Contributions of a in centre Application Specialist

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Introduction

The position of an Application Specialist (AS) was established in our Portuguese network in July 2013 and in our unit this new function was assigned to a renal nurse with 11 years' experience in haemodialysis (HD). For this purpose, she had to attended a specific 40 hours training course on dialysis machines, which included training of all components. The main objective was to spread specific knowledge among the involved healthcare team members, promoting and improving handling of the HD machines, reducing costs associated with maintenance, since a careless handling of the dialysis equipment can lead to damage or premature change of components with economic consequences.

Objectives

To assess the differences of two different periods before and after establishment of an AS in a haemodialysis centre, related to the proper use of the devices and the need for corrective maintenance.

Methods

Retrospective and observational study. Preventive Actions (PA) and Corrective Actions (CA) (interventions on the dialysis machine) were analysed (we considered the same device in the observation period) on the basis of the equipment reports over a period of four years:

T1: Jun 2011 to Jun 2013, (before implementation of an AS)

T2: Aug 2013 to Aug 2015 (after implementation of an AS).

Both periods covered the 38 haemodialysis machines in our unit with an average of 30 nurses. In T2, we provided annual training to the involved healthcare team members to improve their knowledge about the dialysis machines for an average of 5 hours (formal) and 1 hour (informal).

Any breakdown was reported to the AS who assessed the seriousness on-site and subsequently reported the event to the service department.

