

# Supported self-management case history

## Childhood asthma and respiratory infection

In the second of our series of snapshot case vignettes aimed at illustrating self-management opportunities Dr Iain Small brings you the case of Chelcie. Three healthcare professionals have provided their feedback on the case. How would you respond?

### Asthma - Case 2

Chelcie is a 7-year-old girl who presents to the practice with cough, headache and fever. She has had this for 3 days, has no rash or signs of sepsis.

As an infant Chelcie had eczema, particularly in her flexures, although for the past 2 years her skin has improved. A clinical diagnosis of asthma was made by the practice nurse when she was 4 years old, after she was given a 6-week course of Clenil (pMDI and spacer) and her symptoms of exercise-induced cough and wheeze and night time cough improved.

This is the third time this winter she has been unwell in a similar fashion and she never really seems to have 'got out of the bit' for 3–4 months.

On examination Chelcie has a temperature of 38°C, rhinorrhoea, a few high-pitched inspiratory and expiratory rhonchi and her peak flow is well performed at 165 L/min.

Chelcie's mother asks a number of questions:

- Is this illness her asthma or is it infection?
- Would she benefit from antibiotics?
- Would she benefit from increasing her Clenil, or perhaps oral corticosteroids?
- How much of this could the family do themselves to save bothering the Health Centre?

As a practice, you have a very clear policy in favour of supported self-management, and a higher than average record of issuing written self-management advice. How would you respond?



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### Response

**Laura Rush, Primary Care Nurse, Somerset**

#### Is this illness her asthma or is it infection?

Chelcie appears to be suffering from a viral respiratory tract infection which has caused a flare-up of her asthma symptoms. In view of her temperature I would want to rule out any bacterial infection (throat, sinus, chest).

#### Would she benefit from antibiotics?

Antibiotics have no role in the treatment of a viral infection and they will only make a difference to a

bacterial infection. Taking antibiotics inappropriately can cause the development of antibiotic resistance and also side effects.

#### Would she benefit from increasing her Clenil, or perhaps oral corticosteroids?

To understand the severity of this episode, I would like to know:

- Best peak flow rate for comparison

- Pulse, respiratory rate and oxygen saturations
- Short-acting beta agonist (SABA) usage for this episode

Depending on clinical assessment, I would advise treating this episode with regular use of SABA and an increased dose of Clenil with reassessment in 3–5 days. Paracetamol would help to manage Chelcie's headache and temperature. I would give emergency advice highlighting the importance of urgent review with her GP if worsening and give emergency OOH details. In a more severe episode, I would discuss with a GP regarding a 3-day course of oral corticosteroids with review.

This is Chelcie's third wheezing episode this winter. If she is compliant with her Clenil with good inhaler technique, her asthma may be undertreated and I would advise increasing her preventer therapy by adding a long-acting beta agonist in a combination device with her inhaled corticosteroid (ICS) in line with BTS/SIGN 2016.

I would enquire about any changes triggering these episodes such as in lifestyle, socially, at home/family, any new pets or smokers in the household.

### How much of this could the family do themselves to save bothering the Health Centre?

To enable the family to manage similar episodes at home, a self-management plan could be discussed. This could include the Asthma UK child action plan to recognise and address worsening control personalised to include symptoms specific to Chelcie, highlighting when to increase SABA use and ICS, when to seek medical attention and what to do in an asthma attack.

The following would be discussed with the family and incorporated into the plan:

- Family's understanding of asthma, goals of treatment and dangers of poorly controlled asthma
- Chelcie's current asthma control, her goals and expectations
- Triggers
- Compliance with ICS
- Inhaler technique and use of chamber
- Annual flu vaccination
- Regular asthma reviews



### Response

**Dr Duncan Keeley**, Executive Committee Member, PCRS-UK

On what I know so far, Chelcie probably has asthma and this is an intercurrent viral infection on a background of poor control, but I want to know more. In recent months, has she been using her preventer inhaler? With a spacer and correct technique? What dose is she using? Has she had exercise-induced cough and wheezing between her recent illnesses? Does she get a loose cough and fever with her illnesses to suggest the possibility of recurrent chest infection? When she is wheezy, does salbutamol by spacer help? I want to be a bit careful about the diagnosis, get her to do a couple of weeks of peak flow monitoring, and consider a chest x-ray if the history and clinical course suggest something other than asthma.

