

THE FATE OF PICC LINES IN DIFFERENT PATIENT GROUPS IN OUR HOSPITAL

Peripherally Inserted Central Catheters (PICCs) are an integral part of intravenous treatment in major acute and all healthcare facilities world-wide. It is estimated that a total of 2.5 million PICCs are inserted world-wide. ([Peripherally Inserted Central Catheters Market Size, Forecast, 2023](#))

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PICC lines, like other vascular access devices, become unusable for many reasons. In our experience, in our institution, the most common reasons encountered are the elective removal due to patient discharge or central access no longer being required. However, this varies depending on speciality.

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Methods

Data was collected for all the PICC lines inserted in paediatric patients by the Paediatric Vascular Access Team within the last 12 months from insertion to removal. We audited the reason for removal of the PICC line and the duration (in days) it had been insitu. We then stratified the data by speciality to reveal any differences.

Results

Within our hospital, we predominantly inserted PICC lines into our Hepatology patients, followed, not closely, by the Respiratory patients. (Chart 1)
Overall, the main reason for removal when combining all specialities was elective removal due to hospital discharge or central access no longer being required. However, issues with line use (infection/displacement/thrombus etc) made up a considerable number of removals. Also, with self-removal not being a negligible reason. (Chart 2)
When all specialities were combined, the average duration of line use was 31.6days, with the range being from 1-295days. (Table 1)

After stratifying the data according to speciality, it was clear that the Hepatology and Haemo-Oncology patients had their lines in-situ for the longest time, and all specialities, except General Paediatrics had the common reason for removal as discharge, while General Paediatrics has a higher incidence of self-removal. (Table 2)

Conclusion

Most specialities are similar in their reasons for line removal, except General Paediatrics who is an outlier with self-removals, while Hepatology and Haematology-Oncology are keeping their lines in for the longest time.

References
da Silva Godeiro, A. L., Santos, L. M. C., de Oliveira Cavalcanti, E. F., Pinto, J. T. J. M., Bosco Filho, J., & das Neves Júnior, T. T. (2024). Non-elective removal of Peripherally Inserted Central Catheter: cross-sectional study. *Enfermería Global*, 23(2), 340-350.
Jumani K, Advani S, Reich NG, Gosey L, Milstone AM. Risk Factors for Peripherally Inserted Central Venous Catheter Complications in Children. *JAMA Pediatr*. 2013;167(5):429–435. doi:10.1001/jamapediatrics.2013.775

