

Improving clinical outcomes and quality of life of children and young people with asthma in Feltham and Bedfont Primary Care Network

Pharmacy-led asthma consultation clinics

Background

Following the Public Health England report on preventable deaths of children with asthma attacks, North West London Integrated Care Board (NWL ICB) launched a Task and Finish group to improve the asthma care of children and young people. Feltham and Bedfont Primary Care Network (PCN), one of the 5 PCNS in the Hounslow Borough, participated in this local initiative by developing a project to identify and support those at risk.

The PCN has the highest deprivation index with 10.5% of the population on CORE20 (most deprived 20% on the national population) with the Borough's average being 7.1%. We know from Public Health data that the PCN has high rates of asthma and that asthma disproportionately affect those in the CORE20PLUS5, possibly through links with air pollution, inadequate housing, smoking etc. This was therefore a clear opportunity to tackle health inequalities in our area.

Aims

To improve clinical outcomes and quality of life of children and young people with asthma in Feltham and Bedfont PCN.

Objectives

To proactively identify children and young people at risk of asthma deaths/attacks due to uncontrolled asthma and invite to a face-to-face asthma review.

Approach

The current literature indicates that salbutamol (SABA) over-reliance, recurrent asthma exacerbations and asthma-related hospital attendance are key risk factors for asthma-related deaths. We used SystmOne searches to identify those aged 5-18 years old with 6 or more SABA inhalers and/or 2 or more oral steroid courses over the last 12 months. Secondary care provided us with data on patients with at least one hospital admission, A&E or urgent care centre (UCC) asthma-related attendance.

We invited patient and families for a face-to-face 30-minute holistic asthma review. Social prescribing link workers supported those with poor engagement, difficult to reach or not brought to multiple appointments.

Costs

Two senior pharmacists (Band 8a) were upskilled to be able to deliver paediatric asthma reviews. Each required approximately 18 hours of training followed by 6 supervised clinic sessions (2 hours each) by a community paediatric asthma nurse. Pharmacists then independently delivered 2 afternoon clinics per month each, with a total of 158 appointments between June 2023 and June 2024.

There was no need for additional equipment to be purchased as the clinic rooms were already equipped to deliver routine asthma reviews. Placebo inhalers and peak flow meters were provided by pharmaceutical companies for free.

Social prescribing link workers spent an hour each week engaging with those not attending appointments while administrators spent four hours per month to invite and book patients in the clinic.

The project was funded by PCN resources. A rough estimate suggests that this use of ARRS roles is equivalent to an estimated opportunity cost of less than £5,000 per year, equivalent to £51 per young person seen, as explained on the following table.

PCN Staff	Staff time (hrs)	Hourly rate (£)	Subtotal (£)
Senior Pharmacists (Band 8a)	18hrs x 2 staff = 36 (training)	26	936
Community asthma nurse (Band 8a)	12hrs x 2 staff = 24 (supervising)	26	624
Senior Pharmacists (Band 8a)	0.5 hrs x 158 appointments = 79 (clinic time)	26	2,054
Social Prescribers (Band 5)	1h x 52 weeks = 52	14.5	754
Care co-ordinators (Band 4)	4h x 12 months = 48	12.9	619
Total:			4,987
Cost per patient:			51

Based on the King's Fund report, attendance to urgent care centre for the lowest level of investigation and treatment costed on average £86 per patient in 2022/23. NHS England estimated that the average nine-minute GP face-to-face consultation costed £42 in 2021/22.

The cost of the project are dwarfed by the cost of NHS services that have been avoided as a result of the intervention, which presents a compelling case for return on investment, without even considering the improved quality of life for patients and their carers or families.

Planning and delivery

We upskilled two senior independent prescribing pharmacists to conduct asthma consultations in children and young people, including safeguarding training, completion of the Tier 3 National Capability Framework and review of local and national guidelines.

