Pathway diagrams – Annex F
Making the diagnosis of asthma
Confirming the diagnosis may depend on history, response to treatment, measurement of airflow limitation before and after bronchodilator, spontaneous documentation of variability of peak flow or spirometry, an exercise test or assessment of inflammation.

Patient presents with symptoms suggestive of asthma (cough, chest tightness, wheezing or breathlessness, characteristically worse at night or in the early morning)

Diagnosis may be made by Doctor or Nurse, sometimes with assistance of Clinical Scientists

Primary or Secondary Care or Community Diagnostic Assessment Unit
Asthma: The patient journey

Fig 2. Treatment is recommended

**Making the diagnosis of asthma**
Confirming the diagnosis may depend on history, response to treatment, measurement of airflow limitation before and after bronchodilator, spontaneous documentation of variability of peak flow or spirometry, an exercise test or assessment of Inflammation.

Patient presents with symptoms suggestive of asthma (cough, chest tightness, wheezing or breathlessness, characteristically worse at night or in the early morning).

Initial therapy would usually be instituted by the Health Care Practitioner making the diagnosis, with full consideration of the patients wishes, concerns and expectations.

Patient with confirmed diagnosis of asthma (If adult – consider possibility of an occupational cause :see figure 9).

Patient is offered appropriate simple information about diagnosis, treatments and any necessary lifestyle changes and given website address of Asthma UK www.asthma.org.uk

Optimise therapy according to the British Asthma Guidelines – start at step appropriate to symptoms

Primary or secondary care
**Making the diagnosis of asthma**
Confirming the diagnosis may depend on history, response to treatment, measurement of airflow limitation before and after bronchodilator, spontaneous documentation of variability of peak flow or spirometry, an exercise test or assessment of inflammation.

Patient presents with symptoms suggestive of asthma (cough, chest tightness, wheezing or breathlessness, characteristically worse at night or in the early morning).

Patient with confirmed diagnosis of asthma (If adult – consider possibility of an occupational cause: see figure 9).

Patient is offered appropriate simple information about diagnosis, treatments and any necessary lifestyle changes and given website addresses of sources such as Asthma UK [www.asthma.org.uk](http://www.asthma.org.uk) or British Lung Foundation [www.blf.org.uk](http://www.blf.org.uk)

All patients with asthma should be reviewed regularly, especially after changes of therapy. Review includes assessment of control (RCP 3 questions), checking of inhaler usage and assessment of compliance.

Review

Optimise therapy according to the British Asthma Guidelines – start at step appropriate to symptoms

Self management Support

Issuing of a personal action plan and where appropriate reserve supplies of therapy

Such review maybe offered by primary care physicians, well trained nurses or lay educators or by specialists working in a hospital or an integrated care service.

Majority in Primary Care, a small number in secondary care.

School teachers, nursery assistants and other carers may need to be informed.
**Asthma: The patient journey**

**Fig 4  Further review after treatment change**

**Making the diagnosis of asthma**
Confirming the diagnosis may depend on history, response to treatment, measurement of airflow limitation before and after bronchodilator, spontaneous documentation of variability of peak flow or spirometry, an exercise test or assessment of inflammation.

Patient presents with symptoms suggestive of asthma (cough, chest tightness, wheezing or breathlessness, characteristically worse at night or in the early morning).

Patient is offered appropriate simple information about diagnosis, treatments and any necessary lifestyle changes and given website address of Asthma UK www.asthma.org.uk

Patient with confirmed diagnosis of asthma (If adult – consider possibility of an occupational cause: see figure 9).

All patients with asthma should be reviewed regularly, especially after changes of therapy. Review includes assessment of control (RCP 3 questions), checking of inhaler usage and assessment of compliance

Self management Support
Issuing of a personal action plan and where appropriate reserve supplies of therapy (Steroids)

Review
Optimise therapy according to the British Asthma Guidelines – start at step appropriate to symptoms

Review following changes
Review suggests poor control
- Is the patient taking therapy? (ask the patient, prescription monitoring)
- Is there a lifestyle issue (persistence of smoking? Adverse environmental issue?)
- Does therapy need to be increased?
- Is the diagnosis correct or is a second pathology present.
- Does the patient have difficult asthma – see figure 7.
- Increase therapy as per British Asthma Guidelines

Primary care review
Specialist review may be necessary
**Fig 5  Asthma: The patient journey**

**Exacerbations of asthma**

- **Making the diagnosis of asthma**: Confirming the diagnosis may depend on history, response to treatment, measurement of airflow limitation before and after bronchodilator, spontaneous documentation of variability of peak flow or spirometry, an exercise test or assessment of inflammation.

- **Patient presents with symptoms suggestive of asthma** (cough, chest tightness, wheezing or breathlessness, characteristically worse at night or in the early morning).

