

## SPECTRA: Identification of **SusPECTed severe Asthma** in adults

A key clinical system resource to identify potential severe asthma, optimise treatment, and refer where appropriate.



This handbook was initiated,  
funded and organised by

AstraZeneca 

Produced in  
collaboration with Cogora.

# Foreword

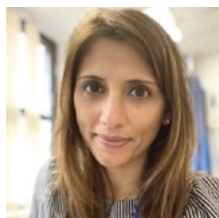
## Abbreviations

<b>ACT</b>	Asthma control test
<b>FeNO</b>	Fractional exhaled nitric oxide
<b>FEV<sub>1</sub></b>	Forced expiratory volume in one second
<b>FVC</b>	Forced vital capacity
<b>ICS</b>	Inhaled corticosteroid
<b>IgE</b>	Immunoglobulin E
<b>IL-5</b>	Interleukin-5
<b>LABA</b>	Long-acting beta-2-agonist
<b>mAbs</b>	Monoclonal antibodies
<b>MART</b>	Maintenance and reliever therapy
<b>MDT</b>	Multidisciplinary team
<b>OCS</b>	Oral corticosteroids
<b>PAAP</b>	Personalised asthma action plan
<b>PEFR</b>	Peak expiratory flow rate
<b>pMDIs</b>	Pressurised metered-dose inhalers
<b>PSA</b>	Potential severe asthma
<b>QoL</b>	Quality of life
<b>SABA</b>	Short-acting beta-2-agonist
<b>SACs</b>	Severe asthma centres
<b>SCS</b>	Systemic corticosteroids

**Hitasha Rupani is a consultant respiratory physician and leads the Southampton Severe Asthma Centre. Hitasha chairs the British Thoracic Society Specialist Advisory Group for asthma whilst actively participating in asthma research.**

Asthma is one of the most common respiratory conditions and when uncontrolled, can significantly impact a patient's quality of life.<sup>1</sup> Uncontrolled asthma leads to more days off work, a limitation on daily activities, decreased health-related quality of life and more frequent hospital admissions compared to controlled asthma.<sup>2</sup> About 3-5% of people with asthma are diagnosed with severe asthma which is defined as asthma that remains uncontrolled despite adherence to maximal optimised therapy.<sup>3</sup> Patients with uncontrolled and severe asthma use more medication, including rescue inhalers and oral corticosteroids (OCS). Each prescribed course of OCS results in a cumulative burden on current health and future risk of steroid-related complications, and the incidence of adverse events increases with each year of exposure.<sup>4</sup>

Therefore, it is important to identify patients with potentially severe asthma so that necessary interventions can be implemented to improve asthma control, reduce the morbidity associated with uncontrolled asthma and treatment (oral steroid) related side effects and reduce hospital admissions. Sadly, reports suggest that over 70% of adults with potential severe asthma in primary



### Hitasha Rupani

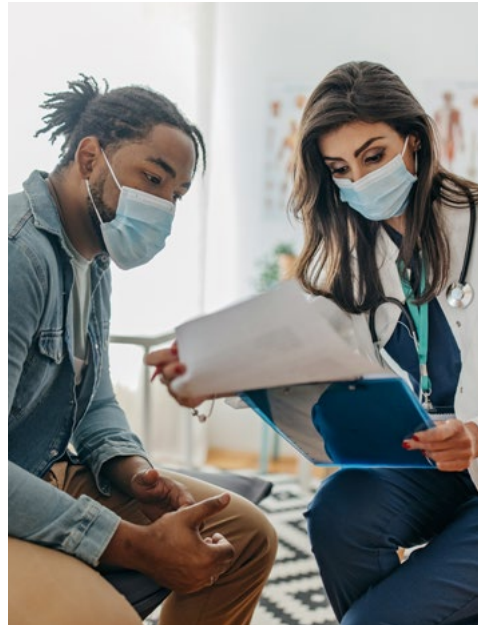
Consultant respiratory physician,  
Southampton Severe Asthma  
Centre.

care have not been referred or had a specialist review in the past year.<sup>5</sup> This highlights that large numbers of patients with potential severe asthma are under-recognised in primary care and more proactive steps need to be taken for early identification, treatment optimisation, and referral if necessary.

Why should patients be referred to severe asthma centres? Once referred to a severe asthma centre, patients undergo systematic assessment and multi-disciplinary team input. This has been shown to improve asthma control through treatment and adherence optimisation and comorbidity management.<sup>6,7</sup> Many patients are started on biologics- treatments that have transformed the management of severe asthma.

The key step in this process is earlier identification of patients with potential severe asthma. This handbook presents SPECTRA- a tool devised by clinicians to help identify these patients in primary care. The handbook describes the process of patient identification, discusses steps for assessment and

treatment optimisation in primary care and highlights when a referral should be made. It also provides helpful links to support healthcare professionals who are involved in the care of people with asthma.



