Introduction Home care has been proposed as a means of reducing costs in palliative care by decreasing inpatient stay without impacting quality of clinical care. Predictors of major cost drivers for end-of-life care are unknown for the management of metastatic gastric cancer.

Objectives This study examined disease, patient and healthcare system predictors of inpatient hospital days and receipt of home care.

Methods This is a population-based, retrospective cohort study of data on patients diagnosed in Ontario between 2005 and 2008. Chart review and administrative data were linked, using a twenty-six month time horizon and the healthcare system perspective. The cumulative inpatient hospital stay was defined using admission and discharge dates from hospitalizations in the Canadian Institute for Health Information database. Home care use was defined as yes/no, using data from the Ontario Home Care Database. Negative binomial regression was used to model the number of inpatient hospital days and modified poisson regression to model the receipt of home care.

Results Patients with primary tumours in the gastroesophageal junction compared to the distal stomach, and younger age incurred significantly fewer inpatient days. Patients who underwent a gastrectomy were significantly less likely to accumulate inpatient hospital days (RR 0.65; 95% CI 0.55-0.76), as were patients who interacted with a high volume specialist (RR=0.54; 95% CI=0.46-0.63). Proximal compared to distal tumour location was associated with an increased likelihood of receiving homecare (RR=1.12; 95% CI: 1.04-1.20). Increasing age was significantly associated with not receiving a home care visit (p=0.0010). Patients in the high resource use category were 78% more likely to receive home care than healthy users (RR=1.78; 95% CI=1.02-3.08). Patients interacting with a high volume specialist were 15% more likely to receive home care than those who did not (RR=1.15; 95% CI=1.09-1.21).

Conclusion A number of predictors of healthcare resource utilization were identified; however, not all were modifiable. Further research needs to examine how differences in home care use and inpatient hospital stay impact clinical outcomes such as symptom relief and quality of life, and how policies may be targeted to reduce costs to the healthcare system while maintaining optimal clinical care.