it
- No doctors aware of EPR order and how to use it

## Strategy

### PROJECT DESIGN:

We focused on two medical wards; M3 and M7. We sampled all patients admitted to M3/M7 from the 23<sup>rd</sup> of January until the 21<sup>st</sup> of May who had a catheter in situ at the time of data collection. Patients with established long-term catheters or who were admitted with a catheter (failed discharges) were excluded.

### DATA COLLECTION:

We identified catheterized patients and whether they had an EPR catheter order (visible on orders and worklist manager) on a daily basis. Additional parameters such as indication, insertion date, inserter, and documentation standards were extracted from EPR on a weekly basis. Patients were kept "live" and contributing to catheter day calculations until they were no longer on the ward or if the catheter was removed.

Put a catheter in it?



Now put an order for it!

Remember the "Catheterisation" order on EPR, including reason for insertion

### DATA ANALYSIS:

EPR orders have been displayed as a percentage of total catheterized patients. Rate of catheter days was calculated as catheter days per 100 bed days. Both outcomes were analysed at weekly intervals.

### INTERVENTIONS

(during the course of April and May)

- Addition of catheter columns to board on M3/M7
- Presentation to nurses and doctors (journal club)
- Catheter posters and alert cards on ED, AMU, M3, M7
- Circulation of emails with guidance to doctor and nursing staff

## Results

A total of 87 patients were analysed during the course of the project. 36 who had been admitted to hospital with catheters already in situ were excluded.

- 30% TWOC on the ward (n=26)
- 41% discharged with a catheter in situ, including to Orpington (n=35)
- 6% transfers to other wards/hospital with a catheter in situ (n=5)
- 16% passed away on the ward with a catheter in situ (n=14)
- 7% still had catheters in at the end of data collection