Pharmacists were then supported by an experienced asthma paediatrician nurse over 6 sessions before being signed-off as competent.

Even though the clinic was pharmacist-led, we were supported by the wider team, including community team and GPs. Access was provided to a monthly multidisciplinary team meeting led by secondary care to discuss complex cases.

Evaluation and monitoring

During the project design period, we set the following key performance indicators to measure at 3, 6 and 12 months post review.

- Number of asthma review completed
- Number of medication changes
- Number of referrals to other teams
- Number of SABA inhalers/oral steroid courses prescribed 12 months post review
- Number of asthma-related A&E/UCC attendances 12 months post review.

Outcome

We reviewed 110 at-risk children over 12 months, providing a holistic asthma review. We educated patients and families on asthma, the differences between inhalers, importance of adherence and the correct use of different inhaler devices/spacers. We supported families with co-morbidities such as obesity, allergic rhinitis, reflux, anxiety and signposted to relevant services (Healthy Hounslow, Hounslow Youth Counselling, BeeZee Bodies). All patients were provided with an updated asthma action plan and education on recognising early symptoms of worsening asthma to request a review.

We offered almost 70 follow-up appointments to ensure asthma was improving after initial intervention and made 40 medication changes (dose titration) when that was required.

Discussion also included identifying environmental factors contributing to asthma symptoms (pollution, passive smoking, triggers) and management of those. Our social prescribing team supported three families with house mould and was in contact with a total of 12 families to increase their engagement with asthma management.

Impact

We have achieved 45.3% reduction in SABA prescriptions 12 months after review which links to reduced symptom burden and better quality of life. Tackling SABA overreliance aligns with both the drive to improve asthma control and the drive to reduce the environmental impact of asthma care. There was also a significant reduction in use of oral steroids (89.5%) and attendance to UCC/A&E (81.8%), leading to better use of the NHS resources.

Additional actions

The launch of this project has allowed us to build stronger relationships with the local stakeholders (local council, schools, other health services). We now work closely with community and hospital services to better co-ordinate the care of children with asthma. Alongside the clinic, we delivered educational sessions to families and children at local schools and participated on the national #AskAboutAsthma Campaign in 2023 and 2024 to raise awareness.

Next steps

We are pleased to see the numbers of children in the very high-risk group (over 6 SABA in 12 months) reducing in our PCN. As the project has been successful, we have secured more funding for another year and we have now expanded the system searches to include those at high-risk (over 4 SABA in 12 months).

Meropi Mastropetrou

Senior Clinical Pharmacist

Feltham & Bedfont Primary Care Network

West London NHS Trust

ACEing Asthma; a health and housing partnership to improve outcomes for children and young people with asthma

ACEing Asthma is a partnership initiative between health, housing and the voluntary sector working to improve mutual understanding and find a way to work together to achieve a shared goal. That goal is to support children with asthma living in social housing to live well and reduce their risk of adverse health outcomes.

Using a community assets-based approach, the program aims to optimise asthma control and mitigate housing and wider socio-economic factors that increase asthma risk in children.

Program Partners:

- Walsall Housing Group (whg)
- Black Country Integrated Care Board
- Walsall Healthcare NHS Trust
- Walsall Together Integrated Care Partnership
- George Coller Memorial Fund

The value of this project was recognised nationally by reaching the [2024 HSJ finals](#) in the Early Intervention and Prevention for Children, Young People and Families category.

Funding:

The cost for 200 children and their families to receive the full support of the ACEing asthma program for 12 months is c. £30,000. The primary costs are human resource, and the ACE offer which, to date, have been borne by whg. Further funding from health has been added recently to support the scale up of the project. Other costs, which include support for education and training, guidance of the project steering group and communications with healthcare teams, are absorbed as business as usual within the partner organisations.

The George Coller Memorial Fund is acknowledged and thanked for their support to fund self-management packs and activities at community education events.

