Health Innovation Network

Working with Accelerated Access Collaborative

Health Innovation Oxford & Thames Valley

Asthma Biologics Pathway Transformation Projects Summative Evaluation

National Pathway Transformation Fund Summary Report

November 2023

Contents

Programme Background

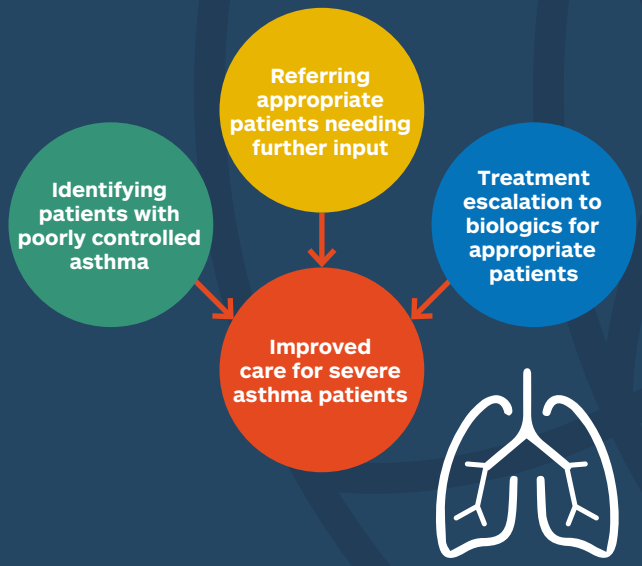
Asthma Biologics (AB) were selected as part of the Accelerated Access Collaborative (AAC) Rapid Uptake Products programme (RUP) in September 2020.

It is estimated that in England over 60,000[1] patients currently suffering with severe asthma would benefit from an asthma biologic. However, prescribing data suggests that only ~11,000 of these patients are being treated with biologic therapies.

This programme covers four high-cost biologic treatments approved for patients with Severe Asthma. These treatments are, Reslizumab, Benralizumab, Mepolizumab, Omalizumab and Dupilumab.

The advent of biologic therapies for severe asthma and the formalisation of specialised severe asthma services and networks (**"Severe Asthma Services in Adults" - commissioning document A14/S/B**) has hugely improved outcomes for patients who are able to access these services.

Aligned with clinical priorities in the **NHS Long Term plan on improving outcomes for patients with respiratory disease**, the Asthma Biologics Programme aims to support improvements in pathways and practices to ensure more patients receive timely specialist care for their severe asthma and access asthma biologics



[1] NHSE BlueTeq data 2021

Pathway Transformation Funding

Funding announced by government in July 2017 was available through the new Pathway Transformation Fund (PTF) to help NHS organisations integrate the rapid uptake products into everyday practice. Delivered with the support of the Health Innovation Networks (HINs) which are now known as Health Innovation Networks, and in partnership with the rapid uptake product suppliers, the PTF sought to improve access to these RUP products.[1]

Phase 3 of the PTF supported the 2021/22 Rapid Uptake Products (RUPs): Biologics for treating severe asthma: Reslizumab, Benralizumab, Mepolizumab, Omalizumab and Dupilumab. Through helping providers overcome practical obstacles to introducing these products, such as:

- support set-up costs such as training of staff;
- pathway redesign and/or business support expertise;
- providing funding for specialist nurses and clinical staff needed to implement a new part of the procedure (e.g. nurse educator, community respiratory champion, physician associate and others);
- covering double running costs;
- address health inequalities;
- support early identification in the primary care;
- improve population health

[1] https://www.england.nhs.uk/aac/what-we-do/how-can-the-aac-help-me/pathway-transformation-fund/

Project Sites

In Wave 3 of the PTF projects, 9 sites received AAC investment funding amounting to £984,000 to deliver and improve uptake of Asthma Biologics RUPs

PTF site	Health Innovation Network (HIN)
Oxford University Hospitals NHS Foundation Trust (OUH)	Health Innovation Oxford & Thames Valley
University Hospital Southampton NHS Foundation Trust (UHS)	Health Innovation Wessex
Guy's and St Thomas' NHS Foundation Trust (GSTT)	Health Innovation Network South London
Mid Yorkshire Hospitals NHS Trust (Mid Yorks Hospitals)	Health Innovation Yorkshire and Humber
University Hospitals of North Midlands NHS Trust (UHNM)	Health Innovation West Midlands
Nottingham University Hospitals NHS Trust (NUH)	Health Innovation East Midlands
Somerset NHS Foundation Trust (SFT) and Bristol Royal Hospital for Children (BRHC)	Health Innovation South West and West of England
Liverpool University Hospitals NHS Foundation Trust (LUH)	Health Innovation North West Coast

* The Health Innovation Network was known as the Academic Health Science Network (AHSN) at the time when Asthma Biologic programme was commenced

Themes

Full list of themes and project sites available in Appendix 1 - Themes

1. Pathway re-design

- Integrated asthma pharmacist to provide early identification and direct referrals to severe asthma centre while optimising and improving adherence in those patients not suitable for biologics
- Specialist asthma pharmacist to provide in-reach to integrate with secondary care referring services
- Mobilising secondary care resources to manage the increase in referrals
- Reviewing and optimising asthma management
- Introduction of new referral criteria and use of the digital tools (SPECTRA, eHealthscope, RUBIC and others)
- Reducing the geographical barriers to accessing asthma biologics, by offering in-reach/ local service provision

2. Building capacity through new roles creation

- Nurse-educator
- Respiratory community champions
- Physician associate
- Asthma specialist nurse
- Adherence lead
- Clinical pharmacists
- Integrated respiratory consultants
- Biologics co-ordinator
- Community asthma nurse

3. Improving multi-disciplinary teams (MDT) and networks

- Establishment of virtual MDTs
- Creation of regional MDTs
- Direct and personal contact between GPs and Severe Asthma Centre and PCN (including children and young people (CYP) services)
- Community MDTs, integrated work between primary and secondary care

4. Improving homecare

- Establishment of home monitoring digital solutions (NuvoAir)

5. Early identification of uncontrolled asthma patients in primary care

- A bespoke case-finding and referral tools to support early identification of uncontrolled patients and ensure timely referrals (SPECTRA, eHealthscope, RUBIC and others)
- Improving referral accuracy: a video highlighting importance of a good referral and how to refer

6. Educational training

- Training on patients identification, diagnosis and asthma care management in primary and community care settings
- Severe asthma MDT meetings provided education for secondary care teams
- Bespoke face-to-face and on-line training sessions delivered at practice, PCN and ICB levels
- An online self-directed free-to-access e-learning module

7. Patient education

- Asthma self-management videos in different languages
- Videos and podcasts about biologics therapy
- Patient information leaflets

8. Health inequalities

- Selecting areas of highest deprivation and inequality
- Taking a local PCN-based severe asthma in-reach approach

9. Other resources

- Cost-benefit analysis

Synopsis of Projects

9 applications to the NHS PTF, to help NHS organisations deploy innovative ideas and overcome barriers to the adoption and integration of RUPs into everyday practice, have been successful across the HIN Network.