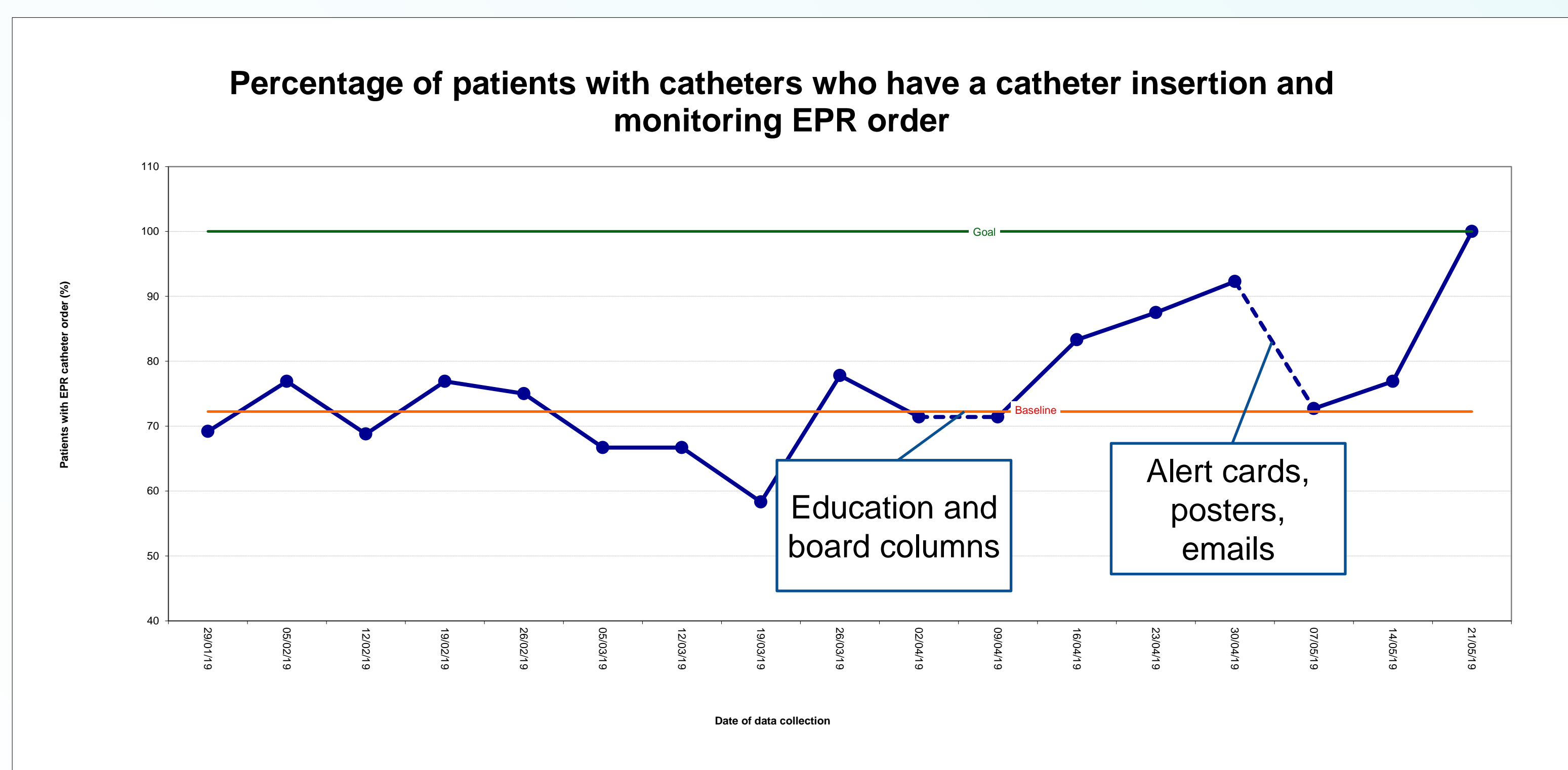


FIGURE 1: The run chart shows shift above baseline after interventions were put in place. The 100% target was reached on the final data collection point.

