Introduction

Head and neck cancers, originating from the upper aerodigestive tract, are amongst the top ten malignancies globally for both incidence and mortality [1]. The most recent National audit found that over 8,300 people were diagnosed with head and neck cancer between November 2012 and October 2013, in England and Wales. The majority of these diagnoses were found to be squamous cell carcinomas (SCCC) of the oral cavity, oropharynx and larynx [2].

Objectives

This study aimed to estimate trends in total secondary care costs associated with the treatment of head and neck cancers in England from 2006/07 to 2010/11.

Methods

A retrospective analysis was performed using data extracted from Hospital Episode Statistics (HES).

Inpatient and outpatient records with diagnosis fields featuring ICD-10 codes for oropharyngeal, laryngeal and oral cavity cancers (see Table 1) were extracted for the years 2006/07 to 2010/11.

As 2010/11 was representative of nine months’ provisional data, a correction factor was applied to inflate the figures to cover an entire year.

Table 1: ICD-10 codes used to identify head and neck cancer patients

<table>
<thead>
<tr>
<th>Cancer Type</th>
<th>ICD Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oropharynx</td>
<td>C01</td>
<td>Malignant neoplasm of base of tongue</td>
</tr>
<tr>
<td>C02</td>
<td>Malignant neoplasm of tonsil</td>
<td></td>
</tr>
<tr>
<td>C10</td>
<td>Malignant neoplasm of oropharynx</td>
<td></td>
</tr>
<tr>
<td>Larynx</td>
<td>C32</td>
<td>Malignant neoplasm of larynx</td>
</tr>
<tr>
<td>Oral Cavity</td>
<td>C03</td>
<td>Malignant neoplasm of lip</td>
</tr>
<tr>
<td>C04</td>
<td>Malignant neoplasm of other and unspecified parts of tongue</td>
<td></td>
</tr>
<tr>
<td>C05</td>
<td>Malignant neoplasm of gum</td>
<td></td>
</tr>
<tr>
<td>C06</td>
<td>Malignant neoplasm of floor of mouth</td>
<td></td>
</tr>
<tr>
<td>C07</td>
<td>Malignant neoplasm of palate</td>
<td></td>
</tr>
<tr>
<td>C08</td>
<td>Malignant neoplasm of other and unspecified parts of mouth</td>
<td></td>
</tr>
</tbody>
</table>

After grouping inpatient episodes into spells, a single Healthcare Resource Group (HRG) was derived for each.

HRG4 allows for the unbundling of certain costs from the National Tariff (for more information on unbundling see [5]). Therefore, bundled costs and unbundled costs were analysed.

Outpatient costs were estimated by grouping consultations by treatment specialty based on Treatment Function Codes (TFCs) and whether the consultation was the first of a series or a follow-up.

Limitations include HES limitations such as miscoding and gaps in the HES outpatient dataset.

Results

The annual number of inpatients jumped from 8,890 to 11,185 over the same period (25% increase).

Both costs and patient numbers were seen to be rising over time (Figure 1).

The total costs of treatment for patients across all three sites were estimated to be around £309 million, at 2011 prices.

Costs due to oropharyngeal cancer were slightly higher than for the other two sites (£115 million; 37.06%), with much of the overall rise being driven by oropharyngeal cancer, where the total costs increased from £18.2 million to £28.32 million, a rise of 52%, with over 1400 (22%) more inpatients treated in 2010/11 compared to 2006/07 (Figure 2).

The total costs for laryngeal and oral cavity cancer grew by 10% and 23%, respectively over the course of the study, with inpatient numbers also increasing by 372 (13%) and 502 (15%) (Figure 2).

The results of this analysis show there is a significant health and economic burden associated with oropharyngeal, laryngeal and oral cavity cancers in England.

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Conclusions

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Sustained pressure on NHS resources requires strategic investment for both treatment and prevention of these diseases.

References