Data collected between **Mar 2023-Nov 2024** will be presented in bold throughout this case study.

293 children from 113 families have benefitted from the ACEing Asthma Program

Asthma is the most common medical condition to affect children; further, it is a long-term medical condition with significant levels of morbidity and rates of avoidable mortality in this age group. Children with asthma living in poverty, from some minority ethnic backgrounds, and those living in deprived areas experience the highest disease burden and are therefore a priority for additional support. Drivers for this prioritisation include the National bundle of care for children and young people with asthma ([NHSE 2021](#)), the Core20PLUS5 for children and young people ([NHSE 2022](#)) and [Awaab's Law \(2023\)](#).

59 families were living in homes where damp/mould was identified – 100% were prioritised for repairs, 3 families were relocated.

The causal relationship between health inequalities and, both the development and exacerbation of asthma in children indicated in evidence-based literature, is complex and multifaceted. Alongside disease specific factors such as epigenetics, diagnostic difficulties and disease severity, it is both housing and other socio-economic determinants of health that play a key part in health-related outcomes for children with asthma. The link between asthma and an increased risk of death in damp, mouldy homes is beyond doubt and therefore projects and interventions which align health and housing make perfect sense, particularly when elements to address wider socio-economic determinants are also included.

Children in 97% of families were living in poverty

Assisting Children to Excel (A.C.E), a pre-existing whg program to support children living in poverty, was adopted and tailored to create an asthma focussed program harnessing the power of community champions and social prescribing to support children and families with self-management of asthma.

The intervention is delivered by whg's team of Community Champions and Social Prescribers who themselves are social housing customers with lived experience of health inequalities. They are trained and supported by NHS specialists and form a human bridge between families and local services. The Investing in Breath Report highlights that supported self-management has been shown to improve asthma control and reduce asthma attacks/hospitalisations thus improving quality of life, reducing risk of adverse health outcomes and reducing healthcare costs ([Asthma + Lung UK 2023](#)).

159 asthma assessments were completed and 100% were provided with personalised self-management support

The program:

- Child with asthma in target area identified
- Prioritised for housing repairs where damp/mould identified
- Family invited to the program
- Asthma intervention delivered
- ACE wider socio-economic determinant support provided

The asthma intervention:

- Delivered by [CYP Asthma Tier 1 trained](#) Community Champions
- Asthma Control Test completed [low scores escalated to CYP Asthma Team/GP]
- Provided with asthma self-management pack and signposted to accessible information
- Supported to access appropriate healthcare
- Invited to community asthma education events
- Supported to attend healthcare appointments
- Parents offered Paediatric First Aid course

The whg ACE matrix of support:

- Ongoing community champion support for the family
- Winter fuel vouchers
- Financial advice and support for Act on Energy
- Vouchers for food and bedding
- Clothing vouchers for winter coats and shoes for children
- Peer support via inclusive community activities e.g. Kindness Pop-Up Shops

This quote from a parent illustrates the day-to-day benefit it has for families:

“They did a full check on my house for damp and mould, but it didn’t have any – which was a relief. They also gave me an information pack, which was useful, with extra spacers for the children, and warm winter coats and shoes, which is really helpful for me because we’re a low-income family and it just prevents me from worrying to make sure we’ve got the warm clothes to properly cover their chests.”

Next steps for ACEing Asthma:

Grounded in committed strategic leadership from whg, the Black Country Integrated Care Board and Walsall Together Integrated Care Partnership, the program continues to strengthen, growing and adapting in response to data driven local need.

Reach is spreading locally with the development of an integrated primary care pathway and across the Black Country system via the place based Integrated Care Partnerships and the Black Country Health and Housing Forum. Our ambition for this low cost, high value, early support and prevention program is for it to be available to all children with asthma at risk of health inequality in the Black Country. We are further applying our learning from the project to work with health and housing partners nationally to extend reach and increase accessibility to this innovative approach through the creation of an [Asthma Friendly Homes scheme](#).