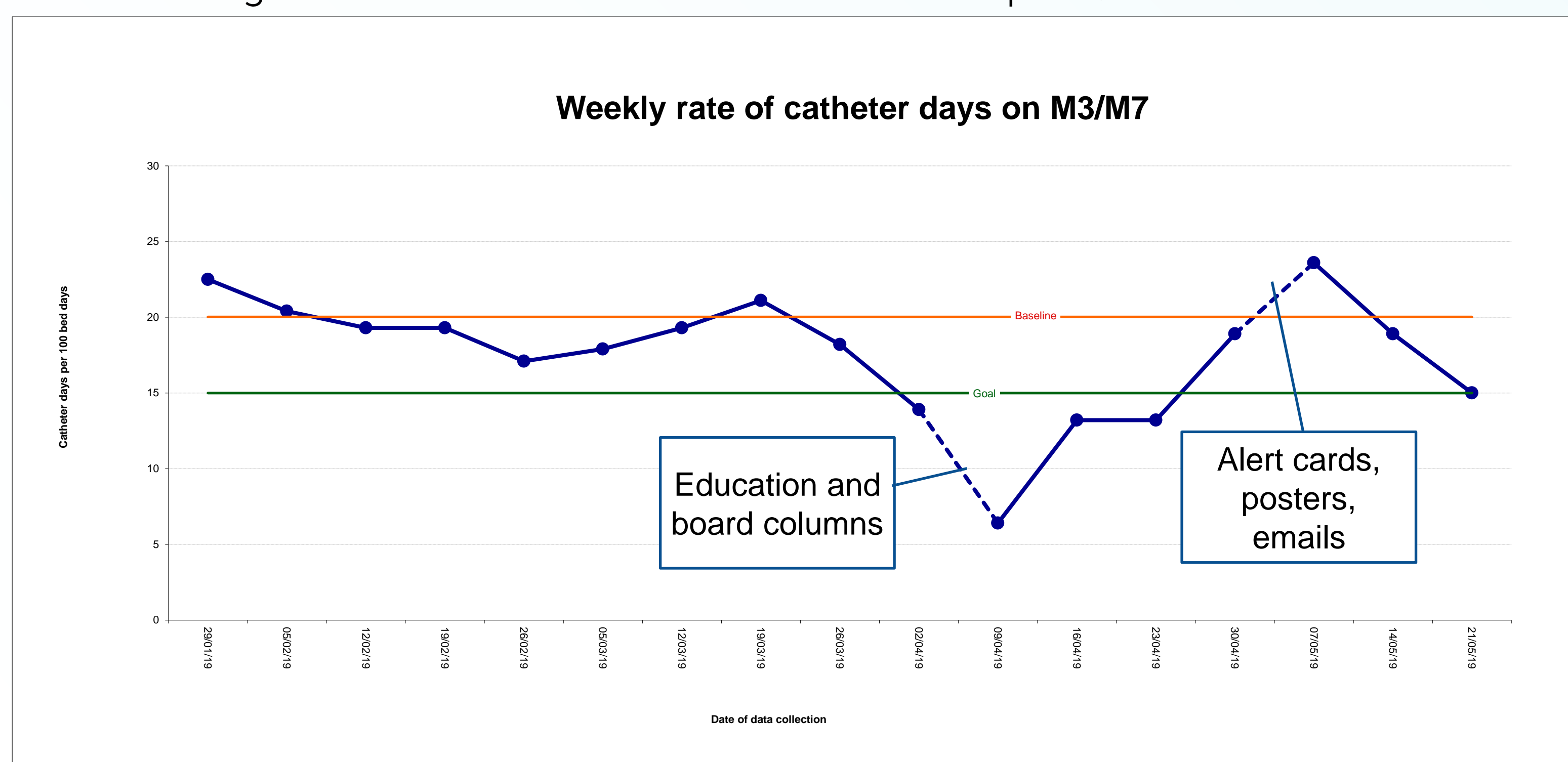
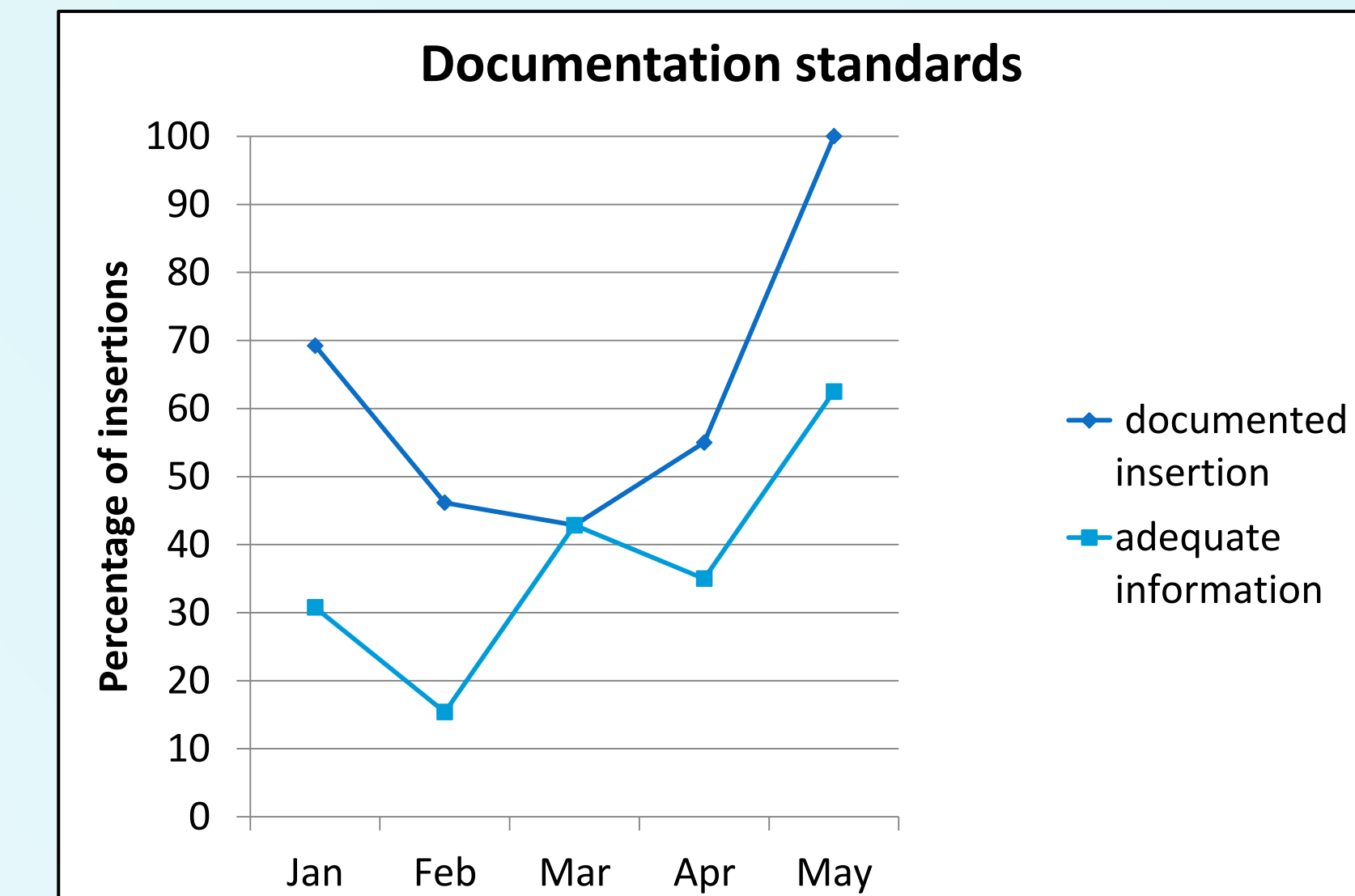
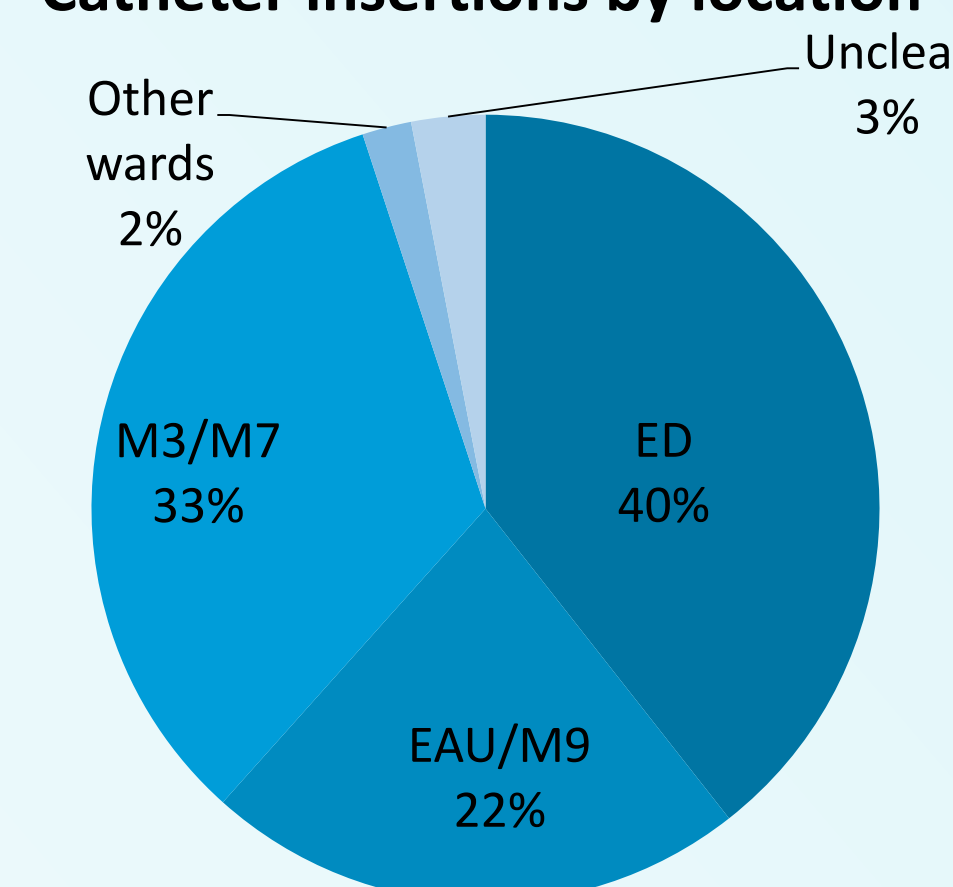


