

The Newcastle upon Tyne Hospitals NHS Foundation Trust Asthma Service –

1.0 Project Aim and objectives

The aim of the project was to Improve the identification & follow up of patients with Asthma who attend or are admitted to hospital outside of the Respiratory Department.

2.0 Project Objectives

The objectives of the Joint Working Project were to:

1. Identify patients attending the Emergency Department (ED) with an exacerbation of asthma who are discharged to offer specialist asthma input
2. Identify patients admitted acutely outside of the respiratory department with an exacerbation of asthma to offer specialist asthma input
3. Develop an automated alert to ensure patients with defined criteria are highlighted to the “rapid response specialist nurse” for appropriate assessment and intervention.
4. Support the detection of a group of “unknowns” generally in the age group of 19-30 who we know are difficult to engage in specialist asthma care due to poor adherence with treatment plans and attendance at reviews.
5. Development of a training module for ED staff which will form an integral part of induction training.
6. Agree metrics and outcome measures to generate data to support continuation of the service beyond the initial pilot

3.0 Key Achievements and Highlights of the Project:

The project commenced in January 2022 and was completed in March 2023 which included a 3-month extension which was agreed by Sanofi and Newcastle upon Tyne Hospitals.

The project delivered on all the following outputs in relation to the project objectives:

- 1) **Identification of patients attending the Emergency Department (ED) with an exacerbation of asthma who are discharged to offer specialist asthma input** - The first stage of this project was to advertise, interview and appoint an acute asthma clinical nurse specialist. The interviews took place in November 2021 and a CNS was appointed to the role. The CNS began advertising the service through Trust communications and visiting other departments to ensure they were aware of referral processes to begin work in identifying patients outside the respiratory department to then provide specialist asthma input.

Referrals by Source - The below table displays the number of referrals the acute asthma service received between 1 December 2021 and 1 March 2023. Referrals are categorised by the referral source.

Data captured shows there were 372 referrals that would not have happened without the implementation of this service which means that 372 patients’ lives were positively affected by this intervention. This also highlights that the communication across the different referral options has been effective given the spread of referrals from different sources.

Referral Source	Number of Referrals
Emergency Department	161
Same Day Emergency Care	33
Assessment Suite	80
Freeman wards	25
RVI wards	65
High Dependency Unit	7
Maternity	1
Total	372

Contacts following Referral - The below table displays the kind of contact patients received following their referral to the acute asthma service between 1 December 2021 and 1 March 2023

Following referral, 195 patients have been uncovered and offered ongoing service and treatment (19/214 known to service). This means that 195 patients would not have been offered this intervention to improve their quality of life without this service being in place. The majority

of the 195 new patients referred within the service received a change in treatment. 2 of the 5 patients referred into the severe asthma service received an upgrade in treatment to a Biologic. Of the total number of patients referred via EAU/ED alert or admission to a respiratory ward at the RVI, 160 received nurse led review. There were also reductions in the number of admissions, out of the total numbers of patients 9 was readmitted. That would likely have meant admitted to the RVI via EAU/Respiratory ward and not just an ED attendance.

Contact Following Referral	Number of attendances
Referred to severe asthma clinic	5
Patients known to service	19
Reviewed prior to discharge	63
Reviewed in clinic	87
Awaiting outpatient appointment	40
Total	214