Strategically we are working to:

- Scale up the program in Walsall to include pathways with primary care and school nurses
- Include asthma in our local authority child neglect strategy
- Share our learning and experience to support and kick start similar programs across the Black Country and nationally
- Develop a national Asthma Friendly Homes program in partnership with a national oversight group

Viv Marsh

Black Country Integrated Care Board

Implementing learning through a whole systems approach in Surrey following childhood deaths from asthma

1. The Vision

In Surrey there was a commitment across the local system to implement the learning from children who had died from asthma. Reducing admissions for wheeze and improving management of asthma in children was a priority and in January 2020 we launched our asthma initiative with a system wide Child Death Review (CDR) Team conference. Following this, a multi-professional working group, jointly led by Children's Commissioning, developed our Surrey Asthma Toolkit. The toolkit aims to advise and support Surrey's children and young people (CYP), parents, carers, and clinicians on pathways for improving asthma control and reducing symptoms, whilst providing a consistent message to all; it is available on the Heathy Surrey website – [Asthma Toolkit | Healthy Surrey](#)

2. Initial System-Wide Improvements

Following the event in January 2020 colleagues within the Integrated Care System (ICS), with support from the CDR team initiated and implemented many other asthma initiatives including:

Online primary care training, this included the creation of a primary care specific webinar, to improve knowledge on referral pathways and paediatric asthma prescribing. The webinar was led by an asthma specialist from a neighbouring ICS, demonstrating our collaborative working with other ICS where we learnt from others and shared good practice.

Access to smoking cessation offering support and effective referrals for parents and older teenagers.

Asthma Friendly schools was developed and implemented as an award which enables schools to achieve Asthma Friendly school status upon completion of defined criteria. 22 schools are currently Asthma Friendly in Surrey as part of Surrey Healthy Schools, which is a commitment to promoting personal, social and health development across the local authority.

Identification of geographical areas within Surrey with the highest asthma admissions. As partners across the ICS, we identified the areas within Surrey with the highest number of admissions due to asthma/wheeze, along with the highest levels of deprivation and poorest air quality.

ICS Child and Young People's Asthma Network. As an ICS we recruited an ICS Clinical Lead and an ICS Project Manager to help implement the Asthma Bundle. We also established our ICS CYP Asthma network and agreed how this will link with our adult respiratory network.

Pilot on implementation of 48-hour asthma reviews at one acute trust, this work identified the benefits of reviews and the lack of asthma action plans and has led to service improvements.

3. National Bundle of Care for Children and Young People with Asthma

In 2022 Surrey was successful in becoming one of the pilot areas for implementation of the 'National bundle of care for children and young people with asthma' and in August 2022 the Senior Specialist Children and Young Peoples Asthma Practitioner was appointed followed by the Specialist CYP Asthma Practitioner in January 2023.

Supporting several of the components in the bundle, these are some examples of further work which has taken place:

Supporting GPs - GP training is available on the Surrey Training Hub – [Asthma : Surrey Training Hub](#). There have been role modelling clinics with local GP practices on how to effectively manage paediatric asthma patients, along with implementation of 'The Surrey Downs Project & Risk Stratification Approach', which is using a definitive search tool to identify Children and Young People at highest risk of asthma attack/death. This service takes referrals from any surgery in Surrey Downs and from Epsom Acute Hospital Emergency Department and is provided by a local GP confederation, Surrey Medical Network and GP Health Partners Ltd. They also provide Children and Young People Respiratory Clinics, twice a week at Leatherhead Community Hospital and one clinic a fortnight at Leith Hill Practice in Dorking. Surrey has also recently been awarded funding for a Community Diagnostic Centre in Woking, in collaboration with North West Surrey Integrated Care Services (NICS) GP Federation.

