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Background

Correct positioning of external fixation device (EFD) on gastrostomy tubes (GTs) is imperative to prevent localised complications such as buried bumper syndrome and granulation tissue formation¹. In this project, various EFD placements were identified and evaluated on a regional hyperacute rehabilitation unit; changes were implemented and re-evaluated.

Aim

- 100% improvement in the number of EFD being positioned 0.5-0.9cm away from abdomen.
- To enhance the knowledge and skills of the unit's nursing staff.

Method

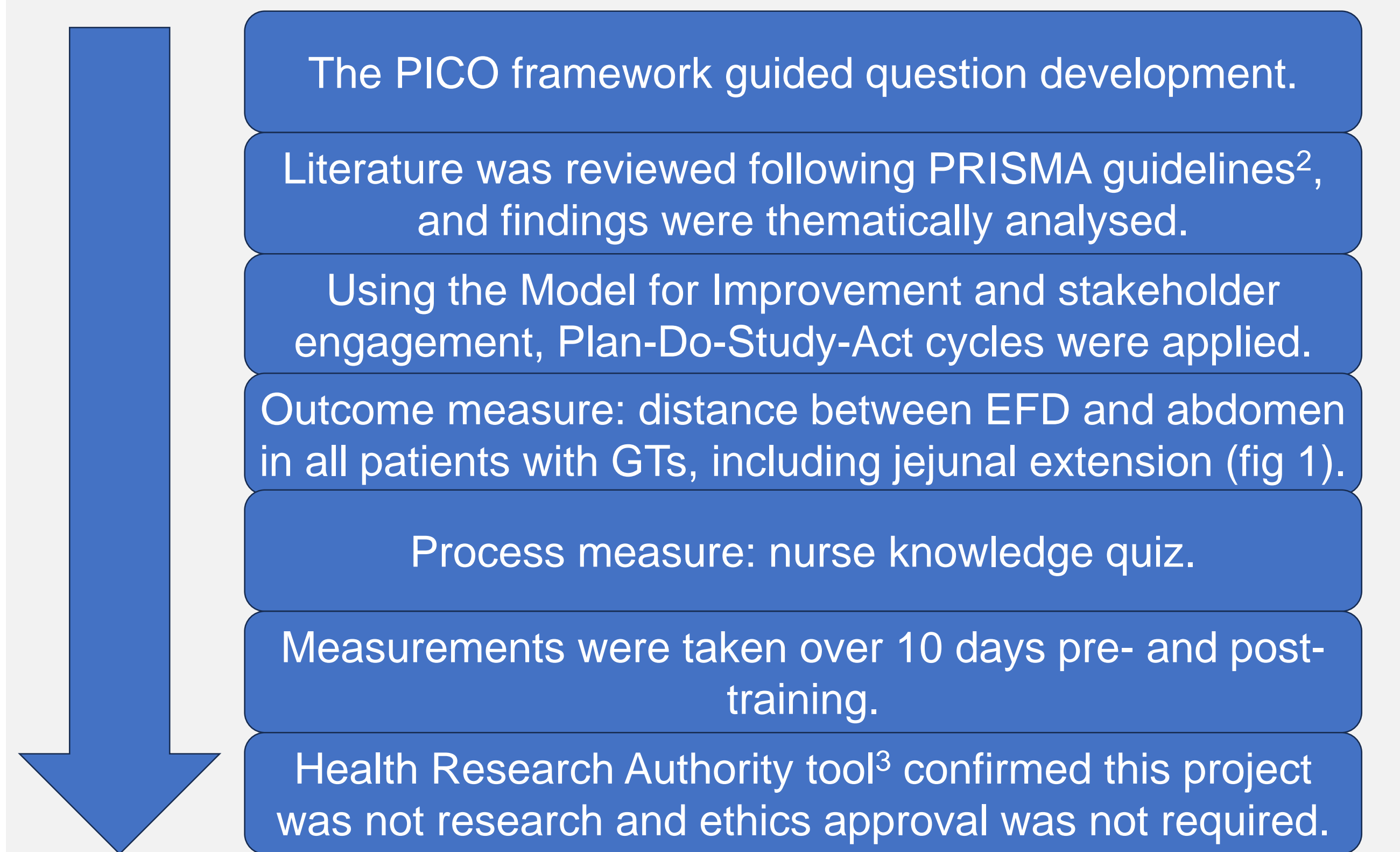
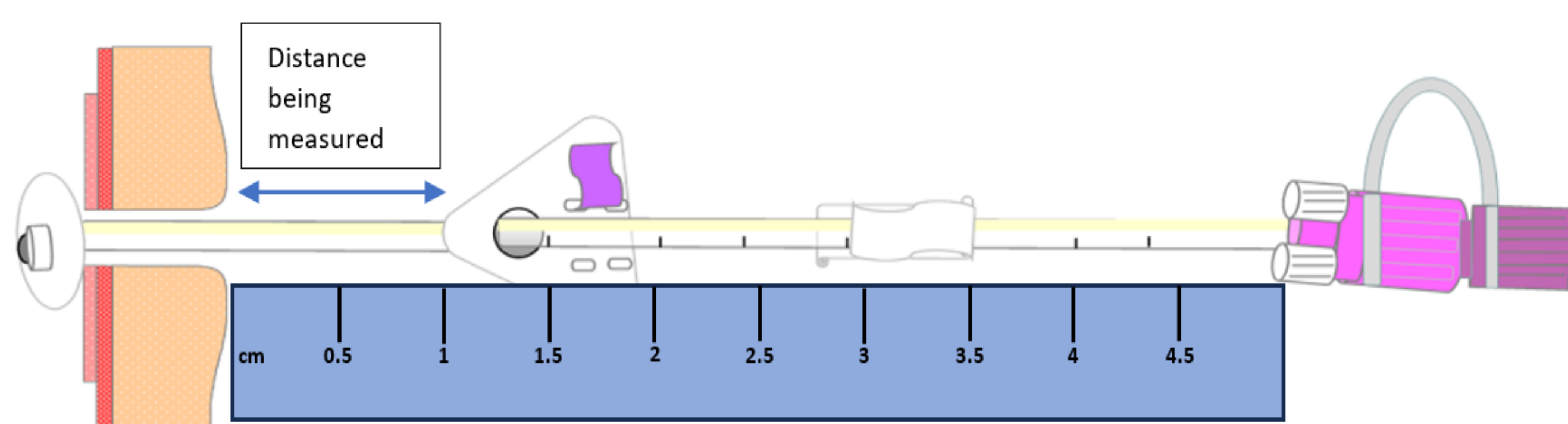