The nine awards comprise the following projects:

Oxford HIN/Oxford University Hospitals NHS Foundation Trust (OUH)

Integrated Severe Asthma Collaborative (ISAC)
Streamlining severe asthma care by creating an integrated severe asthma care provision: clinical pharmacist and respiratory consultant

Wessex HIN/University Hospital Southampton NHS Foundation Trust (UHS)

Development of a novel asthma biologics pathway co-ordinator role within the severe asthma service

Health Innovation Network/Guy's and St Thomas' NHS Foundation Trust (GSTT)

Respiratory virtual clinics for adolescents with uncontrolled asthma
Hospital specialist clinicians (a consultant physician and consultant pharmacist) guide the primary care teams through a systematic review process covering the latest guidelines and evidence in asthma diagnosis and management for adolescents

Development of an online self-directed learning module to support inhaled corticosteroid (ICS) adherence in asthma in primary care
For pharmacists, secondary care and GPs promoted the use of biologics medication and improved referrals into secondary care and adherence for patients

Yorkshire and Humber HIN/ Mid Yorkshire Hospitals NHS Trust (Mid Yorks Hospitals)

Inequality of asthma management
The project concentrated on the area surrounding Mid Yorkshire Hospitals NHS Trust; and specifically looked at Wakefield CCG and North Kirklees CCG. Results and learning from the project informed the wider network and ensured that equity of access is part of the Yorkshire ethos

West Midlands HIN/University Hospitals of North Midlands NHS Trust (UHNM)

Improving access to biological treatment through significant redesign of care pathways for patients with severe refractory asthma

Synopsis of projects

East Midlands HIN/Nottingham University Hospitals NHS Trust (NUH)

Overcoming current barriers to introducing asthma biologics
Community nurse based reviews and consultant-led community MDT in Lincolnshire. Increased capacity in primary (nurse/care navigator), secondary (pharmacist) and tertiary care (increased consultant and nursing time) in Nottinghamshire

South West and West of England HINs/Somerset NHS Foundation Trust (SFT)

Improve access to biologic therapies and reduce waiting times for patients (adults) with severe asthma
The South West Severe Asthma Network, from Cornwall to Swindon, works with all hospitals to create a common pathway for managing asthma care streamlining the process of referral to severe asthma centres and access to asthma biologic therapy

South West and West of England HINs/Somerset NHS Foundation Trust (SFT)/Bristol Royal Hospital for Children (BRHC)

Improve access to biologic therapies and reduce waiting times for patients (Children and young people) with severe asthma

HIN for the North West Coast / Liverpool University Hospitals NHS Foundation Trust (LUH)

Accelerating access to specialist care for asthma patients
Innovative pathway transformation through a quality improvement approach to monitor progress regularly to identify patients eligible for biologics and build capacity

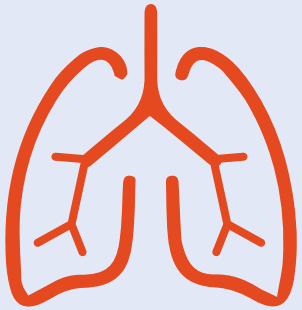
Integrated Severe Asthma Collaborative (ISAC)

Streamlining severe asthma care by creating an integrated severe asthma care provision: clinical pharmacist and respiratory consultant

Oxford HIN/Oxford University Hospitals NHS Foundation Trust (OUH)

Delivery Objectives

1. Identify (SPECTRA tool), assess and refer uncontrolled asthma patients to the Severe Asthma Centre (SAC) for potential biologic treatment
2. Build secondary care capabilities
3. Support for SAC



Key Outcomes

1. Developed a robust and innovative model of clinical practice with clinical pharmacists providing severe asthma outreach service in general practices across the Integrated Care Board (ICB)
2. Provided Fractional Exhaled Nitric Oxide (FeNO) machines to participating Primary Care Networks (PCNs) and bespoke training session to upskill healthcare professionals in primary care
3. Timely referrals and improved patient access to asthma biologics via direct and fast-track referrals made by the outreach pharmacists to secondary and tertiary asthma centres
4. Established monthly virtual Multidisciplinary team (MDT) with secondary care respiratory services
5. ISAC consultant attended SAC clinic and MDT weekly
6. Inhaler switched in line with the NHS Investment and Impact Fund (IIF) approach
7. Inhaler technique assessed and treatment optimised. As a result, participating practices benefited from the Quality and Outcomes Framework (QOF) and IIF payments
8. Undertaken comprehensive assessment of the SPECTRA tool in its ability to identify patients who may be suitable for biologics

Development of a novel asthma biologics pathway co-ordinator role within the severe asthma service

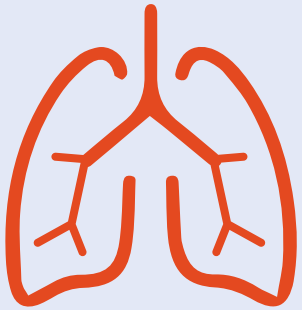
Wessex HIN/University Hospital Southampton NHS Foundation Trust (UHS)

Delivery Objectives

1. Co-ordination of the biologics multi-disciplinary team (MDT) (including investigations, outcomes and timely review of 12-month outcomes)
2. Co-ordinate referral of patients for biologics from network sites
3. Align follow-up of patients on biologics to reduce unnecessary appointments

Key Outcomes

1. The post was converted to a full time position which was fully funded by the division
2. Streamlined biologics pathway
3. The set up of clearer communication with patients ensured timely return of information to help with MDTs
4. The automated approval letters set up enabled patients to be made aware of the biologic approvals faster than previously



Respiratory virtual clinics for adolescents with uncontrolled asthma

Hospital specialist clinicians (a consultant physician and consultant pharmacist) guided the primary care teams through a systematic review process covering the latest guidelines and evidence in asthma diagnosis and management for adolescents

Health Innovation Network/Guy's and St Thomas' NHS Foundation Trust (GSTT)

Delivery Objectives

1. Identification and contacting of primary care network (PCN) asthma leads and preparation of educational pack
2. Booking virtual clinic review with practice clinicians
3. Conducting respiratory virtual clinics (RVC) for identified practices. Provide asthma diagnosis and management advice to asthma lead of each practice:
    - Arrange for patients to be discussed at SAC MDT at GSTT for consideration of biologic therapy if appropriate
    - Review and discuss referred patients at severe asthma centre
4. Evaluation and write up phase

Key Outcomes

1. Introduction of a virtual clinic review proposed
2. In-person reviews conducted with the responsible asthma lead of the practice
3. Additional educational sessions provided
4. Raised awareness of asthma care for adolescents in primary care (spill over into education on severe asthma for adult patients):
    - provided education on asthma diagnosis and management with focus on adolescents but including adults
    - discussed referral criteria to the Severe Asthma Centre (SAC) of adolescents with difficult to control asthma
5. Direct referrals to the severe asthma clinic for review of need for biologics
6. A closer collaboration between the SAC and their PCN. In particular the patient group targeted by this cohort – adolescents – who are more likely to fall in between paediatric and adult care, i.e. miss out on care. This project raised awareness of Guy's Young Adult Asthma Service for adolescents and young adults aged 15-24, where patients received support and care from the wider SAC MDT, including specialist physiotherapy and psychologist and a pharmacist led adherence support clinic
7. Increased referrals for biologic therapies and more patients started on biologics
8. Improved waiting time

Development of an online self-directed learning module to support inhaled corticosteroid (ICS) adherence in asthma in primary care

For pharmacists, secondary care and GPs promoted the use of biologics medication and improved referrals into secondary care and adherence for patients

Health Innovation Network/ Guy's and St Thomas' NHS Foundation Trust (GSTT)

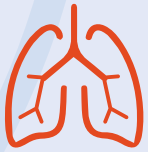
Delivery Objectives

1. Write a training package primarily to support asthma adherence assessment and interventions to improve it; clarifying what is a high-risk patient likely to benefit from intervention and signpost to other AB RUP resources
2. Invite clinicians to complete the training
3. Baseline data and post-training data collection
4. Full project evaluation

Key Outcomes

1. An online self-directed free-to-access module has been written and narrated to support clinicians to better identify and manage non-adherence in asthma
2. Several nationally renowned professional bodies and training hubs have agreed to advertise the module
3. Considerable number of health care professionals (HCPs) completed the module
4. Following completion of the module:
   - average confidence scores increased significantly after completing the module compared with scores measured before
   - the average knowledge score also increased significantly after completion
5. Due to delays in beginning the project the full evaluation is not yet complete
6. An early data from the completed clinician interviews revealed interesting reflections on how HCPs will change their practice moving forward and that of care delivery within their sphere of influence

Inequality of asthma management



The project concentrated on the area surrounding Mid Yorkshire Hospitals NHS Trust; specifically focusing on Wakefiled CCG and North Kirklees CCG. Results and learning from the project informed the wider network and ensured that equity of access is part of the Yorkshire ethos.