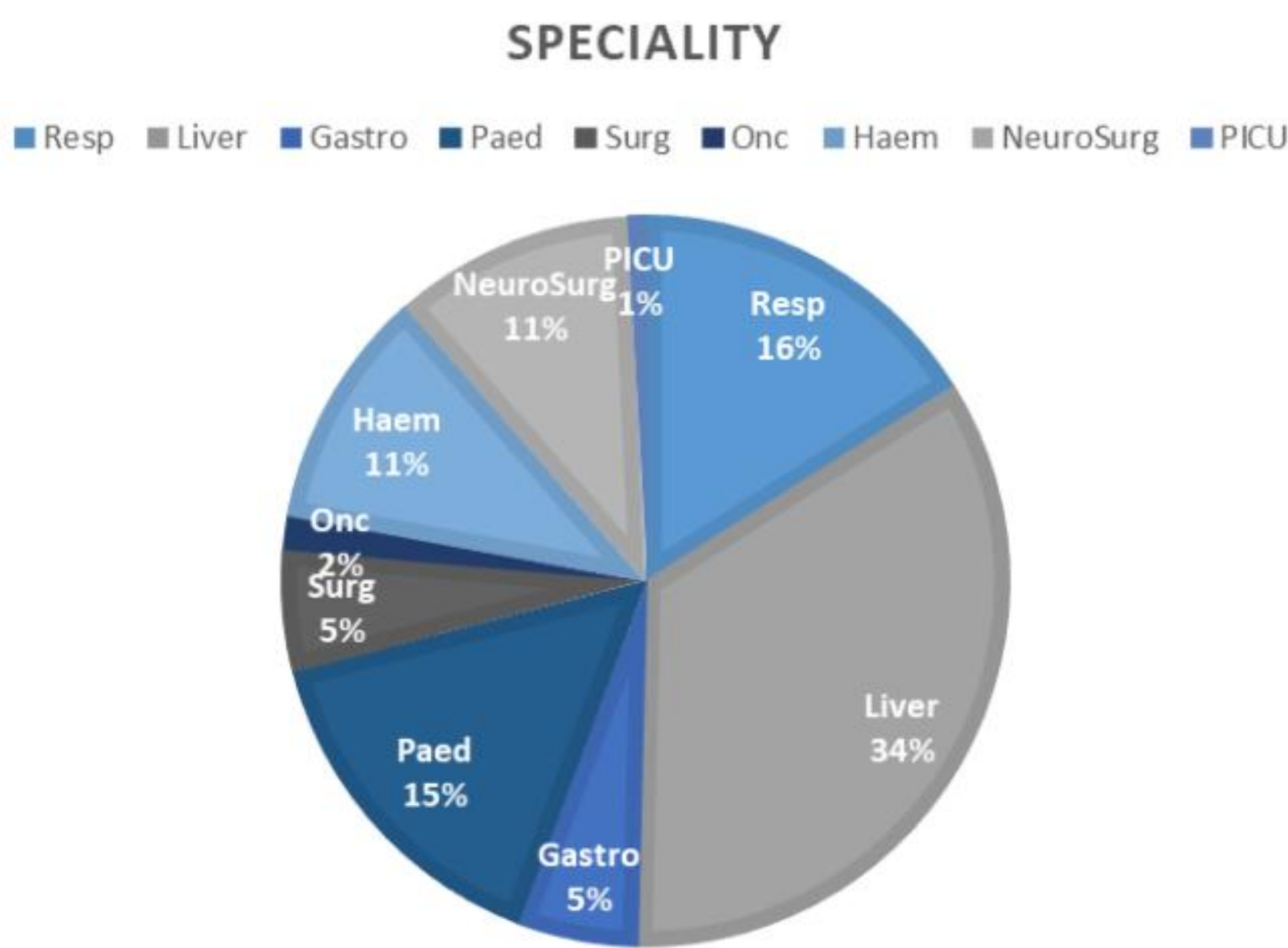


Chart 1

	Days	Range
Duration	Mean = 31.6	1-295
Day of admission at insertion	Median = 7	1-552

Table 1

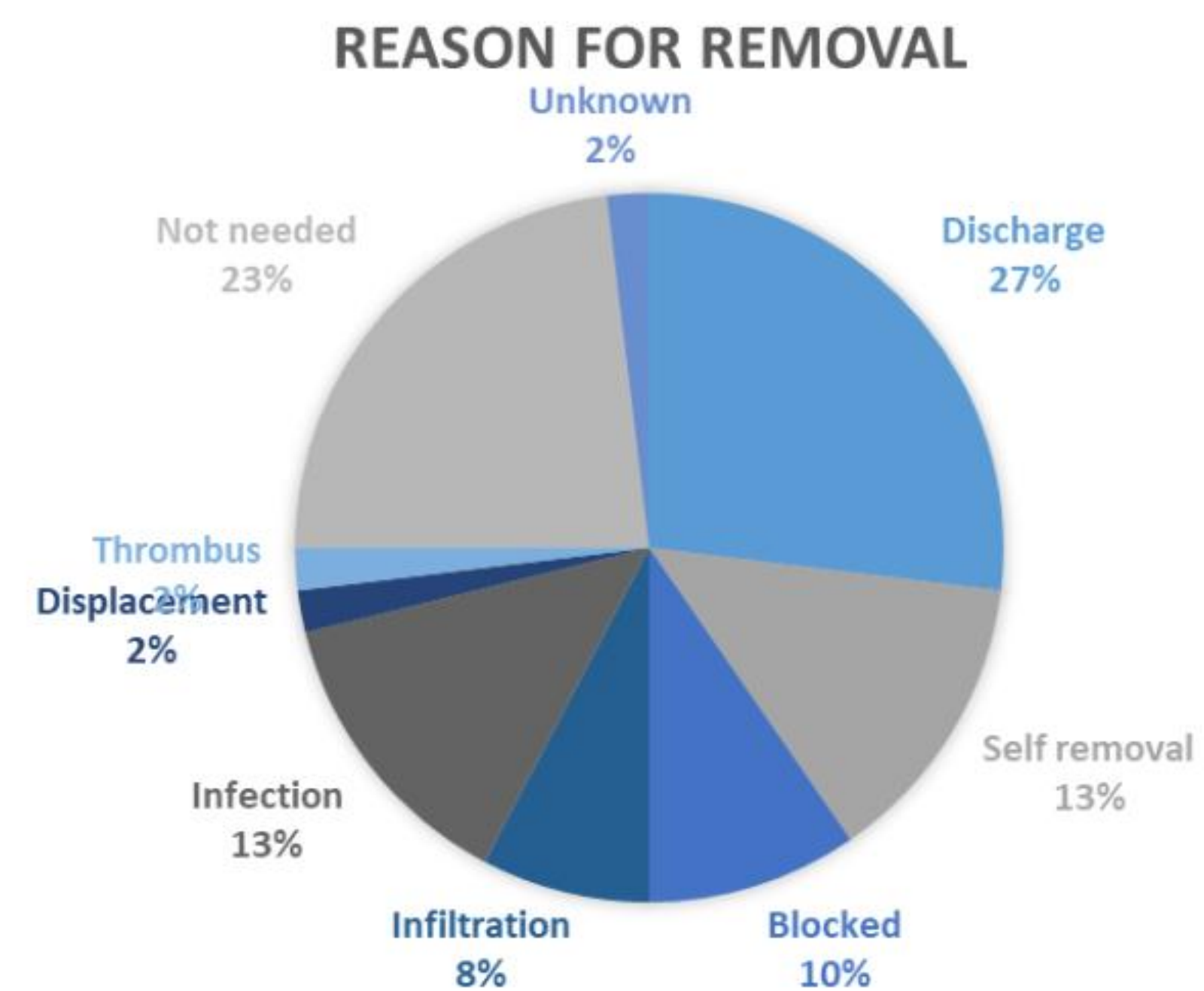


Chart 2

Speciality	Reason for removal	Duration (Days)
Liver	Discharge	40.9
Respiratory	Discharge	14.2
Haem/Onc	Not needed	41.5
Gastro	Not needed	14.4
Surgery	Discharge	31.3
Paed/PICU	Self-removal	29.9

Table 2