Quality Improvement within the Paediatric Severe Asthma (PSA) Service in Leicester

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Introduction

- Severe asthma affects over 200,000 people in the UK; approximately 5% are children[1,2].
- Children with PSA consume a disproportionate amount of healthcare resources, increased morbidity and even mortality[3].
- PSA requires a systematic, tertiary assessment by a specialised multi-disciplinary team (MDT).
- This approach has improved asthma control in >50% of children resulting in more targeted therapy and reduction in morbidity/hospital admissions[4].
- Recent NICE approval for the use of biologics, Mepolizumab and Dupilumab, has also increased the need for phenotyping.

- Due to an increase in primary care referrals and the general asthma workload, we currently only have space for one monthly dedicated PSA clinic.
- Consequently severe asthma patients are frequently seen in the general asthma clinic.
- We are seeing an increasing numbers of PSA referrals, resulting in increased waiting times.

Development

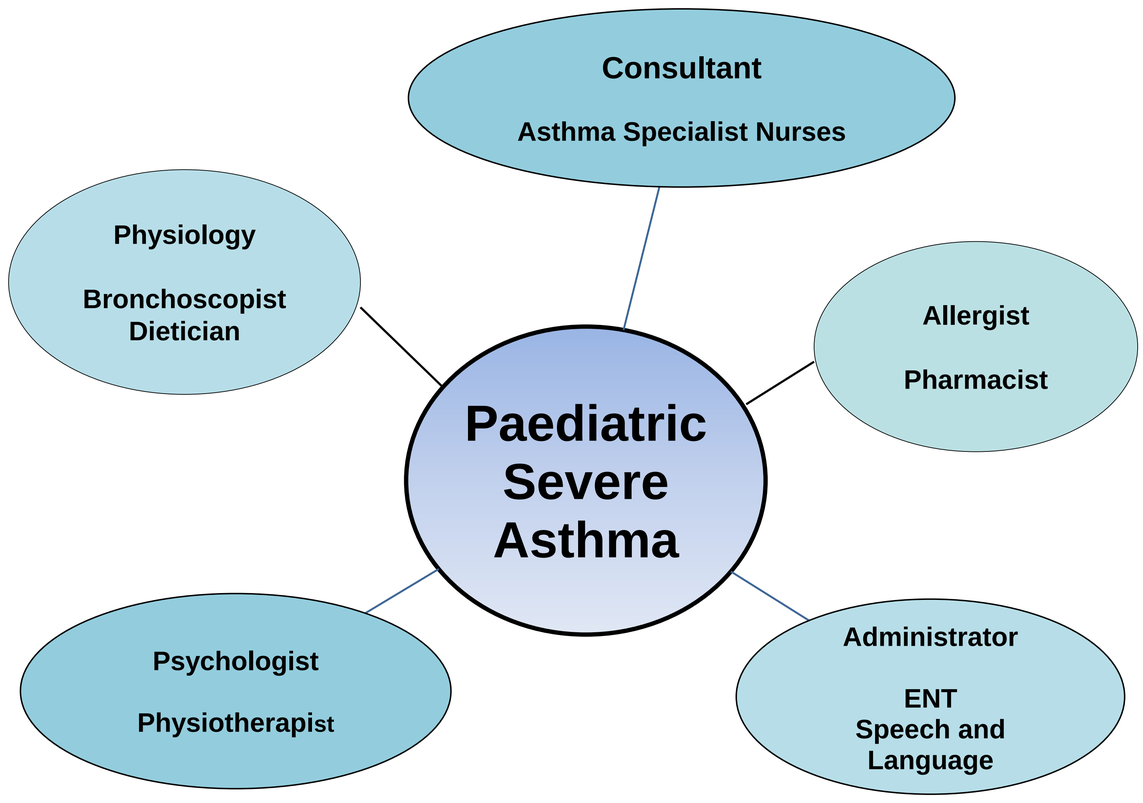
- We reviewed our service against national guidelines and specifications for difficult asthma and found areas where we could develop[5,6,7,8,9].
- We prepared a business case for additional psychology, physiotherapy, respiratory physiology, specialist nurse (nurse-led services) and consultant time.
- An asthma co-ordinator/administrator would be responsible for input of data onto the Paediatric Severe Asthma Registry, co-ordination of clinics, taking minutes of MDTs and administrative support for nurses and clinicians

- Our aim to increase our clinic capacity to weekly with more patients seen per clinic.
- We supported our business case by:
  - reviewing our coding and tariffs to maximise cost effectiveness
  - calculating expected clinic wait times based on current referrals
  - demonstrating potential clinical risk by not increasing capacity
  - reviewing our current clinic processes, including use of clinic rooms, to make more efficient use of limited physical space.

Outcomes

- We have established regular clinical MDT meetings, allowing us to plan and be more timely and responsive to patient's needs.
- We have increased our nurse-led clinics for targeted assessments, health education, lung function testing, personalised asthma action plans and review of adherence.

- Nurse-led services have provided streamlined assessments ensuring results are available at initial consultant appointment, personalising care for precision medicine.
- Additional income generated from a higher MDT tariff and additional lung function testing has allowed us to increase the capacity of our DA and non-DA clinic
- Our business case has just been approved!



Implications for practice

- In adults, severe asthma has recently been prioritised for specialised central commissioning
- The challenge is there is no centralised funding/national service specification for PSA
- Raising standards will provide more timely, high-quality and targeted care.
- Service expansion will provide infrastructure for a centre of clinical excellence, sustainable for the future in line with the NHS long term plan[10].
- Our aim is to work with regional CCGs to monitor and assess clinical and financial outcome improvements
- Other healthcare teams could use our experience to support expansion of their own services.

References:

1. ***Lang A, Carlsen KH, Haaland G, et al.*** *Severe asthma in childhood: assessed in 10 year olds in a birth cohort study. Allergy 2008; 63:1054–1060*
2. ***Ahmed, H, Turner S.*** *Severe asthma in children – a review of definitions, epidemiology and treatment options in 2019. Pediatric Pulmonology 2019. Vol 54, Issue 6. June 2019 p778-787*
3. ***Sharples, Gupta et al.*** *Long-term effectiveness of a staged assessment for paediatric problematic severe asthma European Respiratory Journal 2012, 40: 264–278*
4. ***Fleming L, Wilson N, Bush A.*** *Difficult to control asthma in children, Curr Opin Allergy Clin Immunology 2007; 7: 190-195*
5. ***NHS England. 2017.*** *Specialised Respiratory Services (adult) – Severe Asthma. Available from: https://www.england.nhs.uk/publication/specialised-respiratory-services-adult-severe-asthma/*
6. ***BTS SIGN. 2019. SIGN158****: British guideline on the management of asthma: A national clinical guideline.*
7. ***National Paediatric Asthma Collaborative. 2015.*** *Children's Asthma Clinical Service Specification Primary, Acute, Secondary (DGH), and Tertiary (Regional) Care.*
8. ***NHS England. 2016.*** *WC1 Difficult to Control Asthma Assessment in Twelve Weeks.*
9. ***NHS England 2019*** *https://www.england.nhs.uk/publication/pss8-severe-asthma-flat-final-pss-cquin-indicator/*
10. ***NHS England. 2019****. NHS Long term plan. Available from: https://www.longtermplan.nhs.uk/*