Yorkshire and Humber HIN/ Mid Yorkshire Hospitals NHS Trust (Mid Yorks Hospitals)

Delivery Objectives

1. Assess the barriers and facilitators to optimal asthma management
2. Level of knowledge in the South Asian Community regarding asthma
3. Potential role of the community respiratory champions
4. Development of resources and training of champions
5. Effectiveness of new Community Champion
6. Evaluation of these innovative resources

Key Outcomes

1. Robust local engagement with the South Asian communities
2. Gave the local community a voice – there is no such thing as 'hard to reach' populations, and there is a real willingness in these areas to engage when the right advancements are made by health and social care
3. Training and education of the respiratory community champions – which is now available for others to utilise
4. Foundations have been built for onwards community messaging
5. Delivered real co-production using a social realist approach of resources based on local need e.g. preventer inhalers v's reliever inhalers; medicine usage during Ramadan and what to expect when in hospital; how to use a peak flow meter; how to stay well with your asthma:
    - Development of video on Ramadan and the use of inhaled oral medicines
    - Development of the avatars, 10 languages
    - Graphic medicine sheets
    - Animated resources on a number of topics
    - QR codes
6. Real sense of empowerment witnessed within local communities
7. Higher biologics prescribing rates achieved
8. Achieved highly effective utilisation of community champions particularly with the application of a self-determined approach to enable health fulfilment
9. Improved deeper understanding of their asthma, and how to live with the condition effectively, and when to seek help if required
10. Empowered patients to manage their own conditions, by giving them the tools to do so
11. Provided sense of recognition in the materials produced
12. Acknowledgement that there are individuals (Project Team/community champions) that care about them and want to work with them to successfully manage their asthma

Improving access to biological treatment through significant redesign of care pathways for patients with severe refractory asthma

West Midlands HIN/University Hospitals of North Midlands NHS Trust (UHNM)

Delivery Objectives

1. Redesign of the patient care pathway for severe asthma to speed up access to asthma biologics, including initiation and ongoing monitoring
2. Reduction of the geographical barriers to accessing asthma biologics by offering this service in Stoke
3. Support the introduction of new referral criteria and use of the SPECTRA tool to provide clarity for healthcare professionals in primary care on how to identify, prioritise and refer patients to secondary care for severe asthma
4. Demonstrate improved quality of life for severe asthma patients using asthma biologics using quality of life questionnaires
5. Conduct semi-tructured interviews with stakeholders to collectively identify the experience of implementation, barriers, and perceptions of success of implementation of the project improving access to asthma biologics

Key Outcomes

1. Enabled the improvement of the severe asthma pathway to an enhanced pathway
2. Reduced geographical barriers by offering the service locally
3. Training delivered to considerable number of HCPs on the severe asthma pathway
4. The Asthma Control Questionnaire (ACQ6), denoting changes over time in symptom control, showed a statistically and clinically significant improvement for patients starting biologics treatments
5. Considerable number of patients have been identified and initiated onto asthma biologics
6. Reduced waiting times to be diagnosed with severe asthma
7. Reduction in Short-Acting Beta-Agonists (SABAs) and oral steroid prescribing
8. Reduction in acute episodes and medical intervention
9. Reduced exacerbations and hospital admissions
10. The life changing effects of asthma biologics were shared on the BBC news
11. Increased uptake of homecare
12. GP Practice prescribing data - A data set was created highlighting the practices with the highest prescribing of SABAs and oral cortico-steroid (OCS)
13. Developed cost/benefit tool

Overcoming current barriers to introducing asthma biologics

Overcoming current barriers to introducing asthma biologics through community nurse based reviews and consultant-led community MDT in Lincolnshire and increased capacity in primary (nurse/care navigator), secondary (pharmacist) and tertiary care (increased consultant and nursing time) in Nottinghamshire

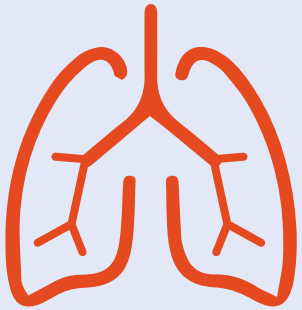
East Midlands HIN/Nottingham University Hospitals NHS Trust (NUH)

Delivery Objectives

1. Increase asthma biologic initiations
2. Reduce waiting time from referral to biologic initiation
3. Increase referrals from primary care to severe asthma services
4. Increase proportion of patients receiving biologics via homecare

Key Outcomes

1. Considerable increase of rate of biologic approvals
2. Significant improvement of waiting times
3. Referrals increased significantly
4. The majority of patients moved to homecare within the first 4 months of the treatment
5. Great achievement in the level of engagement and integrated working between primary and secondary care
6. The new community asthma nurse posts were hugely successful and impactful
7. A bespoke case-finding tool developed (the eHealthscope system) played a game-changer role
8. Secondary care resources to manage the increase in referrals have been successfully mobilised
9. Improved uptake of homecare



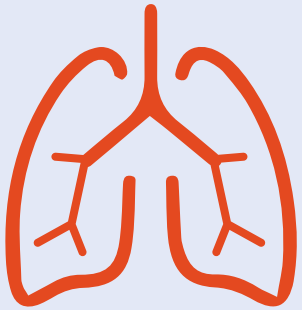
Improve access to biologic therapies and reduce waiting times for patients (adults) with severe asthma

The South West Severe Asthma Network, from Cornwall to Swindon, worked with all hospitals to create a common pathway for managing asthma care streamlining the process of referral to severe asthma centres and access to asthma biologic therapy

South West and West of England HIN/Somerset NHS Foundation Trust (SFT)

Delivery Objectives

1. Improve access to biologic therapies
2. Reduce the time to initiation of biologic therapies
3. Provide education on treatment for severe asthma
4. Engage with evolving/ existing digital and clinical iniatives



Key Outcomes

1. Improved pathway of care
2. The introduction and consolidation of asthma and severe asthma MDTs in secondary care supported by tertiary centres
3. Delivered educational webinars for primary care
4. Developed a referral tool to support identification and referral of patients, namely the Rapid Uptake of Biologic Checker (RUBIC)
5. Considerable improvement in the access to biologic therapy
6. Great reduction in waiting time
7. The team approached British Thoracic Society suggesting an amendment to the Asthma Discharge Bundle, to include biomarker results to aid identification of potential patient that may benefit from Biologic therapies. This has been trailed
8. All sites registered for ‘My Asthma Biologics’ App, with the first patients enrolled
9. Demonstrated a reduction in admissions and emergency department attendances
10. Successfully established several professional networks

Improve access to biologic therapies and reduce waiting times for patients (Children/ young people) with severe asthma

South West and West of England HIN/Somerset NHS Foundation Trust (SFT)/Bristol Royal Hospital for Children (BRHC)

Delivery Objectives

Support BRHC to develop a robust and comprehensive clinical service for children/young people with asthma:

1. Align paediatric asthma care more closely with adult care by developing a network of paediatric asthma-interested specialists and linking with established network infrastructure for adult asthma care
2. Instigate a monthly tertiary severe asthma clinic
3. Run a community pilot project prior to wider rollout, whereby a Specialist Nurse from BRHC visits GP practices to support the efficient identification of younger people potentially suitable for biologics and requiring further investigation, thus minimising time from identification to initiation of biologics for beneficiaries

Key Outcomes

1. Achieved greater collaboration between primary and secondary care
2. Established monthly virtual MDT for CYP
3. Developed formal referral forms and information gathering MDT forms for a region wide MDT to be held quarterly.
4. Created a WhatsApp group – Signet
5. Established and appropriately utilised a monthly local severe asthma clinic
6. Patients were identified and optimised, and if needed started biologics therapy
7. Appropriate prescribing reduced prescription costs and prevented both over- and under-treatment
8. Increased links with Primary Care Networks (PCNs) and wider Community Asthma Clinic rollout
9. Good working relationships developed with several practice nurses and GPs, with the added benefit of opening communication channels for sharing other asthma related updates and service developments (such as Medicines and Healthcare products Regulatory Agency (MHRA) updates on the use of home nebulisers, and the opportunity to attend virtual asthma education sessions with PCNs)

Accelerating access to specialist care for asthma patients

Through a quality improvement approach to monitor progress regularly to identify patients eligible for biologics and build capacity

