OBJECTIVE

To examine the HCRU and healthcare costs during the 18 months preceding and following the diagnosis of PNTM infection in the Medicare population vs. a matched control group at a large US health plan.

METHODS

Study Design

Medical and pharmacy claims between January 1, 2007, and May 31, 2014, were used to identify Medicare patients with PNTM infection (<36 months of continuous enrollment postdiagnosis or until death) and matched controls (≥18 months of continuous enrollment postdiagnosis or until death).

Guideline Optimal Treatment and Suboptimal Treatment Groups

Patients with PNTM infection were categorized in the Guideline Optimal Treatment group if they filled for ≥2 months of American Thoracic Society / Infectious Diseases Society of America (ATS/IDSA) guideline antibiotics within the first 9 months after the diagnosis of PNTM. Patients with PNTM infection were categorized in the Suboptimal Treatment group if they had only 0–2 fills for ATS/IDSA guideline antibiotics during the first 9 months after the diagnosis of PNTM.

Outcome Measures

Healthcare costs and resource utilization pre- and postdiagnosis were compared between the PNTM infection group and matched controls.

Guideline Optimal Treatment vs. Suboptimal Treatment

- Differences in mean (±SD) values were compared using t tests.
- Chi-square tests were performed to compare proportions.

RESULTS

Healthcare Resource Utilization and Healthcare Costs

PNTM, pulmonary nontuberculous mycobacteria; POT, points of treatment; SD, standard deviation.

Table 1: Monthly Prevalence of Pulmonary Nontuberculous Mycobacterial Infection in the Medicare Population vs. Matched Controls

<table>
<thead>
<tr>
<th>Category</th>
<th>Medicare Population</th>
<th>PNTM Infection</th>
<th>Matched Controls</th>
<th>PNTM Infection vs. Matched Controls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical costs</td>
<td>$13,050 ± $7,060</td>
<td>$3,280 ± $1,367</td>
<td>$9,770 ± $4,067</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Pharmacy costs</td>
<td>$479 ± $357</td>
<td>$761.90 ± $273</td>
<td>$283.12 ± $131</td>
<td>&lt;.05</td>
</tr>
<tr>
<td>Other</td>
<td>$638 ± $281</td>
<td>$1,367 ± $552</td>
<td>$508.06 ± $283</td>
<td>&lt;.05</td>
</tr>
<tr>
<td>Total costs</td>
<td>$19,909 ± $10,488</td>
<td>$5,224 ± $2,681</td>
<td>$7,150 ± $1,367</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

DISCUSSIONS

- HCRU and healthcare costs for patients with PNTM infection were significantly higher than those for their matched controls pre- and postdiagnosis.
- There were no differences in the mean (±SD) values of PNTM infection and matched controls.

CONCLUSIONS

- HCRU and healthcare cost patterns for patients with PNTM infection were significantly higher than those for their matched controls pre- and postdiagnosis.
- Future research should validate this finding and examine the patterns of healthcare utilization and costs by age, gender, and line of business.

REFERENCES