System working – including further developing the Asthma Network has meant that here is now a joint children, young people and adult respiratory group. **Working closely with medicines management**, who have been key to developing local guidelines on prescribing and paediatric asthma management. **A Post Asthma/Wheeze Discharge Bundle Task and Finish Group** have agreed processes locally and a Primary Care Discharge flowchart ratified. There is currently a slide deck preparation in progress to present to Acute Trust governance groups.

Learning – Parents/ Carers and Schools - There have been several webinars for parents/carers and schools across the locality, which have supported parents/carers and professionals to manage their children/pupil's asthma appropriately, including when to seek

further advice from healthcare professionals. **Conferences** - There have been two multi-agency conferences which were held in June 2023 and September 2024, which included speakers on **Air Quality** - the Surrey asthma team have made connections with and continue to attend the Surrey Air Alliance meetings.

Inequalities in health - the team have made links with the local Core20Plus5 group and are working to support looked after children, young people, foster carers and staff, through training and information sharing. **Partnerships with Housing** have included working to promote a Damp and Mould leaflet within Primary and Secondary care, along with collaborative working with housing representatives.

The pilot comes to an end in July 2025, and we are currently seeking funding to ensure the job roles can become embedded within the system, to ensure ongoing impact of this work on outcomes for children and young people in Surrey.

Further information is available at [Surrey Heartlands CYP Asthma - Beating Asthma Together - FutureNHS Collaboration Platform](#)

Surrey Heartlands Integrated Care System, NHS Surrey Heartlands team:

Nicola Mundy, Child Wellbeing Professional and Lead for Learning from Child Deaths

Fiona Whitaker, Head of Commissioning and Transformation Acute Paediatrics and Maternity,

Suzanne Bailey, ICS Children and Young Peoples Clinical Respiratory Lead/Senior Specialist CYP Asthma Practitioner

Lisa Cook, Specialist CYP Asthma Practitioner

Introduction of Salbutamol and Adrenaline Autoinjectors in Leicester and Leicestershire schools

Schools have a legal duty to make arrangements for pupils with medical conditions (including those with food allergies) under the Children and Families Act 2014. In 2017, the law was changed: the Human Medicines (Amendment) Regulations 2017 to allow schools to obtain, without a prescription, “spare” AAI devices for use in emergencies, if they so wish. Many schools were unaware of these changes and therefore we started the project to improve safety for children with allergy in schools. We developed a strategy to provide local schools with access to and education to support the use of generic spare Adrenaline Autoinjectors (AAIs)

Through charitable donations, we have been able to implement generic spare AAIs in 76 secondary schools in 2021/22. The project gained further momentum, and in 2023/24, 213 primary and secondary schools received spare AAIs, in addition to a Salbutamol Inhaler and single use cardboard spacers within Leicester City and Leicestershire County Councils. In 2025, 458 schools (every school in the region) will receive AAIs, Salbutamol and spacers for one year only and then longer term funding will be required. The main cost are the AAIs and this project will cost £48,600 per annum

We have already seen a positive impact from this work when we surveyed participating schools in 2023.

- emergency use of the spare AAIs in schools were reported on 4 occasions.
- In two of these cases the individuals involved did not have access to an AAI and therefore the availability of a spare AAI in school was considered life-saving.
- At least 8 schools have used the generic Salbutamol inhalers at least once with some schools reporting more frequent use. Whilst this may be due to expiry or delay in replacing existing inhalers it supports the need for this provision.

Implementing generic salbutamol and AAIs in schools has been down to removing barriers such as cost but also providing education and support through dedicated online resources to raise anaphylaxis awareness and staff confidence in recognising this life threatening condition and providing prompt and lifesaving treatment.

The longer-term success of this project relies on securing a dedicated funding stream from commissioners within the Integrated Care Boards and is aligned with MHRA guidance on access to AAIs.

