CHARACTERISTICS OF PATIENTS AND PREDICTORS OF IN-HOSPITAL MORTALITY AFTER HOSPITALIZATION FOR LUNG CANCER IN WEST VIRGINIA

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OBJECTIVES: The objectives of this study were to describe the characteristics of patients who were hospitalized for lung cancer in West Virginia during the year 2007 and to identify predictors of in-hospital mortality. METHODS: Study data are drawn from 2007 hospital discharge records in the state of West Virginia, using the Agency for Health Research and Quality Healthcare Cost and Utilization Project State Inpatient Database (HCUP-SID). All patients who had a primary diagnosis of lung cancer were included in the study. Univariate and multivariate logistic regression analyses were used to identify patient characteristics that were associated with in-hospital mortality. RESULTS: In total, 1,326 discharge records with lung cancer as primary diagnosis were identified. The average age of patients was 66 years, and the mean length of stay in the hospital was 8 days, and the in-hospital mortality rate was 13%. Patients who had comorbid conditions and complications and patients who were grouped under the self-pay/no charge/other categories had greater odds of in-hospital mortality compared with patients who were covered by private insurance (P < 0.05). CONCLUSIONS: Patients with comorbid conditions and complications and patients without adequate insurance coverage had greater odds of in-hospital mortality. One reason for this may be inadequate access to care because of the absence of insurance and uncoordinated market failure. Further studies controlling for social security disbursements will be required to determine whether insurance status and patient-related factors can influence outcomes from lung cancer in individual patients independent of their disease stage.

THE FINANCIAL EFFECT OF THE INTRODUCTION OF PERFORMANCE-VOLUME LIMIT (PVL) ON THE HUNGARIAN ONCOLOGY CARE

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OBJECTIVES: Hungary was the first country in Europe fully implementing a DRG (Diagnosis Related Groups) like financing method for the whole hospital care as early as 1993. In 2004 in addition to the DRG like financing technique, the so-called performance-volume limit (PVL) was introduced forming an artificial financial cap for the activity based financing of the Hungarian hospitals. The aim of our study is to analyse the effect of performance-volume limit (PVL) on the performance indicators of acute oncology care, with special respect to the health insurance reimbursement not paid over the PVL. METHODS: Data were derived from the consecutive administrative dataset of the National Health Insurance Fund Administration (OEP) covering the period 2006–2008. We analysed the effect of PVL according to medical specialities. We calculated the average annual reimbursement rate of DRG cost-weight and with and without the application of PVL. The loss due to PVL was calculated both by monetary terms and as the % of annual revenue. RESULTS: The loss of medical specialties measured by monetary units (Hungarian forint, HUF) and as a percent of their revenues was the following 2008–ban: Oncology 1,327 million HUF (4.7%), Cardiology 791 million HUF (3.0%), Gynecology and obstetrics 772 million HUF (3.0%), internal medicine 708 million HUF (3.3%), intensive care 661 million HUF (2.5%), surgery 637 million HUF (3.2%), pediatrics 614 million HUF (3.9%), traumatology 545 million HUF (2.5%), radiotherapy 438 million HUF (3.1%). CONCLUSIONS: The introduction of performance-volume limit (PVL) had significantly different effect on the different medical specialities. Oncology care can be considered as one of the largest loser of the application of performance-volume limit.

USING A DISEASE MANAGEMENT APPROACH IN A HEALTH TECHNOLOGY ASSESSMENT: A CASE STUDY

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OBJECTIVES: Health technology assessments (HTA) typically compare the clinical benefits and costs of a single candidate technology with an existing standard of care. Recently, some have argued that HTA should adopt a disease management approach in order to better reflect clinical practice, whereby the technology may simultaneously compete, complement or overlap with existing technologies at multiple points in the clinical pathway. Thus, the purpose of our study was to compare and contrast the disease management and traditional approaches in an HTA case study. METHODS: Markov models comparing photodynamic therapy (PDT) to esophagectomy for the treatment of Barrett's esophagus with high-grade dysplasia were used to evaluate treatment cost and effectiveness. To investigate the traditional HTA approach, PDT was modeled as a standalone therapy. To investigate the disease management approach, PDT was modeled as the primary treatment with additional, secondary treatments (radiofrequency ablation and/or endoscopic mucosal resection) available in the event of PDT failure, reflecting local practice. RESULTS: PDT was less expensive and more effective with respect to quality-adjusted life years (QALYs) than esophagectomy in all models. In contrast, PDT treatment resulted in more cancer cases than esophagectomy in all models. When comparing the two approaches to HTA, modeling PDT as a standalone therapy underestimated the incremental effectiveness of PDT compared to esophagectomy (0.7 versus 1.0 QALYs) and overestimated the lifetime cancer incidence (5.1% versus 4.1%) and the total cost of treatment ($21,000 versus $17,000). CONCLUSIONS: The disease management approach is more intensive than traditional HTA, requiring more research, data analysis and complex modeling. Using a disease management approach did not alter the favourability of PDT with respect to esophagectomy. However, given the 20–30% difference observed in incremental effectiveness and cost between the two methodologies, it is possible that the approach taken could ultimately influence the outcome of a more difficult decision.