



## Case Study – Paediatric Respiratory Patient

### Case Study Summary

Patient X is a 6 year old boy with chronic asthma under the care of the paediatric respiratory team at Pinderfields. Patient X is on daily inhaled Cortico-Steroids and uses Salbutamol daily.

Patient X has had multiple attendances to the Emergency Department, out of hours and GP with asthma symptoms. The attendances require acute treatment with oral Cortico-steroids and high doses of inhaled Beta 2 Agonists. Patient X has also had admissions to the paediatric high dependency unit and has missed multiple school days and weeks due to his asthma.

The asthma is affecting the patient's quality of life and quality of family life.

### Initial Actions

A home visit was conducted by the Mid Yorkshire Trust Asthma Clinical Nurse Specialist (CNS). The home is a rented housing association property. The visit found multiple areas of extreme damp in the home which consisted of thick black mould and spores.

The home was cluttered and his bedroom was small with lots of cuddly toys evident. The Mid Yorkshire Trust Asthma CNS met with school teachers and confirmed that the patient is missing school due to his asthma and using high amounts of Salbutamol at school.

### Examinations/ Tests

#### Physical examination results

The patient is too young for objective lung functioning tests.

The patient is wheezy when attending urgent care/primary care but does respond to asthma treatments when given.

#### Results of pathological tests and other investigations

Diagnosis of asthma has been made from history and response to treatment.

Bloods taken for specific IgE's. shows a high result for dust, cat hair, and mould.

### Treatment plan

Patient has been referred to the Paediatric Difficult Asthma Team at Leeds General Infirmary.

Advice given to the family on how to minimise exposure to cats and measures to try and reduce dust mites in the home. Discussions included reducing numbers of cuddly



toys, or washing/freezing any that are kept to kill any house dust mites. Information leaflets and links to national websites provided.

Discussions with the family have taken place regarding treatment of damp and mould in the home. Consent was provided by the patient's mother to refer to Wakefield Healthy Housing Pathway\* (part of Wakefield Council) for an assessment and further support to try and improve the indoor air quality in the home environment.

### Expected Outcome

The house would be assessed, and the mould and damp be treated.

Reduction in exposure to known asthma triggers would lead to improved asthma symptoms and control.

School attendance would be improved and there would be a reduction in Salbutamol use and visits to primary, secondary and out of hours care.

Quality of life would be improved.

### Actual Outcome

Family have taken measures to reduce dust, including using anti-allergy bedding, regular hoovering and damp dusting.

Housing has been assessed and confirmed as damp.

Treatment of the mould and damp has started. The work is not yet complete and is ongoing.

The patient is already using less Salbutamol and has had zero attendances to the Emergency Department or Primary Care to date.

The patient is now sleeping through the night and school attendance is improving.

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### \*Wakefield Healthy Housing Pathway

Wakefield Council were given a grant to set up a service to provide support and warm housing. There is a big drive nationally to improve indoor and outdoor air quality, and this is identified also in the National Bundle of Asthma Care for Children and Young People. Mid Yorkshire Asthma CNS worked with Wakefield Council to provide information regarding the effects of poor indoor air quality on children's health. The Healthy Housing service was then developed to ensure children and young people, elderly and those whose health conditions are made worse by cold or damp housing can be referred to a service to provide support.

The pathway is planned to be reviewed in December.

Patient X was amongst the first to go through this pathway.

Pathway PDF: [277133-healthy-housing.pdf \(yhphnetwork.co.uk\)](https://www.yhphnetwork.co.uk/277133-healthy-housing.pdf)