

Title: Elective vs Non-Elective Hospital Admissions by Patients with Multiple Myeloma in England 2014 – 2018

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Conflicts of interest

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Abstract

Introduction: Multiple myeloma (MM) is associated with high healthcare resource utilisation. Better understanding of the hospital use by patients with MM is needed to plan future resource allocation to care for these patients. The aim of this study was to characterise the hospital use by patients with MM in the English National Health Service (NHS).

Methods: Routinely-collected aggregate hospital admissions data from patients with MM were used from all 451 hospital trusts in the English NHS. This included elective and non-elective hospital admissions from April 1st 2014 to March 31st 2018. Patients were identified using the ICD-10 code for MM (C90.0) as either primary or secondary diagnosis. The number

of admissions, number of patients, procedures, and total NHS hospital costs (based on Healthcare Resource Groups and NHS national tariff) were extracted alongside data to identify what percentage of the total NHS admissions are related to MM. Elective admissions were defined as admissions where the decision to admit preceded the time of the actual admission.

Results: There were 754,345 admission records reported during the period of analysis from 17,555 women and 24,290 men. Of these, 675,400 (89%) were elective and 78,945 non-elective admissions. The total cost during the period analysed was £183,389,143 for elective and £227,650,088 for non-elective admissions. For elective admissions, 65% of the costs were for day-cases. Despite non-elective admissions constituting only 11% of all admissions, they accounted for 55% of the total hospitalisation costs. Over the period of analysis, elective admissions increased in average by 4.5% per year whilst the average yearly increase in costs was 1.5%; for non-elective hospitalisations, these figures were 4.1% and 9.0%, respectively (Figure). Of the total number of non-elective admissions over the study period, 58% were by men. Most of the procedures for elective admissions were related to chemotherapy and for non-elective ones the majority regarded radiology.

While only 0.2% of all patients admitted to the NHS between April 2014 and March 2018 had a MM code, they accounted for 1% of all admission records and 0.5% of all inpatient NHS costs. During this period, patients with MM had on average 19 elective and 3 non-elective admissions per year, compared to 3 elective and 2 non-elective admissions per year per person for all patients admitted to the NHS.

Conclusions: MM is associated with a large number of hospital admissions in the English NHS, relative to the low incidence of the disease. While the majority of the hospital admissions are elective, non-elective admissions accounted for the majority of costs. The impact of non-elective admissions should be included when assessing the economic burden of MM and the benefits from novel therapies. Further research is needed to understand the timing of non-elective admissions in the natural history of MM.

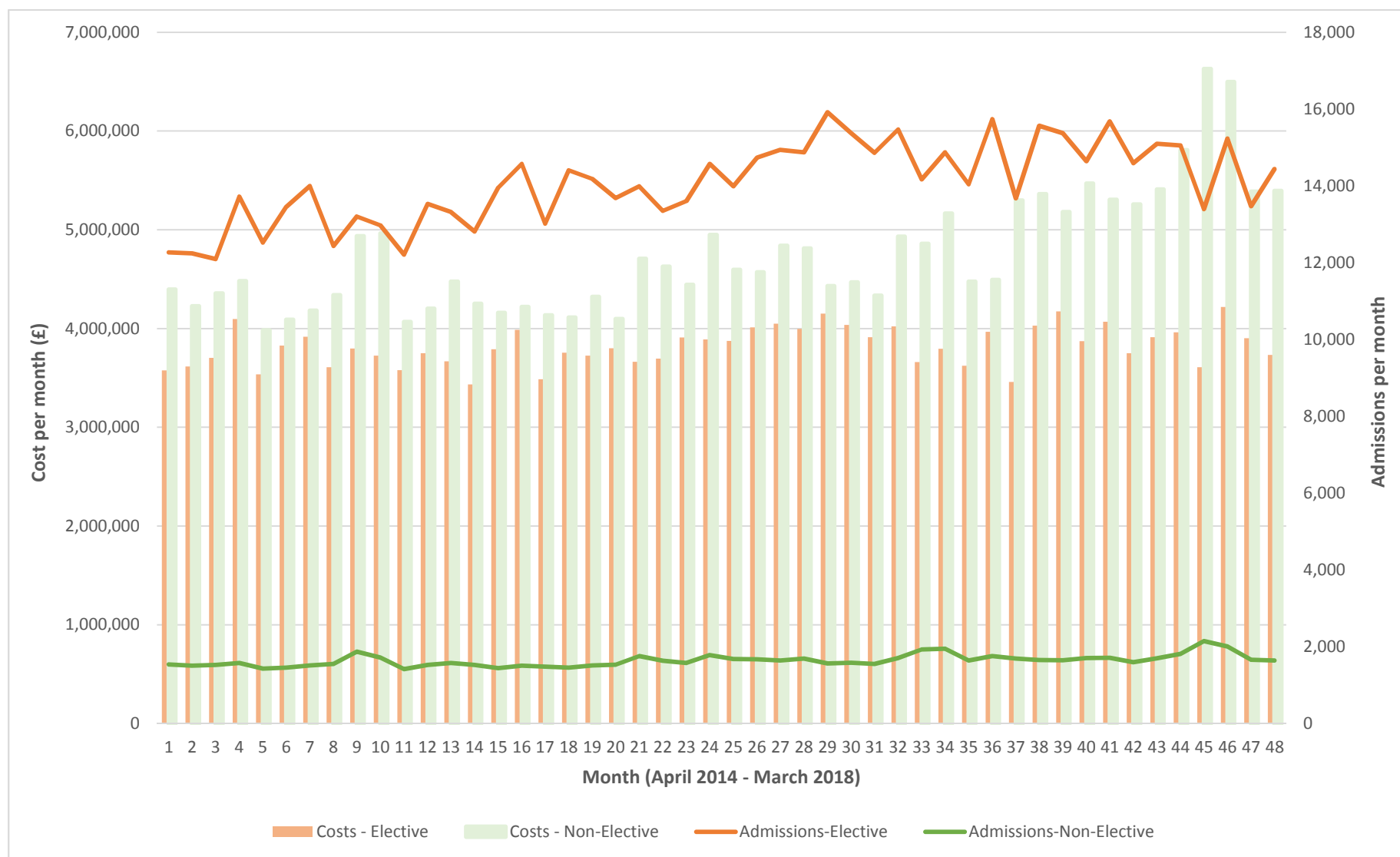


Figure. Total estimated costs and number of admissions for elective and non-elective admissions of patients with MM in the NHS (April 2014 – March 2018)