**BACKGROUND**

- Cancer of the head and neck accounts for approximately 3.2 percent of all malignancies in the United States.
- It is estimated that approximately $3.1 billion is spent in the United States each year on the treatment of head and neck cancer.
- The incidence of head and neck cancer has declined over the past 20 years due to a decline in smoking rates; however, rates of oropharyngeal cancer have stagnated, possibly due to the increasing incidence of cancer caused by the human papillomavirus (HPV).

**OBJECTIVE**

- To estimate direct annual healthcare utilization and costs of patients with head and neck cancer in the United States (US) in 2007-2008 from an all-payer perspective.

**STUDY DESIGN**

- A retrospective cross-sectional analysis of the 2007-2008 Medical Expenditure Panel Survey (MEPS) database was conducted.
- **Study Population**
  - Patients with a diagnosis of head and neck cancer (ICD-9: 140.xx-149.xx or 160.xx-161.xx)
- **Outcome Measures and Analyses**
  - Healthcare resource utilization (i.e., inpatient, outpatient, and pharmacy)
  - Direct costs of head and neck cancer from an all-payer perspective: the sum of third-party payments and out of pocket (OOP) payments.
- **Statistical Methods**
  - MEPS employs a complex, probabilistic survey design (i.e., stratification, clustering, and multi-stage sampling).
  - Standard error estimates were computed using the SURVEY MEANS and SURVEYREG procedures.
  - Direct costs per year per person (PYPP) were reported in 2008 U.S. dollars.

**RESULTS**

**Patient Characteristics**

- A total of 25 patients reported using medical resources or incurring expenditures due to head and neck cancer (Table 1).
- Weighted frequencies represented 160,353 patients in the U.S.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Frequency</th>
<th>Weighted Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head and Neck Cancer patients</td>
<td>25</td>
<td>160,353</td>
</tr>
<tr>
<td>Age (years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 65</td>
<td>11</td>
<td>92,357</td>
</tr>
<tr>
<td>≥ 65</td>
<td>14</td>
<td>67,996</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>17</td>
<td>115,205</td>
</tr>
<tr>
<td>Female</td>
<td>8</td>
<td>45,148</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>18</td>
<td>129,219</td>
</tr>
<tr>
<td>Black</td>
<td>5</td>
<td>17,070</td>
</tr>
<tr>
<td>Asian</td>
<td>2</td>
<td>14,064</td>
</tr>
</tbody>
</table>

**Resource Utilization and Costs**

- Direct costs attributable to head and neck cancer were estimated at $9,414 (standard error $5734) per patient.
- Approximately 79% ($7,391) of the total cost was generated by ambulatory visits, which were experienced by 100% of head and neck cancer patients, with an average of 11.13 visits per patient. (Figure 1)
- Private insurance paid about 69% of the direct medical expenditures attributable to head and neck cancer in the US in 2008. (Figure 2)

**LIMITATIONS**

- Due to constraints of the design of MEPS, which includes patient-reported data from a national survey, the possibility of recall bias cannot be ruled out.
- MEPS collects information only from the non-institutionalized civilian population. Therefore, our analyses do not include utilization and costs attributable to head and neck cancer patients in nursing homes and long-term care facilities.
- The sample size was small in this database.

**CONCLUSIONS**

- This study provided an overview of the clinical and economic burden of head and neck cancer in the U.S. in 2007-2008.
- Head and neck cancer attributable expenditures were strongly driven by high ambulatory visit costs and the majority of these costs were paid for by private insurers.

**REFERENCES**


**CONTACT INFORMATION**

Texas Hospital Association
Maria Rascati
Email: mrascati@gmail.com

The University of Texas at Austin
College of Pharmacy
Email: hs park@mail.utexas.edu or krascar@mail.utexas.edu

Presented at ISPOR 14th Annual European Congress
Nov 5-8th, 2011
Madrid, Spain

This study was not funded.