A toolkit to support the identification and prioritisation of at-risk asthma and COPD patients

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Introduction
The National Review of Asthma Deaths (1) and National COPD Audit Programme (2) identified a series of avoidable risk factors for patients living with asthma and COPD.

Corresponding quality improvement recommendations to reduce the number of preventable attacks and improve disease control have been made with many of these recommendations echoed in both national policy and guidance issued by organisations such as NICE, BTS/SIGN, NHSE, MHRA, GINA and GOLD (3-12).

Nonetheless, the identification of ‘high risk’ patients for priority review in primary care can often be challenging. The co-ordination of annual reviews for patients with asthma and COPD represents a significant undertaking at a time when resources are under considerable pressure. A proactive and targeted audit can be onerous, and variations in clinical processes and gaps in clinical coding can sometimes result in sub-optimal reporting. Furthermore, limitations and lack of intra-operability associated with GP clinical systems can make the consistent application of best-practice problematic.

Method (contd.)

- High oral corticosteroid/antibiotic use
- COPD patients with an MRC score a3 and no record of pulmonary rehabilitation referral

Each agreed risk factor was translated into a series of aggregated EMIS Web search reports and eight distinct protocol alerts using SNOMED CT coding / search criteria (the ‘toolkit’).

When imported into the EMIS Web clinical system – via a single, consolidated file – the toolkit interrogates the clinical coding in patient records reporting those asthma and COPD patients considered to be at risk of unplanned admissions and/or displaying signs of poor disease control. Patients are ‘flagged’ either through a proactive audit via the search reports or opportunistically on presentation via the protocol alerts.

Screenshot example of search report

<table>
<thead>
<tr>
<th>Search Criteria</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asthma patients with over 20 EDAIs in L2P</td>
<td>80</td>
</tr>
<tr>
<td>Asthma patients presenting to 5 or more out of hours in L1H for each episode</td>
<td>70</td>
</tr>
<tr>
<td>Each patient has had at least one exacerbation in the last 12 months</td>
<td>60</td>
</tr>
<tr>
<td>All asthma patients in last 12 months</td>
<td>55</td>
</tr>
<tr>
<td>All exacerbations to 5 or more out of hours in L1H and/or 2 or more in L2P</td>
<td>55</td>
</tr>
<tr>
<td>At least 2 exacerbations in L2P and/or asthma in L1H</td>
<td>50</td>
</tr>
<tr>
<td>All exacerbations within 30 days of each other in L2P</td>
<td>45</td>
</tr>
<tr>
<td>At least 3 exacerbations in L2P</td>
<td>40</td>
</tr>
<tr>
<td>At least 4 exacerbations in L1H and/or asthma in L2P</td>
<td>35</td>
</tr>
<tr>
<td>At least 5 exacerbations in L1H</td>
<td>30</td>
</tr>
<tr>
<td>Asthma patients with over 10 EDAIs in L1H and/or L2P</td>
<td>25</td>
</tr>
<tr>
<td>At least 3 exacerbations in L1H and/or asthma in L2P</td>
<td>20</td>
</tr>
</tbody>
</table>

The toolkit was beta-tested and validated by MPPN clinical pharmacists over a period of three months across 10-12 practices (approx. 50-75,000 patients) in the West Midlands to ensure accuracy and utility.

Beta-testing the toolkit in practice

Results

Beta-testing concluded the toolkit was easy to install and run and accurately identified ‘at risk’ patients as defined by the search criteria.

In July 2020, the tested version of the toolkit was made available to all healthcare practitioners in the UK – free to download via https://asthmacopdtoolkit.org/. Since launch, the EMIS Web version of the toolkit has been downloaded 250 times and the website visited over 3,400 times. A SystmOne version was launched in October 2020.

Conclusion

The toolkit offers practitioners a practical and systematic aid in the identification of ‘high risk’ asthma and COPD patients for priority review in primary care.

Plans are currently underway to audit a number of outcomes associated with improvements in respiratory care in a cohort of patients identified using the toolkit.

References

Acknowledgements

Toolkit developed in partnership between the Midlands Practice Pharmacy Network (https://www.mppn.org.uk/) and Prescribing Decision Support Ltd at Keele University. Special thanks to everyone who provided clinical and technical expertise to support the toolkit’s development (see https://asthmacopdtoolkit.org/for contributors).

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