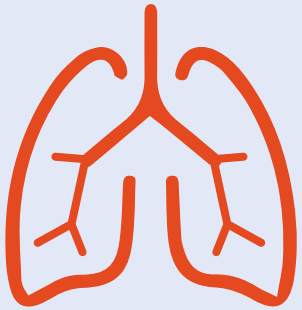
ASHN for the North West Coast / Liverpool University Hospitals NHS Foundation Trust (LUH)

Delivery Objectives

1. Review and optimise asthma management
2. Identify patients eligible for biologics and initiate treatment
3. Increase Liverpool Severe Asthma Service (LSAS) capacity to accommodate biologic initiation and monitoring for these patients.
4. Increase homecare uptake and establish home monitoring using digital solutions

Key Outcomes

1. Considerable number of patients reviewed
2. Considerable number of patients identified through this pathway and prescribed biologic therapy
3. LSAS capacity increased by considerable number of consultant appointments and day ward slots
4. Increased number of patients on homecare
5. Reduced waiting time
6. Secondary care in reach by the LSAS pharmacist resulted in one of the sites being well on the way to becoming a tier 3 site on the consensus pathway
7. Further adoption across ICB for the primary care case finding approach.



Evaluation Approach

The summative evaluation of the Asthma Biologics Pathway Transformation projects was carried out by Oxford Health Innovation Network (HIN). A requirement for pathway transformation funding was for each successful site to submit an evaluation report at the end of the project period. Evaluation reports were returned by all nine of the sites.

Individual reports were reviewed against a framework that was developed by the Oxford HIN Asthma Biologics project team. Where required, clarification questions were sent to the pathway transformation fund project leads. The deadline for return of responses was 2nd February 2023. All leads that were sent questions submitted responses.

Information from all of the individual reports and clarification questions was collated to inform this aggregated summative report.

As the projects varied in their focus a thematic approach was used to categorise areas of impact and transformation, challenges and lessons learnt.

To ensure the breadth of the impact of the projects was captured, in addition to quantitative data, vignettes and descriptions of new roles tested, resources developed, and new networks formed were also included in the report.

To note, when referring to sites within the report the lead bid site has been used.

Information from all of the individual reports and clarification questions was collated to inform this aggregated summative report.

Impact Summary

744 new patients were started on asthma biologic treatment. One site reported a 60% reduction in oral corticosteroid prescribing.

13 new resources have been produced including educational modules; case finding tools; videos; podcasts and patient information resources.

9 new roles have been tested including community respiratory champions, integrated asthma consultants and pharmacists, and nurse educators.

7 sites reported that new networks and/or multidisciplinary teams were created across their areas.

4 PTF sites reported a reduction in time between referral into a service and biologic initiation.

3 sites attracted additional funding for their projects.

7 projects delivered educational events and webinars across their areas.

6 projects have had elements of their work extended via other funding routes, or embedded new ways of working into routine practice.

744 new patients were initiated on an asthma biologic

The 7 projects had a direct impact on, and were able to measure, the number of new patients started on an asthma biologic. Across these projects a total of 744 patients were initiated. Individual activity from some of the sites is quoted below.

Oxford University Hospitals NHS Foundation Trust

To date, 53 patients have been referred by the Integrated Severe Asthma Collaborative (ISAC) pharmacists for tertiary care review. The ISAC consultant has started 42 new patients. An additional 31 patients have been commenced on the biologic treatment via the regional multidisciplinary teams, bringing the total number of new starters to 73. Several patients have been referred to the multidisciplinary team (MDT) for biologics consideration have yet to be seen. Additional clinics between January and March have been offered in primary care to review patients referred directly by the GP teams.

Nottingham University Hospitals NHS Trust

MDT approvals have increased by 40% from baseline and this trend is likely to continue over the next 6-12 months. The rate of referrals from primary care has increased significantly and the severe asthma MDT now takes place twice monthly.

Bristol Royal Hospital for Children

94 patients offered appointments. Asthma treatment was increased in 40 patients, decreased in 13 patients, stopped in 11 patients and unchanged in 15 children.

University Hospitals of North Midlands NHS Trust

By the end of October 2022, 28 GP practices had been visited by the asthma education nurse and the SPECTRA tool run on their systems to identify patients with uncontrolled asthma who may be potentially eligible for biologics treatment. Across these 28 practices, 564 patients were reviewed, and 125 were referred to the biologics clinic in secondary care for further assessment (22.2%). By November 2022, 87 of these 125 patients had either started on asthma biologics, or were scheduled to start by the end of the year (69.6%).

744 patients were started on an asthma biologic across the sites that reported on patient numbers.

For one patient to be started on an asthma biologic a significant number of additional patients would have had to be reviewed.

These patients would have had their treatment plans optimised and may be potential candidates for an asthma biologic in the future. The pathway improvements made by the sites will make the process for treatment optimisation and potential asthma biologic initiation faster and smoother for future patients.

Prescribing of oral corticosteroids reducing

2 projects reported on the impact of their projects on oral corticosteroid (OCS) prescribing. Both projects used data from the NHS Business Services Authority (BSA) Respiratory Dashboard on number of short courses (>3) or on 1g of OCS as the measure. A few projects mentioned that OCS prescribing was still to be analysed.

UHNH demonstrated a significant reduction of around 60% from pre-biologics mean. Table 3 shows prescribing rates before biologics initiation and afterwards (mean, standard deviation, range). Steroid prescriptions significantly reduced after biologics initiation (p<0.001), from a pre-treatment mean of 0.37 per month (SD 0.37) to a post-treatment mean of 0.12 (SD 0.22) per month; a reduction of more than 60%.

Table 1: Changes in prescribing rates before and after biologics treatment initiation (n=46)[1]

Treatment	Pre-biologics		Post-biologics		
	Mean monthly rate (SD)	Range	Mean monthly rate (SD)	Range	Statistical significance
OCS	1.37 (0.55)	0.5 to 2.3	1.48 (0.52)	0.4 to 2.9	t=-1.273: p=0.210
SABA	0.93 (0.46)	0.2 to 2.2	0.76 (0.51)	0.0 to 2.2	t=2.145; **p=0.037**
Steroids	0.37 (0.37)	0.0 to 1.3	0.12 (0.22)	0.0 to 0.8	t=5.295; **p<0.001**

Bold p values indicate a statistically significant difference
*OCS refers to inhaled corticosteroids; Steroids refers to steroid courses

UHNH demonstrated a significant reduction of around 60% from pre-biologics mean.

[1] ARC report

Prescribing of oral corticosteroids reducing

The number of patients who increased, reduced or maintained the same monthly rates of OCS, SABA or steroid treatments after they began taking asthma biologics was also monitored.

Figure 1. The largest changes were seen in rates of steroid use, with 32 patients reducing use in the months following biologics initiation (69.6%), only 4 increasing use (8.7%), and 10 staying the same (21.7%).

Figure 1: Number of patients reducing, increasing or maintaining monthly treatment rates after biologics initiation (n=46)[1]

A key priority and measure of success of the national programme was a reduction in the number of people prescribed high doses of oral corticosteroid (prednisolone) along side their asthma treatment.

A new measure was developed with the NHS BSA to identify and monitor the number of people on 3g+ prednisolone alongside their inhaler.

The reduction in this number will be gradual and exceed the life span of the project as patients will usually need to be started on new treatment before OCS can be reduced. Monthly tracking to date has shown a national level reduction in over 3,100 patients on over 3g of prednisone over the course of the programme. Data will be further analysed for the final programme impact report.

[1] ARC report

Potential system savings

Modelled on the GSK Severe Asthma Value and Economic Return (SAVER) model, the estimated savings from events avoided is £1,488,984 over a 2-year period based on 744 patients.[1] This saving excludes additional costs related to the asthma biologic medication itself.

The main estimated saving is seen in the event costs avoided, which are lowered by £1,488,984 over the time horizon for the future scenario compared with the current scenario.

The estimated number of events in the current scenario was 1,713,758, and the future scenario was 1,709,974, showing a reduction of 3,784 events, Table 2.