## References

- 1** Asthma + Lung. Asthma + Lung. What is asthma. Available at: <https://www.asthmaandlung.org.uk/conditions/asthma/what-asthma>. Accessed November 2023.
- 2** Price D, Fletcher M, van der Molen T. Asthma control and management in 8,000 European patients: the REcognise Asthma and Link to Symptoms and Experience (REALISE) survey. *NPJ Prim Care Respir Med* 2014;24:14009.
- 3** Asthma + Lung. What is severe asthma? Available at: <https://asthmaandlung.org.uk/conditions/severe-asthma/what-severe-asthma>. Accessed November 2023.
- 4** Price D, Castro M, Bourdin A, et al. Short-course systemic corticosteroids in asthma: striking the balance between efficacy and safety. *European Respiratory Review* 2020;29:190151.
- 5** Ryan D, Heatley H, Heaney LG, et al. Potential Severe Asthma Hidden in UK Primary Care. *J Allergy Clin Immunol Pract* 2021;9:1612-1623.e9.
- 6** Van Der Meer AN, Pasma H, Kempenaar-Okkema W, et al. A 1-day visit in a severe asthma centre: Effect on asthma control, quality of life and healthcare use. *European Respiratory Journal* 2016;48:726-733.
- 7** Redmond C, Heaney LG, Chaudhuri R, et al. Benefits of specialist severe asthma management: demographic and geographic disparities. *European Respiratory Journal* 2022;60.

# Introduction

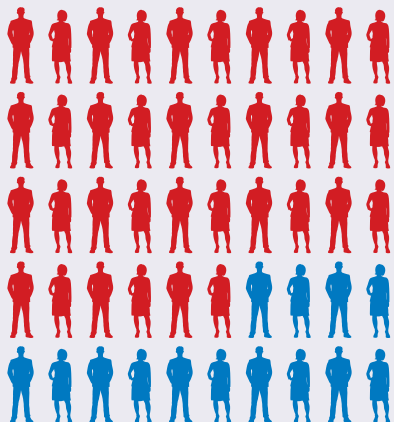
Severe asthma is defined as asthma that remains uncontrolled even when patients are adherent to high doses of medicines.<sup>1</sup> It is estimated that for every 100 asthma patients, four have severe asthma in the UK.<sup>1</sup> Although the condition can be life threatening, a large proportion of those in primary care who could potentially have severe asthma are not referred.<sup>1-3</sup> A recent study found that 72% of patients (n=16,409) with potential severe asthma (PSA) had not been referred to a secondary care or had a specialist review in the past year.<sup>3</sup> PSA patients are on high dose inhaled therapy and present with at least one of the following: poor symptoms control, serious exacerbations, two or more issues of systemic corticosteroids and the use of 6 or more reliever inhalers in the past 12 months.<sup>4-6</sup> It is crucial for PSA patients to be identified and referred when guidance suggests because uncontrolled asthma is associated with frequent exacerbations needing recurrent courses of oral corticosteroids (OCS).<sup>6</sup> Limited evidence suggests that even short courses of systemic corticosteroids (SCS) can result in negative outcomes for the patients by increasing risk of hypertension, gastrointestinal ulcers/bleeds, loss of bone density and negatively impacting mental health.<sup>7</sup>

SPECTRA can help primary care clinicians quickly identify adults with PSA through alerts and searches. Once uncontrolled and suspected severe asthma patients are identified through

SPECTRA, primary care clinicians can continue their duty of care, reviewing patients per current guidelines, and referring to secondary care where necessary. Once referred to secondary care patients gain access to a multi-disciplinary team who can confirm their diagnosis and provide access to specialist treatment, if deemed beneficial.<sup>8</sup> This increases the number of patients receiving the right care, reduces morbidity associated with uncontrolled asthma and enables eligible patients to access treatments, thereby improving patients' health and quality of life (QoL).

The use of SPECTRA does not replace clinical judgement.

**72% of PSA patients had no referral or specialist review in the past year.<sup>3</sup>**



## Patient profile



Not a real patient, for illustrative purposes only

### Meet Jane, a patient with asthma

Jane is 23 years old and works as a teacher. Jane has recently had her 4<sup>th</sup> exacerbation this year and is experiencing worsening symptoms. Jane required treatment with oral corticosteroids (OCS) on all four occasions. Her asthma interferes with her daily life as she reports disturbed sleep and when playing hockey, she becomes wheezy. Jane is on a combination inhaler containing a medium-dosed inhaled corticosteroid (ICS) and long-acting bronchodilator (LABA) inhaler, to which she demonstrates good inhaler technique. Additionally, she has ordered six short-acting beta-agonist (SABA) inhalers in the past six months.

## Introduction to SPECTRA

SPECTRA is a key clinical system resource currently used by over 500 practices across the UK. The system assists clinicians to identify PSA patients which prompts a review of their condition. The search criteria used by SPECTRA consists of:

- Serious exacerbations ( $\geq 1$  hospitalisation, ICU stay or mechanical ventilation in the past 12 months)<sup>6</sup>
- $\geq 2$  issues of systemic corticosteroids<sup>6</sup>
- $\geq 6$  reliever inhalers in the last 12 months<sup>4,5</sup>
- Poor symptom control (Asthma control test  $< 20$ )<sup>6</sup>

As of April 2023, 1.74 million patient records have been proactively searched using SPECTRA. Following clinical review and any necessary treatment optimisation in primary care, if patients remain uncontrolled, they can be referred using SPECTRA's useful referral template. The system can also be used to generate reports measuring the impact of the review and referral process.

