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Improving electronic health charting by nurses in the Intensive Care Unit: an evidence informed change project proposal

Dayananda Bittenahalli Omkarappa[1]

[1]Intensive Care Unit Staff Nurse, Somerset NHS Foundation Trust, Yeovil District Hospital, Yeovil BA21 4AT, UK.

Email: dayananda.omkarappa@somersetft.nhs.uk

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Background

Many hospitals in the UK are using electronic health records (EHR). In September 2023, the Intensive Care Unit (ICU) at Yeovil District Hospital in the UK implemented a new electronic charting system, the IntelliSpace Critical Care and Anaesthesia© (ICCA). Previous studies show that electronic charting benefits healthcare in many respects (Jalilian & Khairat, 2022, Riman, *et al.,* 2022). Han *et al.,* (2016) demonstrated that implementing an EHR reduced medication errors and improved ICU patient outcomes. A study in the UK during COVID-19 found advantages of electronic charting in ICU in terms of efficiency, freeing time for direct patient care, and reducing clinical errors (Pankhurst *et al.,* 2023). After three months of implementing ICCA, the ICU nurses are still experiencing challenges in electronic charting, particularly with respiratory parameters.

Aim

To identify the challenges of ICU nurses on the correct entry of respiratory parameters on ICCA and to develop, implement and evaluate a bespoke training programme.

Objectives

- To audit the electronic charting of discharged ICU patients with regards to respiratory parameters.
- To identify the learning needs of ICU nurses in the electronic charting of respiratory parameters.
- To design, implement and evaluate a training programme.

Methods

A mixed-methods approach will be adopted involving a retrospective audit of patients' electronic charting and a focus group discussion with ICU nurses, and the design and implementation of ongoing training. The audit will include data of patients discharged between October and December 2023. Anonymous data related to respiratory parameters and written entries by nurses in the ICCA system will be reviewed. Inclusion criteria will be patients admitted to the ICU and having at least 24 hours of mechanical ventilation support. A focus group discussion will be organised with 5-8 nurses. The audit results will be presented and discussed with the nurses. The focus group discussion will be recorded and transcribed. The main themes and learning needs will be identified. Accordingly, a training programme will be designed and implemented. The training will be evaluated by a pre- and post-test questionnaire including skills, knowledge, and confidence.

Discussion

This project addresses the challenges for ICU nurses in charting respiratory parameters using ICCA. After feedback from the nurses, a report will be submitted to the ICU education team and training will be organised for ICU nurses. It is anticipated that the training programme will improve patient outcomes, which will be measured in a follow-up project.

References

Han, J. E., Rabinovich, M., Abraham, P., Satyanarayana, P., Liao, T. V., Udoji, T. N., Cotsonis, G. A., Honig, E. G., and Martin, G. S. (2016) 'Effect of electronic health record implementation in critical care on survival and medication errors', *The American Journal of the Medical Sciences*, 351(6), pp. 576–581. DOI: https://doi.org/10.1016/j.amjms.2016.01.026.

Jalilian, L., and Khairat, S. (2022) 'The next-generation electronic health record in the ICU: A focus on user-technology interface to optimize patient safety and quality', *Perspectives in Health Information Management*, 19(1), pp. 1g.

Pankhurst, T., Lucas, L., Ryan, S., Ragdale, C., Gyves, H., Denner, L., Young, I., Rathbone, L., Shah, A., McKee, D., Coleman, J. J., Evison, F., Atia, J., Rosser, D., Garrick, M., Baker, R., Gallier, S., and Ball, S. (2023) 'Benefits of electronic charts in intensive care and during a world health pandemic: advantages of the technology age', *BMJ Open Quality*, 12(1), e001704. DOI: https://doi.org/10.1136/bmjoq-2021-001704.

Riman, K. A., Davis, B. S., Seaman, J. B., and Kahn, J. M. (2022) 'The use of electronic health record metadata to identify nurse-patient assignments in the Intensive Care Unit: Algorithm development and validation'. *JMIR Medical Informatics,* 10(11), e37923. DOI: https://doi.org/10.2196/37923.