Antibiotic prescribing trends and patterns among Out of Hours primary care providers, England, 2010-2014

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INTRODUCTION

• Antimicrobial resistance (AMR) is a global public health threat.
• In England, infections accounted for 7% of deaths in 2010.
• Antimicrobial prescribing in Out of Hours services (OOH), which provide primary health care when General Practices (GPs) are closed, is poorly understood.
• Aim: to describe prescribing trends and patterns among OOH providers in England.

METHODS

• Estimated the number of CCGs with OOH data
  • Using the national prescribing database (ESPAUR).
• Compared OOH and GPs in terms of prescribing volume, seasonality and trends.
  • Using linear regression.
• Compared the contribution of broad spectrum antibiotics to total prescribing in OOH and their respective CCGs.
  • Using binomial regression.

RESULTS

• Of 211 CCGs, 68% had OOH data.
• OOH prescribing represented 3.2% of GP antibiotic prescription volume.
• Similar seasonal pattern in both GP and OOH.
  • Prescribing peak in December. (Figure 1)
• Prescribing volume Trends stable over time in GPs and OOH.
  • p=0.37
• Compared with GP, OOH consistently prescribes more Broad Spectrum Antibiotics.
  • Year on year decrease in GP and OOH (table 1).
• OOH broad-spectrum antibiotics prescriptions correlated with CCG broad spectrum prescriptions (figure 2).

CONCLUSIONS

• Compared with GP, OOH prescribing was out of proportion to consultation volume but remained stable.
• Seasonality similar to GP prescribing.
• OOH prescribed more broad spectrum antibiotics than GPs.
  • Sicker case mix?
  • Prescribing behaviour?
  • Gap is narrowing.
• Local prescribing drivers are reflected in OOH prescribing.
• Prescriber interventions can help increase appropriate prescribing.

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Table 1. Proportion of broad spectrum antibiotics out of total antibiotic prescriptions, by year and type of practice, England, 2010-2014.

<table>
<thead>
<tr>
<th>Year</th>
<th>Type of Practice</th>
</tr>
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<tbody>
<tr>
<td>2010</td>
<td>GP</td>
</tr>
<tr>
<td>2011</td>
<td>12.7</td>
</tr>
<tr>
<td>2012</td>
<td>11.8</td>
</tr>
<tr>
<td>2013</td>
<td>10.7</td>
</tr>
<tr>
<td>2014</td>
<td>10.6</td>
</tr>
</tbody>
</table>

Figure 1. Seasonal variation in prescribing in OOH and GP.

Figure 2. Contribution of broad spectrum antibiotics to total prescribing in OOH (%)

r=0.99