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Healthcare resource utilisation for critical care survivors in Wales: a population-based data linkage study

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Introduction

More patients are surviving critical illness, with a growing understanding that transition to survivorship needs to be managed in primary care. In Wales, however, survivors' comprehensive healthcare resource utilisation (HRU) has not been studied in detail.

Aim

To investigate the levels and predictors of HRU of critical illness survivors in Wales.

Methods

We used the SAIL Databank to identify survivors and characterise their HRU. We fitted Poisson models for HRU during one year after intensive care unit (ICU) stay, adjusted for follow-up length within that year, HRU in the previous year, modified Charlson Comorbidity Index (CCI), age group, and gender.

Results

We identified 56,722 patients. The median age was 66 years (IQR=52-76), 46.3% were female, and 39.0% had high comorbidity (CCI \geq 10). More patients lived in the more deprived areas. Patients had medians of 29 (0-51) visits to general practitioners (GP), 5 (2-10) outpatient visits, 17 (5-63) days for length of hospital stay (LOS), and a mean of 0.89 emergency department (ED) attendances. Older patients had more GP visits (incidence rate ratio, IRRs, ranged from 1.1 to 1.2) and outpatient visits (1.1), greater LOS (1.2 to 1.7), but fewer ED visits (0.72 to 0.65). Higher CCI was associated with greater HRU (GP [1.19, 1.20], ED [1.34, 1.42], outpatient [1.50, 1.52], LOS [1.24, 1.6]). Higher socioeconomic deprivation was associated with more ED visits (IRR=1.2 [1.17, 1.25] between the most and the least deprived areas).

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Conclusions

Critical care survivors use significant primary healthcare resources following their ICU stay. Predictors of long-term mortality [1] also influence HRU. The fewer ED visits in the older patients needs further evaluation.

References

1. Szakmany T et al. Crit Care Med. 2019 Jan;47(1):15–22