Assuming I'm happy for now with the asthma diagnosis, I'd check her spacer technique. I'd restart the Clenil if she's stopped it or, if not, double it to a maximum of 400 µg twice daily for 2–4 weeks maximum to see if

this gets her better. I wouldn't use antibiotics or oral steroids.

What happens next depends on the 2–4-week review. If she's better – and the peak flow chart supports the asthma diagnosis – I'd gradually wind down the Clenil dose towards 100 µg twice daily. If things don't fit with asthma or she's no better, she may need further investigation or a referral.

Could the family do all this themselves? It was right to bring Chelcie in for assessment until an asthma diagnosis is clear and she is well. She needs a written self-management plan if she hasn't already got one. Once all's well, this kind of brief increase in her inhaled steroid dose to get symptoms back under control can be part of that plan – with a clear understanding that we have an open door if things aren't going right.



**Response**

**Katherine Hickman, GP, Leeds, PCRS-UK Conference Co-Chair**

Establish early on in the consultation their ideas, concerns and expectations. Explain that her symptoms are consistent with a virus. Currently her PEFr is satisfactory, but talk to them about the need to recognise viral illnesses as a potential trigger for worsening of Chelcie's asthma. There is nothing in the presentation that would suggest that antibiotics would be beneficial, and providing them with a TARGET Treating Your Infection – Respiratory Tract Infection (RTI)<sup>1</sup> could help aid this discussion and help them to recognise worsening signs and symptoms. Always consider differential diagnosis and be on the lookout for more serious underlying conditions such as pneumonia. Safety net by ensuring that, if Chelcie's cough is not better in 3 weeks, ensure she comes back. Ask about the possibility of an inhaled foreign body. If she has a persistent wet cough for more than 4 weeks she may have persistent bacterial bronchitis, a condition which might need a 2–4-week course of broad-spectrum antibiotics.<sup>2</sup>

A study by Taylor and Pinnock<sup>3</sup> established 14 potential support interventions for self-management. The authors state that not all these interventions are necessarily effective, appropriate or even evaluated in every long-term condition. A number of these, though, could be used with Chelcie.

This visit is a golden opportunity to establish what Chelcie and her mum understand about asthma, the reasons why she should be taking regular ICS, her inhaler technique and her compliance. Providing her with links to online videos of inhaler technique<sup>4</sup> could help to ensure that she knows how to take her spacer/MDI correctly if she is ever unsure. If she is missing doses, try and establish what is the trigger for when she remembers to take her inhaler and how can we help her establish a routine twice a day. Has Chelcie got an asthma management plan and, if so, is she using it? Again, this is an opportunity to go through it with her. By highlighting other useful resources including Asthma UK and their telephone advice line, 111, pharmacist, Babylon and/or PushDoctor, we can start to help them feel confident in safely managing her asthma outside of the clinical setting.

**References**

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2. Primary Care Respiratory Society. Inspiring best practice in respiratory care. <https://pcrs-uk.org/tools-help-cut-antibiotic-prescribing-children-coughs-and-rti>
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**Comments and summary from the editor**

**Dr Iain Small, Editor *Primary Care Respiratory Update***

Our experts have highlighted three important issues around what makes good, effective SUPPORTED self-management.

Firstly, ensuring that everyone involved is confident in the initial diagnosis. We know that concordance with pharmacological therapy has as its primary tenants a belief in the diagnosis, and a belief that the treatment will bring improvement. Reviewing the diagnosis in response to treatment is not only good clinical practice, but it allows the ongoing support that Chelcie and her family will need, helping them to understand the condition Chelcie has, and their role in its treatment.

Secondly, a knowledge of 'what to do next'. Our experts discuss the scope for patient-initiated therapy change in response to changes in Chelcie's symptoms, both for better and for worse.

Giving a family the confidence to recognise when to do this, and the power and support to go ahead will reap its own reward in symptom control, mitigation of future risk and reduced exposure to unnecessary treatment.

Finally, knowing what to do in an emergency. A child with asthma will be reliant on self/parent/guardian-initiated treatment interventions well ahead of any interventions delivered by health professionals. The recent headlines remind us YET AGAIN that delaying emergency treatment never ends well, and may end in tragedy. Taking time to encourage Chelcie's family to feel comfortable in administering emergency treatment (as part of her support team) and to have the same conversation at school, clubs, or wherever Chelcie may find herself at risk may be the safety net she needs.