Figure 1. How to measure the area between the EFD and abdominal wall, while the patient was sat upright, as stoma tract length alters from sitting and supine positions^{4,5}.



Summary / discussion points

- Substantial improvements post-training were demonstrated by both patient outcomes and nursing staff knowledge; a 162% improvement in EFD placement and 90% improvement in quiz scores.
- Confounding factors: non-attendance at training, high staff turnover & workload pressures.

Conclusion

This project demonstrated substantial improvements in EFD positioning and nursing knowledge following structured, evidence-based training. Continued monitoring is recommended to sustain improvements and evaluate impact on GT-related complications. Findings highlight the value of targeted education and systematic quality improvement in enhancing clinical outcomes.

Results

Table 1: Data collected over 10 days pre- and post-training

| | Within target range (0.5-0.9cm) | Mean | IQR | SD | Quiz accuracy |
|---------------|---------------------------------|------|-----|------|--------------------|
| Pre-training | 25.38% (n=33/130) | 1.17 | 1.2 | 1.15 | 41.18% (n=56/136) |
| Post-training | 66.47% (n=111/167) | 0.66 | 0.3 | 0.34 | 78.13% (n=100/128) |

Figure 2. Overall percentage of data within and out of target range (0.5-0.9cm) pre- and post-training

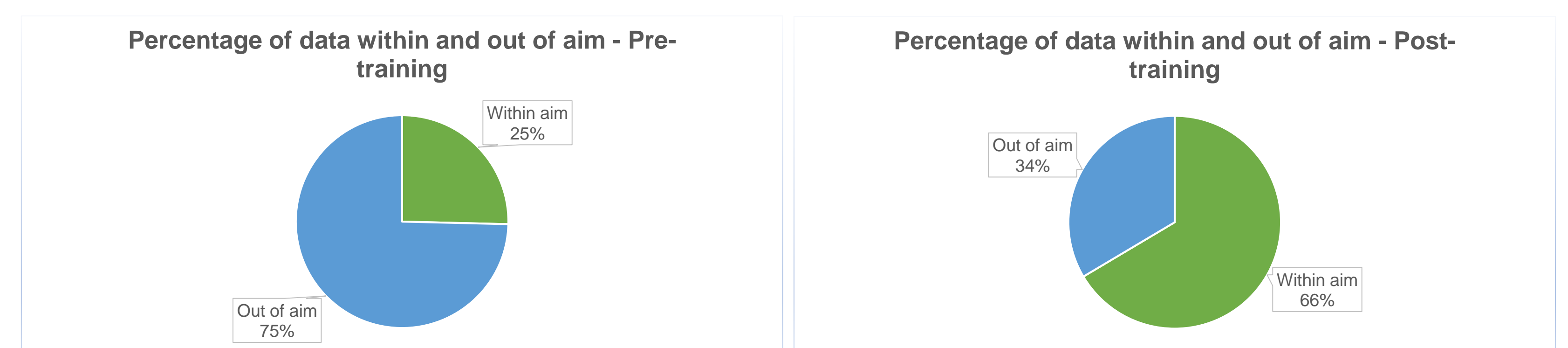


Figure 3. Histograms, displaying overall distribution of the 10-day data. NB. The y-axis of histogram for pre- and post-training are not the same due to significant differences in frequencies.