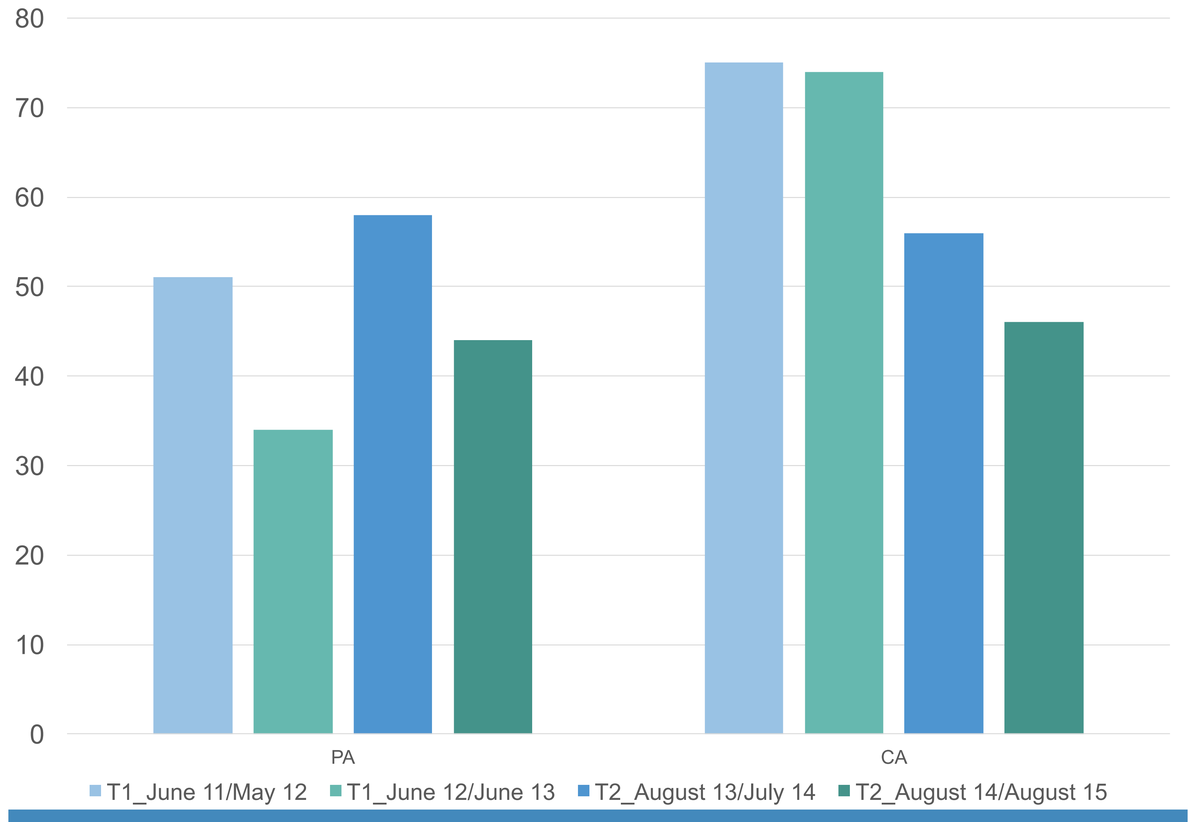

Figure 1: Preventive and Corrective Actions in both periods

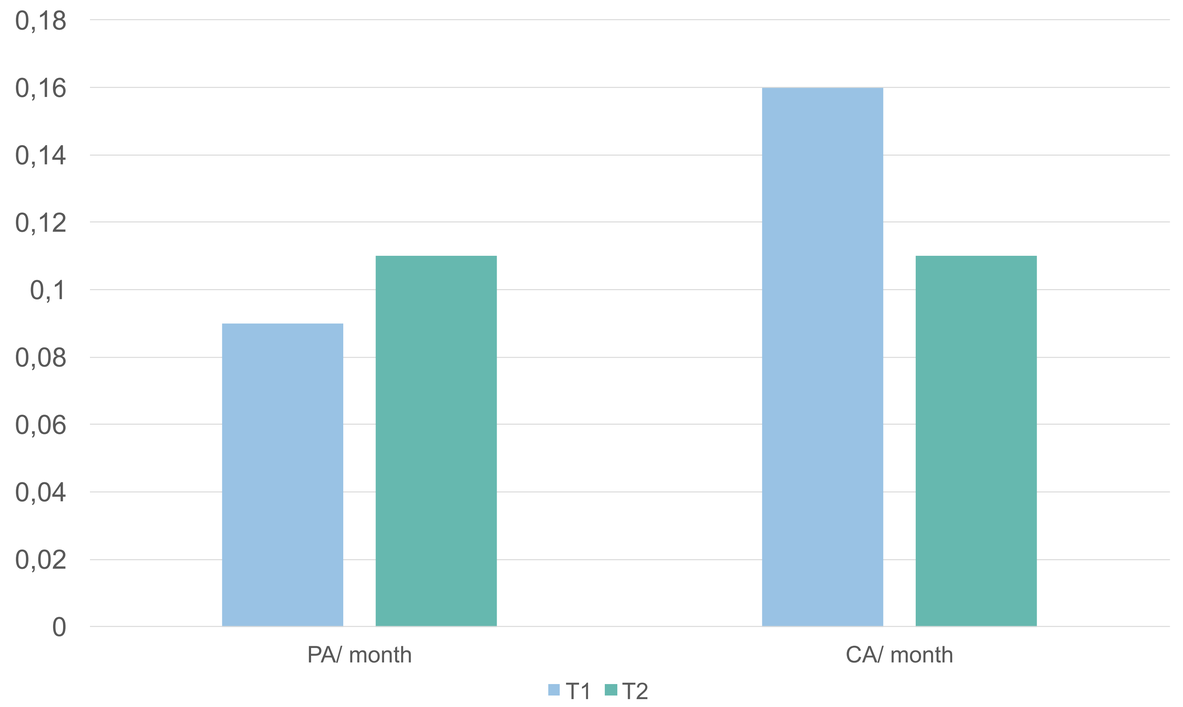

Figure 2: Average monthly interventions per HD machine on both periods

Results

We analysed 438 interventions (234_T1 and 204_T2, respectively):

PA: T1 - 85 vs. T2 - 102

CA: T1 -149 vs. T2 – 102.

Each dialysis machine performed on average: T1 to 0.09 PA and 0.16 CA/month; T2 to 0.11 PA and 0.11 CA/month.

In T1, no formal training of the healthcare team was performed; in T2, there were three periods of formal training, with an average of 5h/nurse followed by an informal training by the AS during the daily routine.

Conclusion

- CA in all dialysis machines decreased by 31%, PA increased by 18%, allowing to conclude that our unit benefited from the presence of the AS
- The training carried out contributed to increase the knowledge of the team in handling of the dialysis machines, which somehow justified the increase in PA
- There may have been a reduction of costs associated with an improved damage report and due to a reduction of movements of the technical unit in CA situations, since PAs are planned and did not require to stop the equipment
- Regarding new training of the healthcare team, including new machine software updates, an external person was not required, since this kind of training was performed at various time periods, to get all interested persons together in the shortest time (4 days).

References

1. Régua, Marco (2013) – Aplication Specialists NephroCare _ Preliminary Report. Porto.