Check out the  
SPECTRA website

Click here

### Importance of effective severe asthma treatment

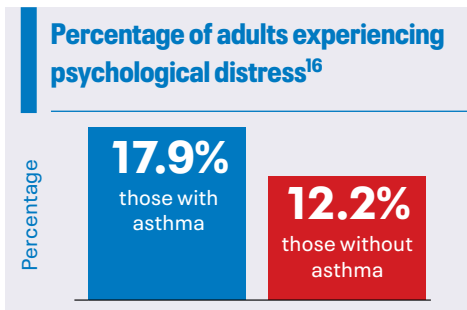
Asthma is a highly prevalent respiratory disease and over 8 million people in the UK are afflicted with this long-term lung condition.<sup>9</sup> Out of 100 people with asthma in the UK around 4 will have severe asthma, this equates to roughly

200,000 people living with severe asthma in the UK.<sup>1</sup> Although there are treatments for asthma available that enable most individuals to live relatively symptom-free, 4 people die every day in the UK due to an asthma attack.<sup>10</sup> This is a high mortality rate for a treatable disease and, even more shockingly, the UK has the highest asthma mortality rate for those aged 10-24 when compared to 13 other European countries.<sup>11</sup>

It should also be acknowledged that this high mortality rate is not evenly spread amongst UK asthma patients, studies have demonstrated that more people with asthma from deprived areas have a higher risk of death and hospital admission.<sup>12</sup>

The high prevalence of asthma has a wide societal impact with the disease generating 4.1m work-days lost in the UK.<sup>13</sup> The total cost of asthma was estimated to be at least £1.1bn between 2011-2012, this includes costs from primary care services, disability claims, and hospital care.<sup>13</sup>

### Impact on patient quality of life



As with many chronic diseases, asthma has a large impact on a patient's QoL.<sup>14</sup> Recent findings have suggested that asthma exerts a complex and detrimental effect upon both the physical and psychological health of patients which inevitably impacts the QoL for the patient.<sup>15</sup>

Psychological distress is more frequent in adults with asthma, with 17.9% of those with asthma experiencing psychological distress compared to 12.2% of those without asthma.<sup>16</sup> Those with asthma are also more likely to be diagnosed with a mental health condition.<sup>16</sup>

Asthma can have an impact on an individual's ability to work. The average percentage of work hours missed in a single week due to asthma symptoms is 3.5% in the UK.<sup>17</sup> Furthermore, workers with asthma report negative emotions connected to how their asthma impacts workplace productivity.<sup>17</sup> Asthmatic workers report feeling sad and depressed and feelings of guilt due to other colleagues sometimes having to pick up their work.<sup>17</sup> This inferiority they feel can have an impact on their self-esteem which may negatively affect their QoL.

### Difference between uncontrolled asthma and severe asthma

Uncontrolled asthma is defined by poor symptom control and frequent exacerbations ( $\geq 2$  exacerbations or requiring OCS or  $\geq 1$  hospital admission related to asthma [serious exacerbation])



in a 12 month period).<sup>6</sup> It may be caused by poor adherence to therapy, poor inhaler technique or a requirement for an increased dose of medication.<sup>18</sup> It is important to address common problems before referring patients to severe asthma services.

Severe asthma is a subset of asthma that is uncontrolled despite adherence to high-dose medication and after the elimination and/or treatment of contributory factors.<sup>18,19</sup>

Asthma can also be defined as allergic or eosinophilic (or both).<sup>19</sup>

### Common problems to address before diagnosing severe asthma:<sup>18</sup>

- Initial diagnosis of asthma is incorrect; the symptoms are a result of another condition
- The presence of comorbidities, such as obesity
- Incorrect inhaler technique
- Poor adherence to prescribed asthma treatments
- Presence of sensitising agents at home or in the work environment

### Severe asthma patients are under-referred and under-treated

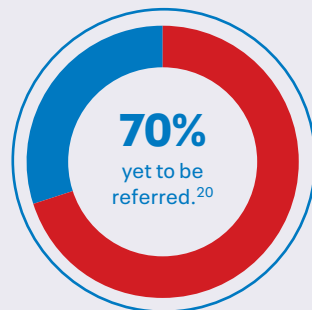
Referral to secondary care is critical for patients with PSA to ensure they can access the specialist care needed to successfully assess and manage their condition.<sup>8</sup> Without proper management, patients could continue

to suffer from frequent asthma attacks, hospital admissions and, in the worst-case scenario, death.<sup>2</sup> Despite the importance of referral, reports suggest that over 70% of adults who have received three or more courses of OCS are yet to be referred, and 40% of patients were uncontrolled for over two years prior to referral to a severe asthma centre (SAC).<sup>20</sup>

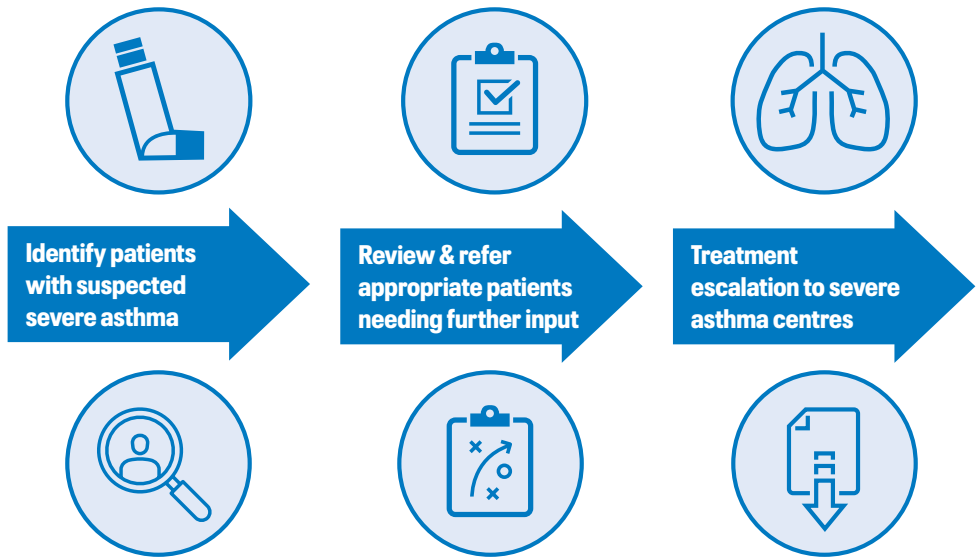
England has one of the lower rates of asthma biologic prescribing.<sup>21</sup> Currently only 20% of those eligible are receiving them, highlighting the need for increased focus on earlier identification and referral of patients with PSA.<sup>2,22</sup>

SPECTRA can help to increase the identification of patients with PSA, thereby ensuring patients can access the appropriate care and medication they require.

