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Can continuity of primary care decrease emergency care use? A nested case-control study

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Abstract

Background National Health Service emergency departments have been under considerable pressure. Many patients presenting to emergency departments could be managed in primary care, suggesting that aspects of general practice might be associated with unplanned hospital admission. Recently a government scheme introduced the concept of a named GP (general practitioner) responsible for the care of patients aged 75 and older to reduce unplanned hospital admission. We aimed to investigate whether better continuity of care is associated with lower risk of emergency hospital admission.

Methods We used records from 10 000 patients aged 65 years and over randomly selected from the Clinical Practice Research Datalink, linked with Hospital Episode Statistics. Using a nested-case control approach, we identified 769 patients with an emergency hospital admission between April 1, 2012, and March 31, 2014, and at least two GP consultations in the previous 2 years, of which the last was within 30 days before hospital admission. 2123 controls were matched on age group, last consultation within the same time-period as the case, and GP practice to account for practice composition, deprivation level, and services such as out-of-hours. For both cases and controls we calculated two longitudinal measures of continuity of care—namely, Bice and Boxerman's index, which quantifies the extent to which the patient saw the same GP, and proportion of times seen by an index GP (ie, last GP seen before admission). Conditional logistic regression models were applied to estimate the odds ratio (OR) associated with continuity of care, adjusting for sex, number of consultations, previous hospital admission, and a range of comorbidities.

Findings Both the Bice and Boxerman and the appointed index GP measures showed a graded inverse association between lower continuity of care and higher risk of emergency hospital admission (OR for those experiencing the least continuity of care 2·1 [95% CI 1·3–3·2] and 2·3 [1·6–2·9], respectively, compared with those who always saw the same GP).

Interpretation Better continuity of care might reduce emergency hospital admission. More research is needed to understand this association including distinguishing between GP-referred emergency hospital admissions and admissions through the emergency department. Such an analysis requires a bigger data set.

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Contributors

RWM designed the study. PT managed and performed the analysis. SP, CS, FM, MJR, and DL contributed to the methodological approach and also added substantial input to the results and discussion. All authors contributed to the interpretation of the findings. RWM was the lead investigator for the overall project.

Declaration of interests

We declare no competing interests.