Table 2: Total estimated cost saving of treating severe asthma patients with biologics in England over a 2-year time horizon by events avoided

	Estimated cumulative events avoided between current and future scenarios	Total cumulative savings per event between current and future scenarios
Unscheduled admissions	575	£546,641
Critical care admissions	60	£96,667
Elective overnight admissions	65	£172,659
Elective daycase admissions (non-X962 coded)	-616	-£178,741
Outpatients appointments (non-X962 coded)	-380	£64.58,
A&E activity	1,688	£344,385
Ambulance calls	2,393	£571,962
Total	**3,784**	**£1,488,984**

Estimated savings from events avoided is £1,488,984 over a 2-year period based on 744 patients.

[1] GSK Severe Asthma Value and Economic Return (SAVER) model. Data compiled March 2023

Patient waiting time from referral to first injection reducing

4 projects were able to measure a reduction in patient waiting times. This reduction was demonstrated at various stages of the pathways from the point of referral through to asthma biologic initiation.

University Hospitals of North Midlands NHS Trust

The enhanced pathway reduced patient waiting time from 76 weeks to 26.7 weeks. The time from MDT approval for a biologic to initiation of biologics is now 8 weeks. Broken down, the time from:

- referral in primary care to review has reduced from 21 weeks to 8.5 weeks
- referral into severe asthma centre to be seen in severe asthma centre has reduced from 17.9 weeks to 6.7 weeks
- first review to MDT review (for biologic) has reduced from 155 weeks to 26.7 weeks

Nottingham University Hospitals NHS Trust

Waiting times have improved significantly from baseline levels, with a total of 131 days being cut from the patient pathway from referral to biologic initiation. The time from:

- referral to review in SAC reduced from 120 days to 90 days
- first review to MDT approval (median) reduced from 183 days to 133 days
- MDT approval to initiation (median) reduced from 98 days to 47 days

(1) Renwick I., Rupani H., Cumella, A.A review of the patient journey to biologic initiation in UK severe asthma centres. Asthma UK and the British Lung Foundation, December 2021

University Hospital Southampton NHS Trust

The mean time from reterral to discussion at a Severe asthma MDT has increased from 182 to 269 days. This is thought to be due to an increase in respiratory referrals post pandemic, an awareness of severe asthma, resulting in an increase in referrals and the time required to assess and optimise patients. However, the site has demonstrated a reduction from discussion at MDT to commencement of biologic therapy of 31 days to 27 days, and overall reduction from referral to commencement of biologic therapy from 182 day to 112 days.

Liverpool University Hospitals NHS Trust

Waiting times have been most markedly reduced through secondary care in-reach. The time from:

- referral to review has reduced from 70 days to 18 days
- referral to first injection time has reduced form 167 days to 53 days

A review of the patient journey to biologic initiation in UK Severe Asthma Centres was carried out in December 2021.(1) The review assessed how long the whole pathway took from referral into a severe asthma service to initiation of biologic treatment. The overall time between referral into a service and biologic initiation was 63.5 weeks. 60% took a year or more; 29% took two years or more and 17% took 3 years or more. The sites that have reported on waiting times have demonstrated a decrease in the time from referral to asthma biologic initiation with some sites reducing the waiting time to 16 weeks or less.

9 new roles have been tested

Across the projects 9 new roles have been tested. These are described below.

Community respiratory champions held drop-in sessions and workshops, 'Chai and Chat', at community centres signposting and supporting people with advice on asthma management. They also helped to produce resources such as videos.

Integrated asthma consultant assessed and reviewed patients referred directly from the integrated asthma pharmacists working in primary care. They also supported a consultant-led forum to improve connectivity and expertise in severe asthma management across primary and secondary care.

Integrated asthma pharmacist identified appropriate patients in primary care and improved patient access to asthma biologics via direct referral to secondary and tertiary asthma centres.

Severe asthma network project manager focused on supporting network development.

Nurse educator acted as the link between primary and secondary care, delivering education to primary care practitioners and assisting GP practices in using the SPECTRA identification tool.

The nurse educator developed a formal asthma education programme. At the end of October 22, 187 healthcare professionals had undertaken the programme, representing 37 primary care practices.

Physician associate and asthma specialist nurse reviewed patients with ongoing poor control in primary care. This involved carrying out relevant diagnostics and treatment optimisation with MDT support.

Community asthma nurse visited GP Practices, ran SPECTRA searches to find potential patients that could benefit from asthma biologics, reviewed and optimised treatment and referred patients' to community MDTs, secondary care clinics or the regional MDT.

The community asthma nurses visited 23 GP Practices and reviewed 226 patients

Biologics co-ordinator established clearer communication with patients to ensure timely return of information to help with MDTs.

Pharmacist adherence lead performed adherence checks for all new referrals, reviewed sub-optimal adherence and worked with community pharmacists to increase awareness of asthma biologics, to establish systems to document adherence data pre-referral.

The national benchmarking exercise[1] found 68% of Severe Asthma Centres reported staffing limitations (medical staff, specialist nurses and pharmacist resource) as the most significant service barrier in the context of improving patient access. Introducing new roles or changing exisiting roles may be an opportunity to address workforce and capacity challenges. Having specific pharmacist adherence roles could address bottlenecks that can occur because of adherence assessments required for initiation of treatment.

[1] Understanding opportunities to improve Severe Asthma Care in England A National Benchmarking Exercise Summary report. Accelerated Access Collaborative, The HIN Network. March 22

13 new resources have been created

13 new resources have been developed by the projects. These range from educational modules and videos for healthcare professionals, case-finding tools, cost-benefit tools for commissioners and patient information resources.

GSTT have produced an online self-directed free-to-access module to support clinicians to better identify and manage non-adherence in asthma. This will support better patient care, and facilitate optimisation of patients prior to referral to specialist care.

Mid Yorks Hospital have produced a training programme for respiratory community champions.

A formal cost-benefit analysis has been developed by UHNH working with the East Midlands HIN analytics team to assess the costs and benefits of the enhanced pathway. This analysis will support the development of future business cases and go on to support the sustainability of the project.

Case finding tools have been developed by NUH and SFT. In Nottinghamshire a bespoke case-finding tool was developed by two GPs. eHealthscope was familiar to local GPs and practice staff were able to use this without any additional training. The tool also allowed secondary care referrals to be easily generated, and these were e-mailed directly to the project lead, so that potential biologic candidates could be fast-tracked for clinic review.

The eHealthscope tool has been successfully deployed across parts of Nottinghamshire. All other areas within the county have engaged with the process and are at different stages in undertaking the searches to generate appropriate referrals.

UHS have developed the Rapid Uptake of Biologic Checker (RUBIC) tool to support identification of patients in primary care with suspected severe asthma. The tool increases timely referrals from primary care to the severe asthma MDT, bypassing bottlenecks in general respiratory clinics. It has been designed to be used in conjunction with an asthma review in primary care. It has been digitised for EMIS.

Patient information resources have been developed by Mid Yorks Hospital and LUH. Mid Yorks Hospitals have developed asthma self-management videos in different languages and covered topics such as Asthma Medication during Ramadan, use of peak flow meters and asthma control. Graphic medicine sheets have also been developed.

LUH have produced 2 videos and a podcast. The first video explains the work and features a patient's perspective, as well as the Clinical Lead. The second video highlights the importance of a good referral to a severe asthma service. The podcast showcases audio from both videos.

A number of new resources have been developed by the national programme team and are available on the Oxford HIN Asthma Biologics Toolkit. The additional resources developed by the project sites will add to this repository and be beneficial at both the local level for which they were developed and a wider national level.

3 sites attracted additional funding

3 sites attracted additional funding external to pathway transformation funding to support delivery of their project. This funding was from individual Health Innovation Networks and Pharmaceutical Industry partners.

Health Innovation Network funding

This supported the use of eHealthscope (a bespoke case-finding tool) to carry out GP Practice searches.

Pharma funding

This enabled an additional pharmacist to be recruited to an integrated team to support risk stratification and review of uncontrolled asthma patients in primary care.