### Over 70% of adults who have received three or more courses of OCS are yet to be referred.<sup>20</sup>



# The SPECTRA pathway



## Searches & Alerts\*

Patients with:

- Serious exacerbations ( $\geq 1$  hospitalisation, ICU stay or mechanical ventilation in the past 12 months)<sup>6</sup>
- $\geq 2$  issues of systemic corticosteroids (in the past 6 months)<sup>6</sup>
- $\geq 6$  reliever inhalers in the last 12 months<sup>4,5</sup>
- Poor symptom control (Asthma control test  $< 20$ )<sup>6</sup>

## Referral Extract Template

A referral extract template to facilitate the automatic collection of data and medication as part of the referral process

## Impact Reporting

Practice level and local health economy dashboards.

Download baseline and follow-up PDF reports (*if required*) to measure continual review and impact of the service

SPECTRA integrates with your electronic patient records (EMS, SystemOne and Vision) and searches for patients based on certain criteria.

\* EMIS, SystemOne & Vision



When SPECTRA identifies patients who meet the criteria it will alert the user to review the patient.

**H**


### High Intensity Treatment

Is the patient already at the high-end of the treatment escalator?

**A**


### Adherence

Are patients taking their medication at the correct dose and frequency?

**S**


### Severe Exacerbations

Has the patient had  $\geq 2$  courses of oral corticosteroids or been hospitalised due to asthma in the last 12 months?

**T**


### Technique

Is the patients inhaler technique correct?

**E**


### Exclude Other Conditions

Are conditions that mimic or exacerbate asthma being managed?



# Reviewing Jane

Remember the HASTE tool when reviewing your primary care patients. This memorable acronym details five questions to keep in mind when reviewing an asthma patient. If the answer is yes to all the questions, it is time to refer your patient to secondary care for further assessment.

The HASTE tool was used in the following review of Jane.

## 1. Confirm the asthma diagnosis

Patients may not be responding well to treatment if the initial asthma diagnosis was incorrect. To eliminate this option, check records for diagnostic confirmation.

This could include:<sup>23</sup>

- Spirometry results showing airflow obstruction (forced expiratory volume in one second [FEV<sub>1</sub>]/forced vital capacity [FVC] FEV<sub>1</sub>/FVC <70%)
- Peak expiratory flow rate (PEFR) variability (>20%) after monitoring at least twice daily for 2-4 weeks
- Bronchodilator reversibility (BDR) (≥12% + ≥200ml) in response to beta-2-agonists or corticosteroids
- Fractional exhaled nitric oxide (FeNO) (≥40 parts per billion)
- Responses to previous treatments

### Jane's records showed:

- Diurnal PEFR variability (>20%)
- Obstructive Spirometry (FEV<sub>1</sub>/FVC 68%) and positive bronchodilator reversibility (FEV<sub>1</sub> increase of ≥12%)

## Common causes of PMDI misuse<sup>24</sup>



### Omissions

- Device not actuated at beginning of inspirations
- No slow inspiratory flow
- No complete inspiration
- Incomplete actuation



### Errors

- Forced expiration
- No expiration
- Inspiration by nose
- Actuation at the end of inspiration
- No inspiration

## 2. Assess adherence

Simple interventions should be addressed before escalating treatment. One of the simplest interventions is correcting inhaler technique. One study showed that pressurised metered-dose inhalers (pMDIs) were misused by 71% of patients (n=3,955).<sup>24</sup> Demonstrating and checking inhaler technique significantly reduces misuse when compared to patients with no prior education.<sup>24</sup> Common causes of

pMDI misuse include the incorrect holding of the inhaler, not holding breath for 5s following inspiration and not removing the cap prior to use.<sup>24</sup> Consider the use of a spacer for patients who have poor technique.<sup>25</sup> When checking adherence it is important to review how often the patient collects their inhaled steroid prescription, compared to how often they *should* collect it in a 6 or 12-month period (medicine possession ratio).



**Jane is adhering to her treatment and demonstrates good inhaler technique.**

### 3. Assess asthma control

Use a validated tool such as the asthma control test (ACT) questionnaire to assess asthma control in your patients.<sup>26</sup> The five questions in the ACT questionnaire assess to what extent the patient's asthma is interfering with their daily life and how often they require certain medications. Following the patient's answers a score is generated; the lower the score, the more poorly controlled their asthma is. Scores ranging from 0-20 indicate your patient's asthma symptoms are poorly controlled.



**Jane's score is 10 indicating her asthma is poorly controlled.**

### 4. Assess exacerbation risk

Look at the patient's history and assess their exacerbation risk.