- **Patient is offered appropriate simple information about diagnosis, treatments and any necessary lifestyle changes and given website address of Asthma UK** www.asthma.org.uk

- **All patients with asthma should be reviewed regularly, especially after changes of therapy. Review includes assessment of control (RCP 3 questions), checking of inhaler usage and assessment of compliance**

- **Review suggests poor control**
  - Is the patient taking therapy? (ask the patient, prescription monitoring)
  - Does therapy need to be increased?
  - Is the diagnosis correct or is a second pathology present.
  - Increase therapy as per British Asthma Guidelines

- **Onset of exacerbation**
  - Patient self treats – see figure 6
  - Emergency Department attendance
  - Hospital Admission
  - Discharge with early follow up review. Was this potentially fatal asthma? See figure 8
  - Follow up by doctor or nurse in primary care or by peripatetic asthma review service within 48 hours

- **Review following changes**

- **Review**

- **Primary care review**

- **Specialist review maybe necessary**

- **Self management Support**

- **Issuing of a personal action plan and where appropriate reserve supplies of therapy (Steroids)**

- **Optimise therapy according to the British Asthma Guidelines – start at step appropriate to symptoms**

- **Review following changes**

- **All patients with asthma should be reviewed regularly, especially after changes of therapy. Review includes assessment of control (RCP 3 questions), checking of inhaler usage and assessment of compliance**

- **Review suggests poor control**
  - Is the patient taking therapy? (ask the patient, prescription monitoring)
  - Does therapy need to be increased?
  - Is the diagnosis correct or is a second pathology present.
  - Increase therapy as per British Asthma Guidelines

- **Onset of exacerbation**
  - Patient self treats – see figure 6
  - Emergency Department attendance
  - Hospital Admission
  - Discharge with early follow up review. Was this potentially fatal asthma? See figure 8
  - Follow up by doctor or nurse in primary care or by peripatetic asthma review service within 48 hours
**Fig 6  Asthma: The patient journey**

**Self treatment and self management support**

<table>
<thead>
<tr>
<th>Patient with asthma</th>
</tr>
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<tbody>
<tr>
<td>Aged over 5 years with asthma that is requiring step 2 or more therapies (and which is not very mild and completely controlled)</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Self Management advice</th>
</tr>
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<tbody>
<tr>
<td>• for 364 days, 23 hours and 30 minutes the patient is likely to be looking after their own condition</td>
</tr>
<tr>
<td>• They need to know usual therapy, signs that suggest worsening asthma, how to increase usual therapies, when to start reserve therapies, and when to seek urgent medical attention</td>
</tr>
</tbody>
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<table>
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<tr>
<th>Self management support involves:</th>
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</thead>
<tbody>
<tr>
<td>• Advice being offered as per previous box.</td>
</tr>
<tr>
<td>• Prescription of reserve therapies</td>
</tr>
<tr>
<td>• Reinforcement of spoken advice with a written personalised asthma action plan (cognisant of the issue of health literacy)</td>
</tr>
<tr>
<td>• Advice re sources of 24/7 support</td>
</tr>
<tr>
<td>• Regular review (which may be face to face or by telephone)</td>
</tr>
</tbody>
</table>

Support given by a knowledgeable health care provider: This may be a specialist respiratory physician, a lay educator, a primary care physician, or a nurse with a special interest and training.

Primary or secondary care or within an integrated care service (others involved such as teachers, crèche assistants, and care home staff need to be appraised of needs.)
Fig 7  Asthma: The patient journey
Difficult asthma

Patient with asthma;
Review suggests poor control: difficult asthma is suspected.

Difficult asthma
• Is asthma difficult to control because treatment is not available or has not been prescribed at appropriate step?
  • Is asthma difficult to control because treatment is not being taken?
  • Is there a lifestyle issue that needs addressing e.g. smoking

Address these issues

Is the diagnosis correct?
• Exclude bronchiectasis
• Exclude localised airway obstruction,
• Exclude COPD

Is there a co-morbidity? E.g.:
• Dysfunctional breathing
• Vocal cord dysfunction
• Psychological illness

Cases of difficult asthma will nearly always need specialist secondary care and may need tertiary referral to a difficult asthma centre. Such patients should be managed with a systematic proforma approach and a multidisciplinary team including specialist nurses, speech therapists, counsellors, psychologists and psychiatrists are likely to be needed.
Fig 8  Asthma: The patient journey
Potentially fatal asthma

Was this potentially fatal asthma?

Potentially fatal asthma is defined by:

- An episode of respiratory failure requiring incubation, or
- respiratory acidosis associated with an attack of asthma not requiring incubation, or
- two or more hospitalisations for asthma despite chronic use of oral steroids, or
- two episodes of pneumothorax (or pneumo-mediastinum) associated with an asthma attack.

Risk factors for potentially fatal asthma need to be addressed and these include:

- Previous near fatal asthma (previous ventilation respiratory acidosis)
- Previous submission for asthma especially if in the last year
- requiring three or more classes or asthma medication
- heavy use of beta 2 agonist
- repeated attendances at emergency departments for asthma care especially if in the last year
- ‘brittle’ asthma
- non compliance with treatment or monitoring or review
- self discharge
- psychosis, depression or other psychiatric illness
- current or recent major tranquilizer use
- denial
- alcohol or drub abuse
- obesity
- Other stresses

Cases of potentially fatal asthma should remain under life long specialist follow up.
In patients with adult onset, or reappearance of childhood asthma, clinicians should be suspicious that this may be an occupational cause. Ask the patient:
- Are your symptoms better/same/worse on days away from work?
- Are your symptoms better/same/worse on holiday?

Specialist Care, often a tertiary centre

Tertiary care: Occupational lung disease specialist