This also allowed additional nursing support for secondary care clinics and for training patients for homecare.

The momentum created by the pathway transformation projects and the people involved in delivering them galvanised support and attracted additional funding from various sources both within and external to the NHS. This supported and enhanced local delivery of the projects.

7 sites established new multidisciplinary teams and networks

7 projects reported new multidisciplinary teams and networks had been established as part of their projects, facilitating better integrated working across organisations.

OUH introduced virtual multidisciplinary (MDT) team meetings between the tertiary severe asthma centre (SAC) and two secondary care Trust respiratory services. Asthma specialists present patients as potential biologic candidates to the SAC team. This resulted in 31 new patients being initiated on an asthma biologic.

Across UHS and BRHC the adult and children's pathway projects both have introduced MDTs. For the adult pathway MDT clinics and SAC MDTs have been introduced into 10 acute Trusts to enable greater collaborative care for those with severe asthma. This was crucial for the identification and assessment of patients and has increased the knowledge and confidence in identification and management of severe asthma in secondary care. During the project, the Severe Asthma MDTs have matured, with the initiation of biologics being delivered at 9 Trusts.

For the children's pathway, a monthly virtual MDT for children and young people with difficult asthma and a paediatric network has been initiated. The community pilot clinic project has helped to support greater collaboration between primary and secondary care. Practices have a point of contact for advice and guidance for children in the community with poorly controlled asthma in addition to the formal advice and guidance system.

GSTT have established new networks between primary care clinicians and the severe asthma centre. This direct and personal contact between GPs, practice nurses, pharmacists and the SAC clarified referral pathways and will continue. Closer collaboration between the SAC and the PCN has also helped reduce adolescents' transition between paediatric and adult services.

7 sites established new multidisciplinary teams and networks

UHNH have embedded integrated care across primary and secondary care to support the identification of patients. Support from secondary care assisted with the identification and referral of severe asthma patients from primary care.

NUH have reported that a highlight of their project has been the level of engagement and integrated working between primary and secondary care. The project has engaged and involved people from a wide variety of roles including commissioners and managers, clinical directors, GPs, practice nurses, respiratory specialist nurses, care coordinators, pharmacists and consultants. These links are now embedded and mean that collaborative working to improve asthma care will continue to grow and develop.

Across the LUH area, collaboration and building connections has resulted in one site keen to be a tier 3 service as described by the Accelerated Access Collaborative Consensus pathway.[1] New connections with engaged practices in primary care have also been established.

The British Thoracic Society (BTS) position statement[2] and NHS Long Term Plan[3] both recognise the importance of integrated respiratory care where care is co-ordinated and continuous across organisational boundaries and between different healthcare professionals.

The BTS position statement also states, 'This is not about specialists just carrying out clinics in the community, but leading and working within teams, using well defined components of care to deliver high quality respiratory care across populations as well as to individuals.'

The projects have demonstrated this integrated care ideal is possible. Many of the multidisciplinary teams, networks and connections made during the course of the projects will be sustained with or without additional funding, leaving an ongoing legacy.

[1] AAC Consensus Pathway: Management of Uncontrolled Asthma in Adults. Accelerated Access Collaborative. June 2022
[2] Position Statement Integrated Respiratory Care 2019. British Thoracic Society
[3] The NHS Long Term Plan. NHS. 2019

Educational events and webinars took place across England

7 projects reported delivering educational events and webinars. These are described below.

OUH delivered bespoke educational sessions which were offered to each participating Practice on a range of topics. The sessions were taken up by 50% of the participating Primary Care Networks (PCN).

Educational sessions on asthma diagnosis and management with focus on adolescents were delivered by GSTT. Sessions were held for 2 Practices which included a lunchtime teaching session for over 25 doctors, nurses and pharmacists.

The Nurse Educator and the clinical team across UHNH led on severe asthma training events via the training hub. 6 sessions were delivered and then continued on a smaller GP Practice/PCN level. A formal asthma education programme was developed by the asthma Nurse Educator. This was initially a remotely delivered programme consisting of one 20-minute session a week for four weeks. After the first few months the four sessions were amalgamated into a single session and delivered face-to-face. By October 22, 187 healthcare professionals had undertaken the programme, representing 37 Practices.

NUH held 4 educational events over the course of the year for GPs and managers. These focused on raising awareness of the need to refer patients who may be biologic candidates. The sessions resulted in an increase in referrals and GP interest in using eHealthscope to search their Practice populations to identify patients.

NICE in their adoption barriers report[1] highlighted there is a poor awareness of biologics, particularly in primary care.

A suggested solution was to provide more education and to develop brief and accessible educational tools. An area of focus for the national asthma biologics programme was healthcare professional training. Several PTF sites have delivered educational events to support identification of patients that may have severe asthma, further assessment and local referral processes. This learning will have raised awareness and knowledge about severe asthma and potentially resulted in a change in clinical practice. A number of the PTF sites reported that educational events were being continued following programme closure. This will be an important legacy of the programme.

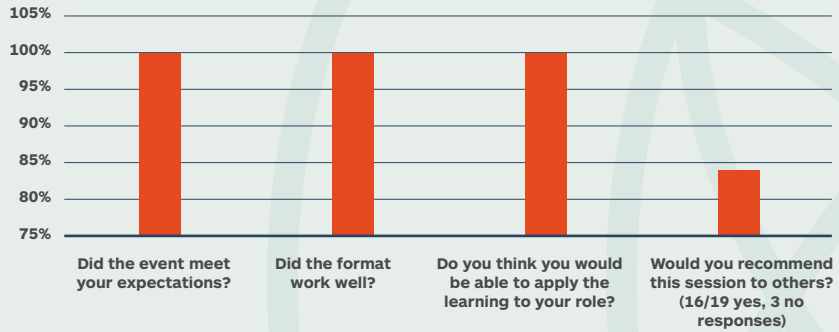
[1] Asthma Biologics Adoption Barriers and Suggested Solutions› National Institute for Health and Care Excellence. February 2021.

Educational events and webinars took place across England

The SFT Severe Asthma MDT have provided 9 educational webinars aimed at identifying patients in primary care. The webinars were delivered by members of the severe asthma teams, from the four ICBs. They were attended by 81 healthcare professionals. Feedback is included in table 3. West of England HIN Clinical Lead Pharmacists also delivered online webinars on asthma treatment.

Across the LUH area there is a webinar and an in-person event planned to raise awareness and educate clinicians on the new pathway at a respiratory network level and to promote the videos that have been developed.

Table 3. Delegate feedback from educational webinars



“I am the asthma lead nurse, never quite sure with regards to referral to secondary care. Good to continue learning and add different elements into my asthma reviews and follow ups.”

A quote from a webinar attendee

Tackling Health Inequalities

Prioritisation

- In some projects initiatives were prioritised in areas where health inequalities were known to be high
- Primary Care Networks were chosen from areas of high deprivation
- Adolescents that were also taking high amounts of oral corticosteroids were prioritised for review
- Data from the Respiratory Outcomes mapping tool provided by AstraZeneca (https://www.respiratoryoutcomes.co.uk/) was used to identify the variation in asthma biologic prescribing across areas. This intelligence was used to plan projects to address this inequality
- For the community pilot clinic, patients were all living within deprived areas, (Indices of multiple deprivation (IMD1) areas), and this was a deliberate design element aimed at addressing health inequalities. The Heatmap data for asthma admissions and SABA overuse were instrumental in identifying the areas to work within
- Where new roles were introduced to provide in reach, e.g. a specialist asthma pharmacist, each asthma review undertook screening for severe deprivation and mental health needs to facilitate access to local services

Evaluation of needs

- Some sites carried out evaluations of specific needs. e.g. an evaluation of the level of knowledge in the South Asian Community regarding asthma. This enabled initiatives to be planned to address these specific needs

Travel

- For health inequalities related to inability to travel due to reasons such as affordability or physical mobility, assessments were offered in GP Practices and by telephone

Education

- Educational modules were designed to encourage reflection on an individual's consultation style and a review of asthma care delivery to engage patients and minimise the impact of health inequality e.g. low health literacy
- Modules included specific support strategies for patients with learning difficulties, poor mental health, at difficult transitions e.g. from childhood to adolescence and those less able to afford prescription charges