Having any of the following risk factors increases the patient's risk of exacerbation:<sup>18</sup>

- High SABA use
- Poor adherence or not using their inhaler optimally
- Comorbidities e.g., obesity and food allergies
- Exposure to smoking
- Ongoing exposure to known triggers
- Major socioeconomic or psychological problems
- Low FEV<sub>1</sub> (especially <60% predicted)
- High bronchodilator responsiveness
- High levels of blood eosinophils and elevated FeNO
- Intubated or admitted to intensive care unit for asthma, ≥1 severe exacerbations in the last 12 months



**Jane has 3 of the warning signs detailed, indicating she could be at risk of another exacerbation.**

### 5. Treatment escalation

If the asthma diagnosis has been confirmed and your patient is adherent and competent in managing and administering their medication it could be time to adapt their current medication. The British Thoracic Society suggests a trial of add-on therapy of varying lengths depending on the desired outcome.<sup>27</sup> There is no defined ICS dose that signifies when to try adding another therapy but note that a considerable number of patients will not benefit from ICS dose above 200 micrograms BDP/day as much as they would an additional therapy.<sup>27</sup>

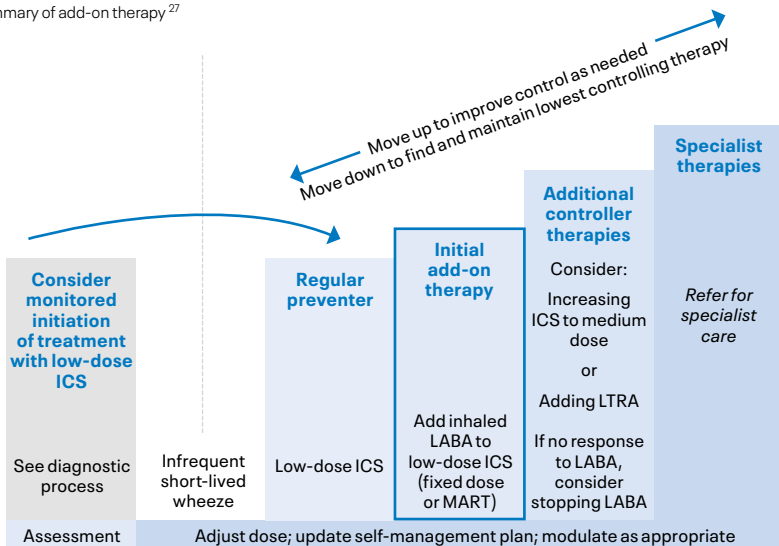
An outline of add-on therapies is provided below for your information, but please refer to your local and national guidelines.

**Add-on therapy**<sup>27</sup>

● An inhaled long-acting  $\beta_2$  agonist (LABA) should be considered before increasing ICS dosage in adults. Combination inhalers guarantee LABA and ICS are taken simultaneously, and that one medication is not forgotten. Maintenance and reliever therapy (MART) is a form of combined ICS and LABA treatment, with the difference being, it is not a fixed dose. MART works on the basis that as a patient’s need for reliever increases, the dose of their preventer medication also increases.

- If patients are still presenting with poor control, check the adherence to their new therapy, additionally, clinicians may want to carry out a FeNO test at this stage, as studies have shown it can be a useful marker for medicine adherence.<sup>28</sup> If patients show no improvements with the addition of LABA, consider stopping this line of medication. Consider the addition of a leukotriene receptor antagonist.
- Long-acting muscarinic antagonists (LAMA) may be considered as an add-on therapy in a combination (‘triple’) inhaler.<sup>18</sup>
- At this stage, if the patient is still presenting with poorly controlled asthma they need to be referred for specialist care.

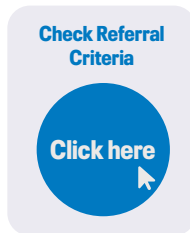
Figure 1: Summary of add-on therapy<sup>27</sup>



## Review and refer appropriate patients

Patients need to be referred to a specialist care team to access additional tests where appropriate. This will aid differential diagnoses and identify less-common comorbidities that are potentially contributing to the symptoms and exacerbations a patient is experiencing.<sup>18</sup> These specialist tests include additional pulmonary function tests, FENO, allergy testing, bone density scans, high-resolution chest computer tomography (CT) and potentially an echocardiogram.<sup>18</sup> The referral letter should include:

- Reason for referral
- Number of courses of steroids, antibiotics and how many times the patient was admitted to the hospital in the past 12 months
- The patients' current asthma treatment
- Specific triggers for the patient
- Smoking status
- Interventions and treatments initiated in primary care
- Details of their medication adherence (number of ICS containing inhaler prescriptions collected by the patient in the previous 12 months)
- Any other information deemed to be relevant



SPECTRA offers a referral template that has been designed in consultation with clinical champions which helps busy clinicians save time during the referral process. This template is a coded file

which facilitates the automatic collection of data and medication and pulls through relevant information onto the template for the clinician to edit, update, save, and send off for a referral. The template includes sections for lung function tests, blood tests, diagnosis, medication, patient biometrics and medication use (adherence).

## Treatment escalation to severe asthma centres (SACs)

Systematic assessment and multidisciplinary team (MDT) input in SACs can improve asthma control, quality of life, and reduce exacerbations, asthma related hospital admissions and oral steroid use, regardless of the use of biologics.<sup>30</sup>

The MDTs consist of doctors specialising in severe asthma, dieticians, psychologists, pharmacists, respiratory physiotherapists, specialist asthma nurses, and speech and language therapists. The severe asthma MDT also work closely with radiologists, ear, nose and throat specialists and allergists when needed.

Biologic therapies are a class of drugs that target specific pathways that lead to inflammation within the airways.<sup>31,32</sup> They are currently licensed for people with severe asthma who experience frequent exacerbations or are OCS-dependent.<sup>33</sup> Biologics are only initiated in SACs and select secondary care sites. Their initiation and ongoing use is monitored under the guidance of the severe asthma MDT.