Currently, guidance recommends carriage of 2 AAIs per individual at all times. The total numbers prescribed will depend on the age of the child and ability to carry and self administer the AAI. Whilst primary school aged children would require 2 dedicated prescribed AAIs to be held in a school, the availability of the generic pen would provide an additional layer of safety if the prescribed devices was not immediately accessible or expired.

In secondary school, children are likely to only require 2 prescribed AAIs to carry with them at all times. The provision of a generic AAI in school provides an additional layer of safety but also a potential cost saving as this can mitigate the need for an additional prescribed AAI to be available at school for those children already prescribed an AAI.

Finally a generic AAI can be utilised to treat anaphylaxis in a person who has not been prescribed an AAI following emergency service guidance.

We plan to try and fundraise amongst schools to try and offset this annual cost.

Dr Gary Stiefel

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Childrens allergy Service

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Allergy Emergency Bags in Schools- Wandsworth and Merton

Background

Karanbir Cheema and Nasar Ahmed both tragically died from anaphylaxis in London schools. The 'Spare Pens in Schools' initiative was brought about in 2017 allowing schools to purchase their own spare adrenaline autoinjector (AAI) devices. In 2019, members of the Allergy team at St Georges Hospital surveyed all local Primary and Secondary schools in Wandsworth and Merton about their policies around managing food allergies in schools. We found that only around one third of schools had purchased the spare AAIs, and that there was a need for further education and training to keep children with food allergies safe in our local schools.

How it was developed

We put together a business case for local CCGs for funding to provide spare AAIs, along with annual training in managing food allergies in schools and the recognition and treatment of allergic reactions to all schools in these boroughs. The case was put together with the help of hospital and community pharmacists, the prepack pharmacy team, school nurses, local schools and GPs. The cost for 2024-25 was £25,760 and includes the cost for collection of bags due to expire alongside delivery of new bags.

The business case was approved in 2020 (amidst the pandemic) and the programme was rolled out to the 143 local Primary and Secondary schools in September 2020. Each school is provided with an 'Allergy Emergency Bag' containing two AAIs (2 x 300mcg devices in secondary schools and 1x 150mcg and 1 x 300mcg device in Primary Schools). Larger schools and schools working across different sites are provided with additional bag/s. Annual training is provided to school nurses and the first aiders in schools via a face-to-face training session and an online training session each September. The online session is recorded and a private link sent to all schools for access to anyone unable to attend the live sessions.

What has it achieved?

The programme is now in its fifth year and has been received well by schools. In Sept 2024, approximately 50 staff attended the in-person training, approximately 60 attended the online training and the recorded version has been viewed 299 times.

A survey of those that have attended (n=51) found that 98% felt that the training improved their understanding of allergies and anaphylaxis and, following the training, 94% felt

confident or very confident about that they knew how and when to administer an adrenaline autoinjector (AAI) if a child in school was having anaphylaxis.

The spare AAls have been used on multiple occasions.

Case examples:

September 2024:

A 15 year old girl with multiple known food allergies suffered from anaphylaxis after eating a school lunch. Her own AAls had expired and therefore the first aider administered the spare AAI. She required a second spare AAI and then was taken to hospital and made a good recovery.

November 2023:

A 14 year old boy with no known food allergies suffered from anaphylaxis after eating a biscuit containing nuts. He was given the spare AAI and an ambulance was called. He made a good recovery and was seen in Allergy Clinic afterwards and found to have nut allergy.

Moving forward

In Primary schools, we are considering the cost savings and safety of removing the prescribed AAls from schools and ensuring that enough Allergy Emergency Bags containing spare AAls are available at each school to ensure the safety of children with food allergies.

In Secondary schools, we advocate that all children with food allergies should carry their own emergency medications (including spare AAls, if prescribed) and that schools are provided with enough Allergy Emergency Bags containing spare AAls to ensure the safety of children with food allergies.

Dr Rosy Wells

Paediatric Allergy Consultant

Trust SuppoRTT and LTFT training champion

St George's University Hospitals NHS Foundation Trust