Resources

- Resources for patients, including leaflets and videos in various languages and the use of QR codes, were developed based on a local needs assessment

Insight

- In many cases projects enabled greater insight to be gained into what needs to be done to address health inequalities. This included the need for increasing access to allied health professionals and specialist expertise to support assessment and treatment

Challenges

Workforce Capacity

- Delay in recruiting key project staff
- Difficulties recruiting suitable candidates within a short period of time
- Candidates moving around internally due to staffing pressures on the respiratory wards
- Recruited staff leaving or going on maternity leave
- Inability to re-recruit into fixed term contracts

Information Governance

- Complexity of Data Sharing Agreements
- Delays in approval of the Data Protection Impact Assessment (DPIA)

Project Delivery

- Late project start due to delayed recruitment of the project team
- Issues with Information Governance and Information Technology (IT) infrastructure
- Logistics, including availability of IT equipment and access to primary care system/EMIS
- Reduced engagement with primary care particularly during the peak times of COVID-19 infections
- System barriers to accessibility of biologics, for example issue at one site being able to access the 'BlueTeq' system which enables drug costs to be centrally reimbursed

Engagement with Primary Care

- Difficulty to engage with primary care due to reduced capacity impacted by the COVID-19 and winter pressures
- Formation of ICS/ICBs forming and constraints caused by the pandemic restricted the ability of the network to integrate with primary and community care
- Variation in knowledge of severe asthma
- Difficulty restructuring and establishing a rolling clinic, limiting the potential number of patients to be reviewed
- Physical environment: limited availability of clinic room space impacted utilisation of appointments

Capacity at the Severe Asthma Centre

- Limited capacity of respiratory service provision and waiting list
- Defined/limited number of slots available within the MDT

Challenges

Concern around using the Identification of SusPECTed seveRe Asthma in adults (SPECTRA) tool

- Raised concerns with Information Governance breach
- SPECTRA tool produced large number of results requiring manual and time-consuming analysis
- Lack of awareness and competence in using SPECTRA tool

The Development and Implementation of Rapid Uptake of Biologic Checker (RUBIC) tool

- The complexity of the process of development and implementation of the RUBIC form
- Concern that the use of RUBIC would result in a significant increase in referrals to under resourced severe asthma services

Patient Identification and engagement (Paediatrics)

- Patient identification and engagement difficulty in the most deprived locations
- Considerable time spent contacting patients/parents to ensure attendance at the clinic, thus education and awareness raising on the importance of managing and optimising any condition for children/parents/carers is required. This impacted on the number of patients reviewed

Data Collection

- No single/shared electronic data recording system to link/track/capture activities across primary, secondary and tertiary care (data from identification and initial referral through to commencement of biologics and on-going reviews)
- Lack of resource, with lack of dedicated administrative support to collate the data
- Time consuming manual data collection by the clinical team

Funding Allocation

- Adjustments to the funding allocation to support required needs not anticipated in the initial PTF bid

COVID-19 impact

- Period of significant pressure on primary care, due to the COVID-19 vaccine rollout and a significant wave of COVID-19 infections in the population. This reduced the capacity for primary care to engage meaningfully with the projects and caused delay in the project delivery
- COVID-19 spike and staff redeployment in secondary and tertiary care
- COVID-19 caused significant delays in recruitment of key project team
- Project delivery timescales slipped as recruitment of key project team and engagement was slower than anticipated, particularly during the peak times of COVID-19 infections
- Inability to safely and reliably run face-to-face training
- Data collection

Sharing Learning

Engagement

- To effectively engage patients and communities from all backgrounds, information and education needs to be produced where patients can find a sense of self, and which clearly addresses cultural beliefs and barriers
- Local community champions are essential in order to promote accurate information locally
- Communication, particularly regarding patient appointments, needs to be clear, simple and repeated
- Primary care involvement and stakeholder engagement needs to start from the initial planning stages. Sites that had engaged enthusiastic GPs, community nurses, consultants, pharmacists and managers, and allowing them to contribute feedback, was key in making their project a success
- To maintain enthusiasm and momentum throughout the project regular communication was key with regular core project team and wider network meetings

Local adaptability

- Local solutions sometimes worked better than national ones. For example, SPECTRA tool was useful for some sites whereas others preferred to use locally developed tools or simpler EMIS searches that were integrated with GP prescribing systems. Predominately, sites did feel it was really useful to have some form of practice prioritisation tool

Flexibility

- It was Important to constantly monitor the performance of each aspect of the project, and to be flexible and change plans if needed. This had to be done by a number of sites to support proactive case finding or when original roles planned for could not be recruited to

Data sharing

- Data processing agreements need to be in place at the early stages of project initiation to avoid delays. These should set out the formal arrangements for integrated working

Sharing learning

Scope

- One site recognised that the project probably was under resourced and over ambitious, covering a large number of ICBs and Acute Trusts during the COVID pandemic
- One site shared that, on reflection, the initial aspiration to align paediatric and adult services may not be appropriate. This was due to the significant differences in the two cohorts which required services to be personalised to each group
- Another site reflected that their project focused too intensely on patients with severe asthma, when a whole pathway approach might have proved more successful

Training

- Online training package that people can work through in their own time is a cost-effective and practical alternative to face-to-face training
- The training and education sessions delivered by sites were valued by primary care but there was potentially more work to be done to upskill staff

Primary care capacity

- Primary care services are stretched, and it is not realistic to expect existing primary care staff to take on significant extra work, particularly if specific funding is not provided. Areas that funded roles such as the new community nurse role proved to be valuable as it took the pressure off existing primary care staff and provided a consistent conduit between primary and secondary care.

Integrated working

- Multidisciplinary team (MDT) working across organisations and professions was an essential component to the success of the projects.
- Development of Severe Asthma MDTs and professional networks linking sites to a severe asthma centres has enabled support, knowledge and expertise to be shared

Legacy

8 sites reported that elements of their projects were being continued either through alternative funding streams or by incorporation into routine service delivery.

Innovation in Healthcare Inequalities programme

- 2 sites have successfully secured continued funding via the Innovation in Healthcare Inequalities programme. This will continue the work they have started with an increased focus to address health inequality challenges

Pharma funding

- UHNM plan to utilise the cost/benefit tool to create a business case for permanent funding of the service. The nurse educator role that was piloted by the project is also being replicated by other integrated care systems with the support of Pharma funded Joint Working Agreements

Local funding

- At SUH, the positive impact of the biologics co-ordinator role will continue to be funded as a permanent full-time position by the Acute Trust's Respiratory Division
- NUH are developing business cases to continue and extend the work. Within Nottingham University Hospitals, internal funding has been agreed for 0.5 Full-time equivalent (FTE) pharmacy support for the asthma service long-term, as well as to convert the third asthma nurse post funded by the PTF to a permanent post
- In Nottinghamshire, funding has been provided by the East Midlands HIN to extend the eHealthscope searches to all PCNs
- In Lincolnshire, funding for the community asthma nurses continued until March 2023. Plans were in place to convert the posts to permanent positions
- The paediatric community pilot clinic project has progressed to a six-month pilot with non-recurrent funding from Bristol, North Somerset and South Gloucestershire Integrated Care Board as part of the children's and young person's asthma transformation programme. The clinic will explore the value of asthma clinics/hubs in primary care
- Across the LUH area, the project will form part of the new asthma pathway for Cheshire and Merseyside ICB. The new roles have been extended to the end of the financial year. There will be a webinar and an in-person event to raise awareness and educate clinicians on the new pathway at a respiratory network level

Legacy

Promotion and routine service delivery

- GSTT and MYH are planning to continue their work through ongoing promotion of the developed resources via connections and networks made during the project
- MYH are feeding back on the project outputs at national events including the British Thoracic Society Summer meeting; South Asian Heritage Month and SE Ghana Spring 2023 Annual Forum. The Respiratory Futures Team are also supporting communication of the multilingual videos and hosting resources on the multilingual hub on the respiratory futures website
- Across the SFT adult pathway, the existing network meeting's structure will be revised to include stronger representation from primary care, providing system wide integrated approach to care. A community of practice will be embedded into network core activities. Consolidation of the Severe Asthma MDTs to support the acute sites in the region will continue

Pathway transformation funding has acted as a catalyst for many areas to start on the journey to improve asthma pathways and integrate service delivery.