- 2) **Identification of patients admitted acutely outside of the respiratory department with an exacerbation of asthma to offer specialist asthma input** – A total of 372 patients were admitted outside the Respiratory department including ED, Wards, Maternity, High Dependency unit's, same day emergency care and Assessment suites.
- 3) **Developed an automated alert to ensure patients with defined criteria are highlighted to the “rapid response specialist nurse” for appropriate assessment and intervention** - An alert system was developed on eRecord (the Trust's clinical system), this posed the most challenges due to relying on IT support to create and add the alert to the clinical system. Initially, a generic email account was set up and advertised across the Respiratory team and front of house areas. Maintaining the email account was not sustainable in the long term; therefore, the CNS looked to engage with the IT department more and eventually was in contact with a senior member of the IT team who understood how to build the alert system. It was initially constructed to allow for any patient who attended the Emergency Department whose attendance to the department was coded as 'shortness of breath' to trigger a 'message' to my message board on Power chart (part of eRecord). This obviously generated a large volume of patient messages that took time to filter through. This was re-evaluated and the design was changed to allow for patients whose attendance was coded as 'asthma, acute asthma, and exacerbation of asthma as well as shortness of breath'. This captured much more accurate information. It continued to generate a large volume of patient information: however, it became much easier to identify the right patient had previously.
- 4) **Support the detection of a group of “unknowns” generally in the age group of 19-30 who we know are difficult to engage in specialist asthma care due to poor adherence with treatment plans and attendance at reviews.**
- 5) **Development of a training module for ED staff which will form an integral part of induction training – the CNS delivered training to ED and Assessment Suite staff regarding detection of asthma and what the acute asthma service provides. The CNS was invited to partake in the weekly education sessions aimed at the rotational medical team on the Assessment Suite. This consisted of a ten-minute discussion highlighting the purpose of my role and how to refer to the Acute Asthma service. Due to the alert system being operational, the service was more aware of patients on the unit to review; however, it did not always pick up all the correct patients. Therefore, it was important the service was formally contacted for a referral. The service was rolled**

out to include Same Day Emergency Care (SDEC), the CNS was offered the opportunity to present to the Nurse Practitioners on SDEC who would assess patients with an exacerbation of asthma if it was appropriate. The CNS also attended the Respiratory wards and offered short education sessions on inhaler technique to the nursing teams. This was well received across the board.

- 6) **Agreed metrics and outcome measures to generate data to support a business case for continuation of the service beyond the initial pilot** - The metrics and outcome measures below enabled a robust business case to be approved by Newcastle upon Tyne Hospitals which meant that the service was able to secure funding to continue the service for a further twelve months with a view to seeking substantive funding following this.

Highlights of the project:

The outputs of this project have resulted in a facilitated sustainable improvement in patient care for those patients with asthma who have an exacerbation bad enough to attend ED or be admitted to hospital using a “rapid response specialist nurse”. In turn this has identified a sub-set of patients with severe asthma that require systematic assessment and consideration of additional treatment such as biologics.

The approach to this project has not only enabled better joint up collaborative working between key Clinical departments that are integral to the Severe Asthma patient pathway, but it has also opened new opportunities to share good practice with NENC AHSN and support wider Respiratory priorities across the NENC ICS.

The key outputs of this project were documented in a final Evaluation Report and Case study and the intention is for both reports to be shared with Newcastle upon Tyne hospitals, NENC Respiratory Clinical Network, NENC AHSN and NENC ICS.

This will be leveraged to focus on a Cross functional approach to share best practice and to develop solutions to further improve continued identification of patient throughput and reduce delay to referral across the NENC region.

External feedback from Newcastle Hospital:

Respiratory Service Manager:

“Working with Sanofi on this collaborative project to commence our acute asthma service has been so valuable, this service has added real quality to our service through facilitating specialised follow up for patients experiencing an asthma exacerbation to ensure they have a management plan to prevent readmission “We have also been able to demonstrate the real unmet need within Asthma which has helped us to focus our strategic priorities and business planning within our wider Respiratory service

Working with Lisa has really aided us to focus our efforts on the project through providing both project structure and accountability, as well as enabling us to share learning from across the health care sector “.

Patient Feedback shared by Respiratory Specialist Nurse:

This project made a significant improvement to the lives of people who suffer with asthma. Patients were offered appropriate follow up in a timely manner which allowed for appropriate changes to medication to be made and any further intervention by other members of the MDT. It gave patients, the space to talk openly about their fears around the condition but it also allowed for patients to have the opportunity to be reviewed at short notice if their symptoms worsened on a triaged basis. This I believe was to be one of the most valuable outcomes from running the project as patients had quicker access to the asthma service as often GPs couldn't review patients as quickly as this service was able to.