

Reduction of home-acquired pressure ulcers among palliative patients using quality tools and techniques

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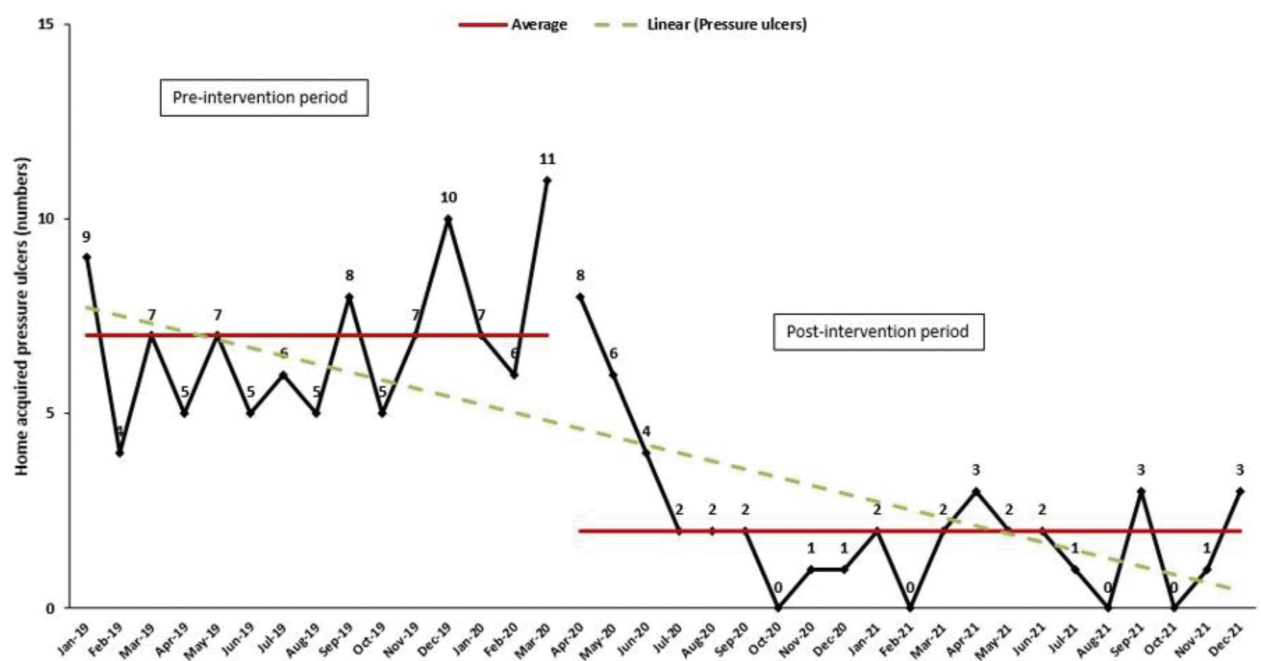


Fig 1. Home-acquired pressure ulcers in palliative patients from January 2019 to December 2021.

Introduction

Pressure ulcers (PU) are a substantial health problem, and they are considered a surrogate for compromised quality care. The prevalence of pressure ulcers in palliative patients is significantly high due to altered skin integrity, mobility issues and chronic diseases.^{1,2} Pressure ulcers increase the burden on healthcare and treatment costs.^{3,4} Patients receiving palliative care at home are more likely to develop pressure ulcers, with a prevalence of 18.8%. The incidence of pressure ulcers in palliative patients receiving domiciliary care can be reduced by early detection and preventive strategies.^{5,6} The objective of the study was to reduce the number of home-acquired pressure ulcers in palliative patients.

Materials and methods

Baseline data from January 2019 to March 2020 were reviewed. Multiple causes leading to process variation were identified using a quality tool, cause-and-effect diagram. The categories of problem areas identified were reviewed and analysed by a team with multidisciplinary expertise and a quality improvement project was initiated. A four-stage approach, the plan, do, check, act (PDCA) cycle, was undertaken to improve the service and resolve the issues faced.⁷ The measures planned to reduce the pressure ulcers included identifying palliative nurses, staff education and family engagement/education at the time of discharge, and implementation of skin bundles. The staff strictly complied with the dissemination of education brochures to patients' families and skin assessment at the time of follow-up visits. The pre-intervention and post-intervention phases were statistically analysed using interrupted time series (ITS) analysis

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and segmented regression to evaluate the effectiveness of interventions. The analyses were conducted by using R-software. All tests were two-sided, and a statistical significance level of 0.05 was used.

Results and discussion

The visual inspection of data showed that the average number of home-acquired pressure ulcers noticeably reduced from 7 per month to 2 per month in the post-intervention period (Fig 1). The results of segmented regression indicated that there were five palliative patients with home-acquired pressure ulcers just before the initiation of the observation period, while in the pre-intervention period, no significant month-to-month change was identified in the incidence of pressure ulcers ($p=0.12726$). However, with the implementation of the preventive strategies in the post-intervention period, the number of incidents reduced significantly by four patients ($p\leq 0.01$) and remained significant after the post-intervention period ($p=0.015$).

Conclusion

The implementation of quality tools, such as the cause-and-effect diagram and the PDCA approach, proved worthwhile in decreasing the number of home-acquired pressure ulcers. The incidence

of pressure ulcers reduced significantly after providing family education brochures, detailed discharge instructions on pressure ulcers and skin assessment on follow-ups. ■

References

- 1 Hendrichova I, Castelli M, Mastroianni C *et al*. Pressure ulcers in cancer palliative care patients. *Palliat Med* 2010;24:669–73.
- 2 Corner J. International Journal of Palliative Nursing. *Int J Palliat Nurs* 2005;11:154.
- 3 Hill-Brown S. Reduction of pressure ulcer incidence in the home healthcare setting: a pressure-relief seating cushion project to reduce the number of community-acquired pressure ulcers. *Home Healthc Nurse*. 2011;29:575–9.
- 4 Slawomirski L, Auraaen A, Klazinga NS. *The economics of patient safety: Strengthening a value-based approach to reducing patient harm at national level*. OECD Health Working Papers 96. OECD, 2017.
- 5 Queiroz AC, Mota DD, Bachion MM, Ferreira AC. Pressure ulcers in palliative home care patients: prevalence and characteristics. *Rev Esc Enferm USP* 2014;48:264–71.
- 6 Artico M, Dante A, D'Angelo D *et al*. Prevalence, incidence and associated factors of pressure ulcers in home palliative care patients: a retrospective chart review. *Palliat Med* 2018;32:299–307.
- 7 Soković M, Jovanović J, Krivokapić Z, Vujović A. Basic quality tools in continuous improvement process. *J Mech Eng* 2009;55:1–9.