QUESTION: Does a comprehensive educational programme improve outpatient follow up and decrease subsequent hospital admissions in inner city patients with acute asthma?

Design
Randomised (allocation concealed), unblinded, controlled trial with 6 months of follow up.

Setting
A university hospital in Philadelphia, Pennsylvania, USA.

Patients
77 patients between 18 and 45 years of age (mean age 29 y, 79% women) who were admitted from the emergency department (ED) with acute asthma and who lived in the inner city. Exclusion criteria were comorbid disease, inability to speak English, lack of telephone access, or pregnancy. Follow up was 100%.

Intervention
44 patients were allocated to an educational programme including inpatient asthma education by an asthma nurse specialist, bedside spirometry, discharge planning assistance, a telephone call 24 hours after discharge, and scheduled outpatient follow up within 1 week of discharge (intervention group). 33 patients were allocated to conventional asthma care and routine follow up (routine care group).

Main outcomes measures
Length of hospital stay, success of discharge (defined as not requiring emergency care in the 1 wk after discharge), attendance at follow up appointments, subsequent ED visits, and hospitalisations.

Main results
No difference existed between intervention and routine care groups for mean length of hospital stay (2.1 v 2.7 d, p = 0.12) or the rate of success of discharge (100% v 97%) (p = 0.2)*. Compared with patients in the routine care group, those in the intervention group had a higher rate of outpatient follow up (p = 0.01) (table), fewer subsequent ED visits (3 v 15, p = 0.04), and fewer hospitalisations for asthma (3 v 12, p = 0.04).

Conclusion
A comprehensive educational programme improved outpatient follow up and reduced subsequent emergency department visits and hospitalisations for inner city patients with asthma.

*p value calculated from data in paper.

Comprehensive educational programme v routine care for patients with asthma†

<table>
<thead>
<tr>
<th>Outcome at 6 mo</th>
<th>Intervention</th>
<th>Routine Care</th>
<th>RRI (95% CI)</th>
<th>NNT (CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outpatient follow up</td>
<td>59%</td>
<td>27%</td>
<td>117% (23 to 308)</td>
<td>3 (2 to 11)</td>
</tr>
</tbody>
</table>

†Abbreviations defined in glossary; RRI, NNT, and CI calculated from data in article.