

Abstract

Background: Lung cancer is a major public health issue and represents a significant economic burden to health care systems worldwide. However there is a lack of information about outpatient prescriptions for lung cancer patients. The aim of this theses is to determine the differences in outpatient prescription patterns and costs by gender, age, state of residence and phase of care (initial, continuing, terminal) in Germany.

Method: Routinely collected claims data, from the health insurance Barmer, were used to quantify differences in prescription patterns of outpatient medicines and associated total costs as well as monthly costs per phase according to gender, age and state of residence. All adult patients with an ICD C33 or C34 diagnosis and death between 2007 and 2017 were selected (n= 47,723). Patients were followed over their full disease cycle. Total costs were estimated as the sum of the reimbursement of the insurance over the patient's disease cycle, while the monthly costs by phase were estimated as the sum of costs which occurred in the phase. Linear regression models were fit to determine total costs and costs per phase of outpatient prescriptions.

Results: Prescription patterns of outpatient medicines differ according to age, gender, state of residence as well as for phase of care. Total costs of outpatient prescriptions were slightly lower in men than in women (-2.7%). With ongoing age the costs of outpatient prescription decreased. Patients between 80 and 89 had 74.9% less costs than patients under 40. Costs were lowest in the initial phase and highest in the terminal phase. Costs also differ by state of residence. While Saxony-Anhalt had the highest total costs, Bremen had the lowest. This trends also appeared in monthly costs in the initial and terminal phase.

Conclusion: Prescription patterns of outpatient medicines and their associated costs differ by gender, age, state of residence and phase of care. These cost estimations are valuable to decision makers to understand the economic burden of outpatient prescriptions in lung cancer patients.