# Useful resources

## Toolkit: Better outcomes for asthma patients and the planet

Oxford Academic Health Science Network provide a useful toolkit to assist clinicians in not only providing better care for asthma patients but also assisting the NHS goal of becoming net zero. This toolkit has links to information from identifying severe asthma in adults using SPECTRA to reducing the carbon footprint of inhaler prescribing.

[Find out more about Oxford Academic Health Science Network toolkit.](#)

External link, not produced by AstraZeneca

[Click here](#)

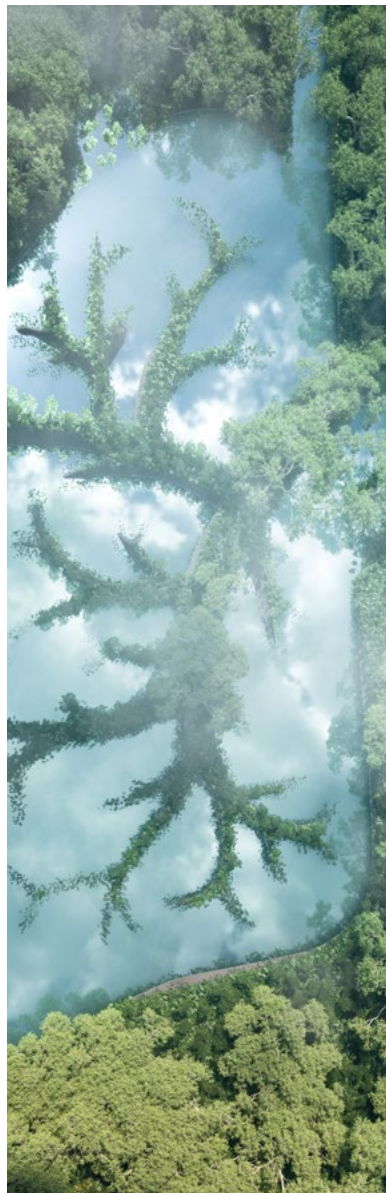
## Asthma structured medication review template

This template supports clinicians when reviewing asthma patients and guides users on the best practice for adherence review, inhaler technique assessment and other important topics. This review template is useful for pharmacists, advanced nurse practitioners and GPs. Import this template free of charge into GP prescribing systems (SystemOne and EMISweb).

[Learn more and import the Asthma structured medication review template.](#)

External link, not produced by AstraZeneca

[Click here](#)





## Analysis of the number of untreated biologic-eligible patients in the UK

Investigators sought to find out how many patients were eligible for biologics; they used a singular primary care network located in London to determine the quantity of biologic-eligible adult patients. They found 1.4% of all patients with asthma meet the criteria needed to initiate biologic therapy and yet currently 80% of these patients have not yet started biologic treatment.<sup>22</sup>

[Read the full paper from BMJ journals.](#)

External link, not produced by AstraZeneca

[Click here](#)

## The HASTE tool

A memorable tool useful for primary care clinicians undertaking asthma reviews. Answer the five questions indicated by the tool and if the answer is yes to all HASTE questions it is time to refer your patient.

[View the HASTE tool.](#)

External link, not produced by AstraZeneca

[Click here](#)

**H**

**A**

**S**

**T**

**E**



# SPECTRA: A practical guide

## Searches



Name	Population Count	%	Last Run	Search Type
613 Adult patients with Asthma on high strength ICS last 12m Cohort 1	49	1%	10-Aug-2022	Patient
614 Cohort 1 patients with "severe exacerbations" last 12m	8	18%	10-Aug-2022	Patient
615 Cohort 1 patients with >=2 issues of systemic corticosteroids L...	4	8%	10-Aug-2022	Patient
616 Cohort 1 patients with 6+ issues of reliever inhalers last 12m	8	18%	10-Aug-2022	Patient
617 Cohort 1 patients with poor symptom control or latest ACT <=3...	2	4%	25-Mar-2022	Patient
62 Adult patients with Asthma on all other ICS strengths Cohort 2	141	2%	10-Aug-2022	Patient
623 Cohort 2 patients with "severe exacerbations"	9	6%	10-Aug-2022	Patient
626 Cohort 2 patients with >=2 issues of systemic corticosteroids L...	3	4%	10-Aug-2022	Patient
629 Cohort 2 patients with 6+ issues of reliever inhaler last 12m	19	13%	10-Aug-2022	Patient

Snapshot of SPECTRA search results

SPECTRA have pre-created downloadable searches that once imported, integrate with the clinical system and become visible on all clinician's desktops. Following SPECTRA's identification of suspected severe asthma patients in your clinic you can easily access patients lists for review. You can individually review the patients in each cohort, checking their consultations, medications, problems, investigations, and care history diary in a few clicks.

## Alerts



**Review for Suspected Severe Asthma**

Suspected severe asthma patient with indicator(s) for review.

Asthma control test score 15 22-Apr-2021

3 Exacerbations in last 12m

2 or more issues of systemic corticosteroids

6 or more issues reliever inhaler in last 12m

Poor Symptom Control: Asthma causing night waking

Review and refer if appropriate.

**BA** Review for Suspected Severe Ast...

The alert as it appears on a clinician's system following the identification of a new suspected severe asthma patient.

Once SPECTRA is set up in your clinic you can enable alerts. These alerts aid clinicians to prompt a review of the patient record each time a patient meets the specified criteria. Make sure when setting up alerts you enable triggers to 'always run'.