FIGURE 2: The run chart shows a steady decrease in rate of catheter days to a minimum of 6.4%. These changes were difficult to sustain and rates re-increased in early May.

### Catheter insertions by location



Average duration of catheterization was 15 days. 54 % of insertions were done by nurses, 6% by doctors and 40% were unclear. Overall, most catheters were inserted in ED (Figure 3). Documentation standards included whether the individual catheterizing the patient had written "catheter inserted" in the notes, and whether the documentation contained all appropriate information such as catheter size and indication. We saw a general improvement in documentation standards (Figure 4).

## Conclusions & Limitations

We saw an increase in the number of EPR orders used, with our data showing a significant shift above baseline. Furthermore, we saw a decrease in weekly rate of catheter days, but these changes were difficult to sustain. We also saw an improvement in documentation standards during the course of the project when analyzing data retrospectively.

### LIMITATIONS:

The main limitations surrounding this project are poor documentation resulted in our parameters being difficult to measure, which may have led to errors in data. Furthermore, changes may take longer to manifest, and we have already seen that changes are difficult to maintain. Bias as a result of our presence should also be considered.

### FUTURE WORK:

Interventions such as the board columns will be staying. We hope to have raised awareness surrounding this issue, and there is scope to re-audit to see if changes are sustained. This is a project that can continue to be carried on at PRUH with the help of key stakeholders in infection control and nursing, with regular education and training sessions.

## Acknowledgements

We would like to thank the staff of medical 3 and medical 7 for their hard work and understanding during this project. We would also like to thank Dr Kessel, Nikita Paramithiotis, Iain Hayden and Isla MacDonald for their contributions and support.