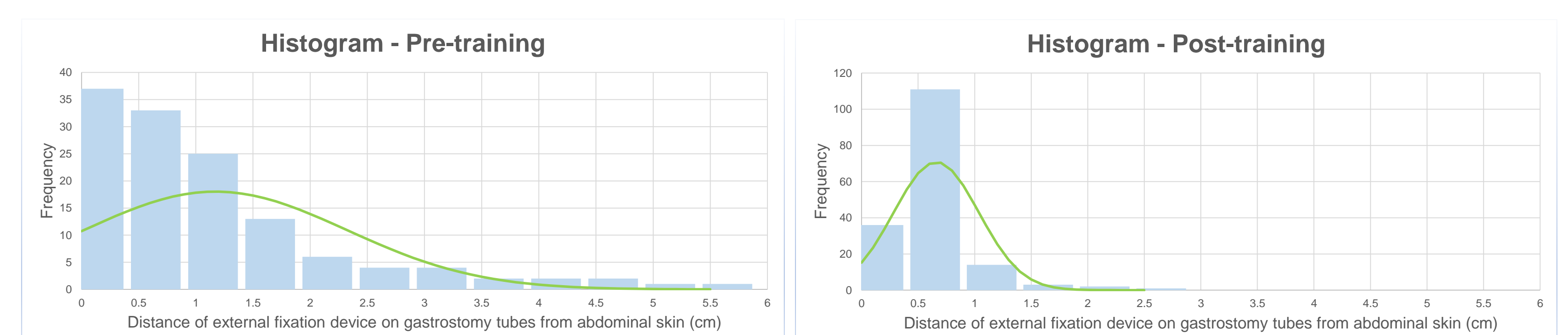


Figure 4. Histograms, displaying overall distribution of the 10-day data. NB. The y-axis of histogram for pre- and post-training are not the same due to significant differences in frequencies.

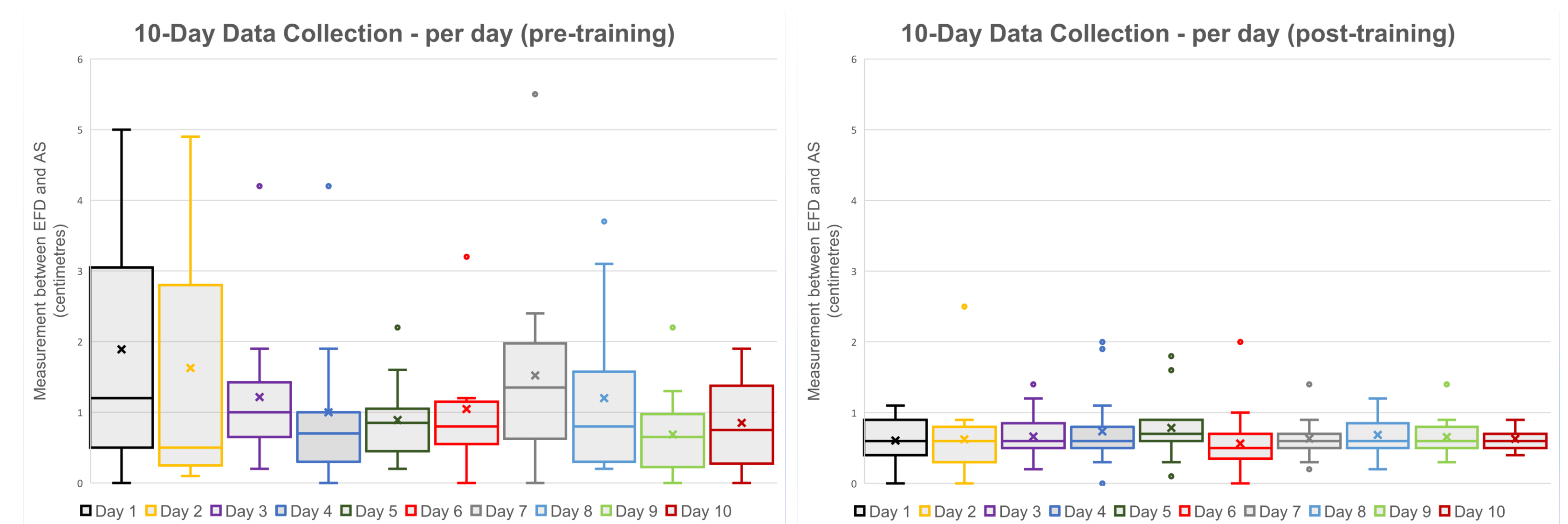


Figure 5. Overall quiz results – completed by nurses and healthcare assistants.