## Referral Extract Template

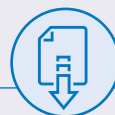


The referral extract template is a coded file that pulls through key data and medication into one document, saving you time in the process. You can edit, update, and save the file into the patient record. It can also be further utilised to conduct a review of the patient record.

The following sections are included in the referral template:

- Blood Tests
- Lung Function Tests
- Patient Biometrics
- Current Acute & Repeat Medication
- Exacerbation/Symptom Control
- Diagnosis
- Other Diagnosis

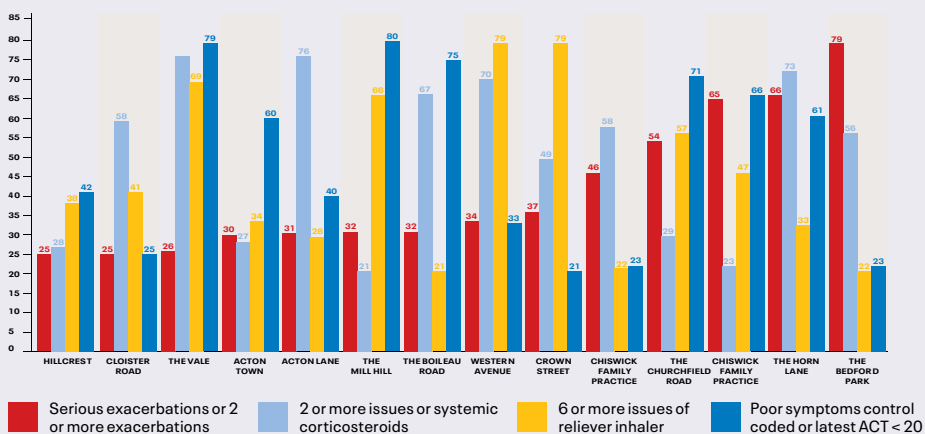
## Impact Reporting



Search Number	Search Title	Patient Numbers	
		Baseline	Follow-up
1a	<b>Cohort 1</b> patients with <b>serious exacerbations</b> (at least one hospital admission) OR <b>2 or more exacerbations**</b> . <sup>1</sup>	11	12
1b	<b>Cohort 2</b> patients who have had <b>2 or more issues** of systemic corticosteroids</b> . <sup>4</sup>	13	7
1c	<b>Cohort 1</b> patients who have had <b>6 or more issues**</b> or reliever inhaler	31	14
1d	<b>Cohort 1</b> patients with "Poor Symptom Control" coded** OR Latest ACT <20. <sup>1</sup>	11	3

Practice report example

### Cohort 2: Number of patients with indicators of uncontrolled asthma by practice



Patient numbers between 1 and 7 are suppressed, aligned to NHS digital's approach to suppression of small patient counts\*

PCN & cluster reports example

SPECTRA reporting functionality enables healthcare organisation to generate baseline and follow-up reports to measure the **impact** of the **review and referral** process across practices, primary care networks and broader healthcare organisation networks to enable risk stratification of adult asthma patients at a population health level.



AstraZeneca provides helpful instruction guides to follow when setting up SPECTRA in your practice. Once registered for SPECTRA you can access the instruction guides in the portal.

Additionally, contact the SPECTRA Support Team for assistance regarding any part of the SPECTRA process:

01332 546 909 | [support@suspected-severe-asthma.co.uk](mailto:support@suspected-severe-asthma.co.uk)

## Patient profile revisited

### What's next for Jane?

Jane's clinician started her on add-on therapy; after working their way through the stepwise process, Jane's asthma remained poorly controlled. This led Jane's clinician to refer her to secondary care and subsequently to a SAC where she was assessed by the MDT. The MDT diagnosed her with severe eosinophilic asthma and began to discuss specialist treatment with her.