Some of the projects have been able to attract additional funding through the Innovation in Health Inequalities Programme, Pharmaceutical Industry or local level commissioning. Other projects have embedded new ways of working and new networks into routine working. The resources developed by programmes will continue to be available. Some of the projects have plans to publish the outcomes of their work to enable wider shared learning and potential spread and adoption. This combined activity will leave a strong legacy of the programme.

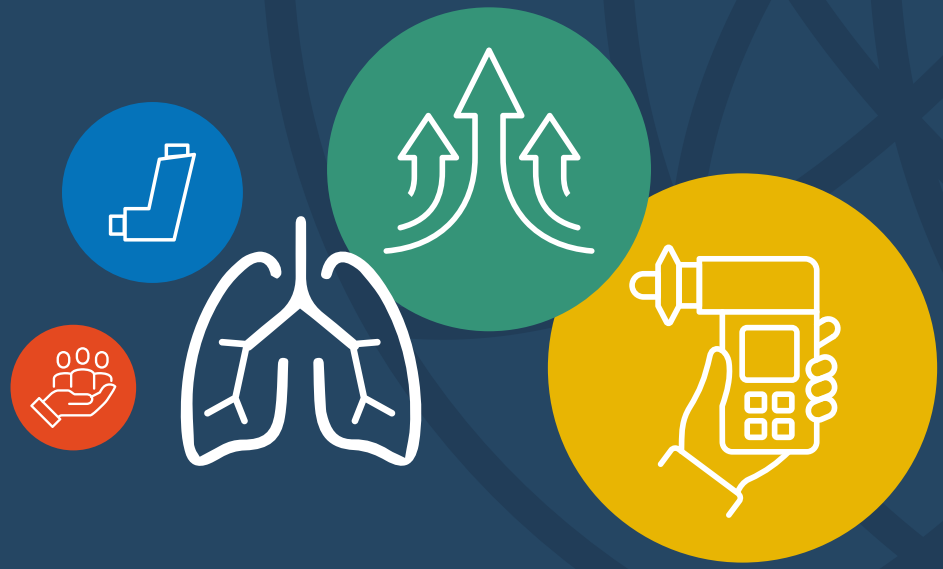
Summary

The Pathway Transformation projects reported in this summary report were an important part of the wider Accelerated Access Collaborative Rapid Uptake Asthma Biologics programme, which aimed to improve access to biologic therapies for severe asthma. Leads at the 9 awarded PTF sites had to overcome an array of challenges and hurdles to deliver their project objectives and in turn to improve care. Challenges included information governance, primary care engagement, and also workforce and service capacity.

The benefits of the pathway transformation projects included improved access to biologic therapies, reduced oral steroid prescribing, reduced waiting times for severe asthma care, the establishment of new multidisciplinary teams and networks, new support roles created and the leverage of additional investment. In addition to demonstrating the effectiveness of new models of care, these PTF projects will leave a legacy of effective resources that will support further pathway improvements in severe asthma.

The outputs and learning from these pathway transformation projects complement the recently published AAC Consensus pathway for severe and uncontrolled asthma in providing blueprints for effective, patient-centred, severe asthma care. As the NHS prepares to delegate the commissioning of severe asthma services to integrated care boards, the learning and resources from these projects will be critical in supporting ICB leaders to shape services of the future.

In conclusion, the PTF projects have demonstrated the value of collaboration and innovation in overcoming challenges to improve care for severe asthma patients. Scaling effective models of care, and leveraging the learning to shape improvements in areas of greatest need should be a focus going forward to ensure patients with severe asthma have access to the best possible care and treatments.



Appendix

Appendix 1 - Themes

PTF Site	Pathway re-design	Building capacity through new roles creation	Improving MDT and networks	Improving homecare	Early identification of uncontrolled asthma patients in primary care	Educational training	Patient education	Health inequalities	Cost benefit analysis
Oxford University Hospitals NHS Foundation Trust (OUH)	✓	✓	✓		✓	✓		✓	✓
University Hospital Southampton NHS Foundation Trust (UHS)		✓							
Guy's and St Thomas' NHS Foundation Trust (GSTT) (adolescents)			✓		✓	✓		✓	
Guy's and St Thomas' NHS Foundation Trust (GSTT) (training)						✓		✓	
University Hospitals of North Midlands NHS Trust (UHNM)	✓	✓	✓	✓	✓	✓	✓	✓	✓
Nottingham University Hospitals NHS Trust (NUH)	✓	✓	✓		✓	✓		✓	
Mid Yorkshire Hospitals NHS Trust (Mid Yorks Hospitals)	✓	✓	✓		✓	✓	✓	✓	
Somerset NHS Foundation Trust (SFT) and Bristol Royal Hospital for Children (BRHC)	✓		✓		✓	✓			
Somerset NHS Foundation Trust (SFT) and Bristol Royal Hospital for Children (BRHC) (Paediatrics)			✓			✓		✓	
Liverpool University Hospitals NHS Foundation Trust (LUH)	✓	✓	✓		✓	✓		✓	

For more information about the PTF sites, please email: Marianna.Lepetyukh@healthinnovationoxford.org

Appendix 2 - Contributors

Pathway Transformation Sites

- Oxford University Hospitals NHS Foundation Trust and Oxford HIN
- University Hospital Southampton NHS Foundation Trust and Wessex HIN
- Guy's and St Thomas' NHS Foundation Trust and Health Innovation Network
- Mid Yorkshire Hospitals NHS Trust and Yorkshire and Humber HIN
- University Hospitals of North Midlands NHS Trust and West Midlands HIN
- Nottingham University Hospitals NHS Trust and East Midlands HIN
- Somerset NHS Foundation Trust and Bristol Royal Hospital for Children and South West and West of England HIN
- Liverpool University Hospitals NHS Foundation Trust and North West Coast Innovation Agency

Asthma Biologics Programme Project Team

- Dr Hitasha Rupani. Consultant Respiratory Physician | University Hospital Southampton NHS Foundation Trust
- Beverley Bostock. Asthma Lead, Association of Respiratory Nurse Specialists
- Gráinne d'Ancona. Consultant Pharmacist, Respiratory and Sleep Medicine, Guy's and St Thomas' NHS Foundation Trust
- Tracey Marriott. Director of Clinical Innovation Adoption & Digital Lead. Oxford HIN
- Dr James Rose. Director of Strategic Industry Partnerships. Oxford HIN
- Seema Gadhia. Pharmacy lead Clinical Innovation Adoption. Oxford HIN
- Marianna Lepetyukh. Senior Programme Manager. Oxford HIN
- Stuart Monk. National Programme Director AAC Programmes. The HIN Network
- Jenny Turton. Deputy Director Innovation, Research & Life Sciences. NHS England
- Victoria Spellacy. Senior Manager, Rapid Uptake Products. NHS England
- Sarah Ramjeet. Relationship Manager, Rapid Uptake Products. NHS England

Health Innovation Network

Working with Accelerated Access Collaborative

Health Innovation Oxford & Thames Valley

Connect with us

The Health Innovation Network was known as the Academic Health Science Network (AHSN) at the time when Asthma Biologic programme was commenced

For more information about past and future work, visit thehealthinnovationnetwork.co.uk
You can also follow us on social media:

HealthInnovNet

the-health-innovation-network

Authors:
Dr James Rose. Director of Strategic Industry Partnerships. Oxford HIN
Seema Gadhia. Pharmacy lead Clinical Innovation Adoption. Oxford HIN
Marianna Lepetyukh. Senior Programme Manager. Oxford HIN
Dr Hitasha Rupani. Consultant Respiratory Physician | University Hospital Southampton NHS Foundation Trust
Beverley Bostock. Asthma Lead, Association of Respiratory Nurse Specialists