Reflections from the first 12 months of delivery of a Respiratory Diagnostic Hub for children and young people (CYP) in City and Hackney.

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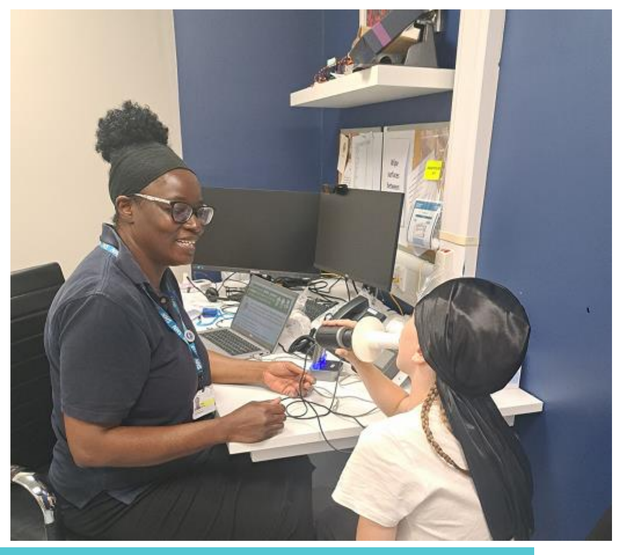
Introduction

- The Adult Cardiorespiratory Responsive Service (ACERS) children and young people (CYP) respiratory diagnostic hublets (RDH) for CYP aged 6 to 17 years old living in City and Hackney.
- Set up in 2024 and located within Primary Care Network, it is the only community CYP RDH in Northeast London.
- Fraction of expired nitric oxide (FeNO) and bronchodilator reversibility (BDR) spirometry are the tests offered.
- Prior to the CYP RDH being set up there was no provision for these tests in the community in City and Hackney.
- No access to quality assured diagnostic, risked mis-diagnosis of asthma, inadequate medication optimisation and poor patient outcomes.



Aim

The aim of this review, it to reflect on the results from the first year of the RDH and if access to accurate and quality assured diagnostics leads to improved diagnosis of asthma.

Methodology

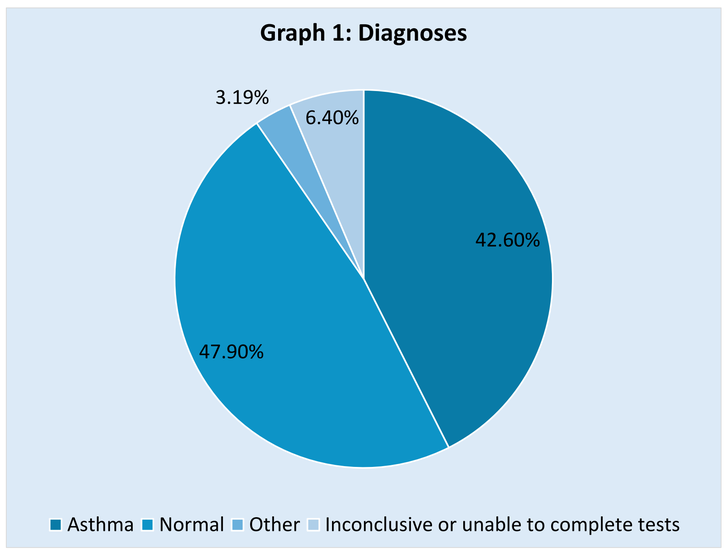
- All service level data from April 2024 until March 2025 was reviewed.
- Descriptive analysis was performed to provide insight into patient demographics and respiratory diagnostic results

Results

The CYP RDH received 321 referrals during the review period, of which 122 (38%) have had an initial appointment booked, with 77.04% (n=94) of appointments attended. Of the 94 that attended, 47 (50%) were female, mean age was 11.04 years old (range 6-17 years), and 47.9% (n=45) were from a white ethnic background. The number of tests completed, and results are outlined below (table 1 and graph 1). In total 40 (42.6%) asthma diagnoses were made.

Table 1: Results	n
On ICS at time of testing (%)	**36** (38.3%)
Patients able to perform FeNO (%)	**92** (97.8%)
FeNO positive (>35ppb) (%)	**32** (36.3%)
FeNO within normal/intermediate range (%)	**60** (65.21%)
Underwent BDR spirometry (if FENO <35ppb) (%)	**43** (71.6%)
% Change of FEV1 (mean±sd)	**9.48%** (8.994)
FEV1 % change range	**-1 to 35%**
Postive Reversibility (FEV1 12% from baseline) (%)	**12** (27.9%)
Patients unable to perform either test (FeNO & BDR) (%)	**2** (2.12%)

Key: sd: standard deviation, ICS: Inhaled corticosteroid, FeNO: Fraction of expired nitric oxide, PPB: parts per billion, <: lower than, >: greater than, BDR: bronchodilator reversibility, FEV1: Forced expiratory volume in 1 second.



Conclusion

- Respiratory diagnostic tests for the CYP population are safe and easily performed, resulting in more accurate and quality assured diagnosis.
- If FeNO was widely available in Primary Care, could help to reduce the demand for BDR spirometry by a third.
- Demand is high; therefore, capacity needs to be adequate to ensure timely diagnosis

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