# References

- 1 Asthma + Lung. What is severe asthma? Available at: <https://www.asthma.org.uk/conditions/severe-asthma/what-severe-asthma>. Accessed November 2023.
- 2 Cumella A, Renwick C. *Living in limbo*. Available at: <https://www.asthmaandlung.org.uk/sites/default/files/2023-03/living-in-limbo--the-scale-of-unmet-need-in-difficult-and-severe-asthma.pdf>. Accessed November 2023.
- 3 Ryan D, Heatley H, Heaney LG, et al. Potential Severe Asthma Hidden in UK Primary Care. *Journal of Allergy and Clinical Immunology: In Practice* 2021;9:1612-1623.e9.
- 4 Crowther L, Pearson M, Faruqi S, et al. Experience-based co-design of an implementation-ready intervention to improve adult asthma care in primary care. Available at: <https://www.hyms.ac.uk/assets/docs/research/wolfson/creating-connections/experience-based-co-design-of-an-implementation-ready-intervention-to-improve-adult-asthma-care-in-primary-care.pdf>. Accessed November 2023
- 5 Bloom Claudia Cabrera Sofie Arnetorp Karen Coulton Cassandra Nan Raif J P van der Valk Jennifer K Quint Cl. Asthma-Related Health Outcomes Associated with Short-Acting b2-Agonist Inhaler Use: An Observational UK Study as Part of the SABINA Global Program.
- 6 Chung KF, Wenzel SE, Brozek JL, et al. International ERS/ATS guidelines on definition, evaluation and treatment of severe asthma. *European Respiratory Journal* 2014;43:343-373.
- 7 Price D, Castro M, Bourdin A, et al. Short-course systemic corticosteroids in asthma: Striking the balance between efficacy and safety. *European Respiratory Review* 2020;29.
- 8 Asthma + Lung UK. Asthma care in a specialist centre. Available at: <https://www.asthma.org.uk/conditions/asthma/asthma-care-specialist-centre>. Accessed November 2023.
- 9 NICE. Asthma: What is the prevalence of asthma. Available at: <https://cks.nice.org.uk/topics/asthma/background-information/prevalence/>. Accessed November 2023.
- 10 Asthma + Lung. What is asthma. Available at: <https://www.asthmaandlung.org.uk/conditions/asthma/what-asthma>. Accessed November 2023.
- 11 Shah R, Hagell A, Cheung R. In association with International comparisons of health and wellbeing in adolescence and early adulthood About the report. Available at: <https://www.nuffieldtrust.org.uk/research/international-comparisons-of-health-and-wellbeing-in-adolescence-and-early-adulthood>. Accessed November 2023
- 12 Alsallakh MA, Rodgers SE, Lyons RA, et al. Association of socioeconomic deprivation with asthma care, outcomes, and deaths in Wales: A 5-year national linked primary and secondary care cohort study. *PLoS Med* 2021;18.
- 13 Mukherjee M, Stoddart A, Gupta RP, et al. The epidemiology, healthcare and societal burden and costs of asthma in the UK and its member nations: Analyses of standalone and linked national databases. *BMC Med* 2016;14.
- 14 Matsunaga NY, Ribeiro MAGDO, Saad IAB, et al. Evaluation of quality of life according to asthma control and asthma severity in children and adolescents. *Jornal Brasileiro de Pneumologia* 2015;41:502-508.
- 15 Stanescu S, Kirby SE, Thomas M, et al. A systematic review of psychological, physical health factors, and quality of life in adult asthma. *NPI Prim Care Respir Med* 2019;29.
- 16 Adams RJ, Wilson DH, Taylor AW, et al. Psychological factors and asthma quality of life: A population based study. *Thorax* 2004;59:930-935.
- 17 Gruffydd-Jones K, Thomas M, Roman-Rodríguez M, et al. Asthma impacts on workplace productivity in employed patients who are symptomatic despite background therapy: A multinational survey. *J Asthma Allergy* 2019;12:183-194.
- 18 GINA. *Global Strategy for Asthma Management and Prevention*. Available at: <https://ginasthma.org/wp-content/uploads/2023/05/GINA-Main-Report-2022-WMSA.pdf>. Accessed November 2023.
- 19 American Lung Association. Severe Asthma. Available at: <https://www.lung.org/lung-health-diseases/lung-disease-lookup>. Accessed November 2023.
- 20 Rupani H, Rose J, Cumella A, et al. P145 What is the severe asthma patient journey to biologic initiation in UK severe asthma centres? In: 'The Force Awakens' - The asthma patient experience. BMJ Publishing Group Ltd and British Thoracic Society; 2022:A159.2-A160.
- 21 LOGEX & IVM. *International Comparison Medicines Uptake.*; 2021. Available at: <https://logex.com/uk/international-medicines-uptake-comparator/>. Accessed November 2023
- 22 Dhruve H, Haigh M, Nanzer A, et al. Quantifying the unmet need in severe asthma: An analysis of the number of untreated biologic eligible patients in the UK. *Thorax* 2022;77:A185.
- 23 NICE. When should I suspect asthma? Available at: <https://cks.nice.org.uk/topics/asthma/diagnosis/diagnosis/>. Accessed November 2023.
- 24 Giraud V, Roche N. Misuse of corticosteroid metered-dose inhaler is associated with decreased asthma stability. *European Respiratory Journal* 2002;19:246-251.
- 25 Asthma + Lung UK. Spacers. Available at: <https://www.asthma.org.uk/symptoms-tests-treatments/treatments/spacers>. Accessed November 2023.
- 26 NICE. Scenario: Follow-up. Available at: <https://cks.nice.org.uk/topics/asthma/management/follow-up/>. Accessed November 2023.
- 27 Scottish Intercollegiate Guidelines Network., British Thoracic Society., Healthcare Improvement Scotland. British guideline on the management of asthma : a national clinical guideline.
- 28 NICE. Measuring fractional exhaled nitric oxide concentration in asthma: NIOX MINO, NIOX VERO and NObreath. Available at: <https://www.nice.org.uk/guidance/dg12>. Accessed November 2023.
- 29 Van Der Meer AN, Pasma H, Kempenaar-Okkema W, et al. A 1-day visit in a severe asthma centre: Effect on asthma control, quality of life and healthcare use. *European Respiratory Journal* 2016;48:726-733.
- 30 Redmond C, Heaney LG, Chaudhuri R, et al. Benefits of specialist severe asthma management: demographic and geographic disparities. *European Respiratory Journal* 2022;60.
- 31 Breedveld F. Therapeutic monoclonal antibodies. *The Lancet* 2000;355:735-740.
- 32 Castellí MS, McGonigle P, Hornby PJ. The pharmacology and therapeutic applications of monoclonal antibodies. *Pharmacol Res Perspect* 2019;7:e00535.
- 33 Shah PA, Brightling C. Biologics for severe asthma—Which, when and why? *Respirology* 2023.



**4 in 100 asthma patients have severe asthma<sup>1</sup>**



**75% of those on three or more courses of oral corticosteroids are yet to be referred<sup>2</sup>**



**Pressurised metered-dose inhalers are misused by 71% of patients<sup>24</sup>**



**SPECTRA: Identification of SusPECTed seveRe Asthma in adults, is a clinical system which has been developed to help identify adults with potential severe asthma, optimise treatment and, where required, refer them to severe asthma centres**