Adherence in Children with Problematic Severe Asthma
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Background:
- Problematic severe asthma (PSA) is defined as poorly controlled asthma despite high levels of prescribed medications (Bush et al., 2008).
- The prevalence in childhood is thought to be between 5-10% of asthmatic children; however the amount of resources these patients consume is disproportionately high.
- PSA can be split into Difficult Asthma (DA) and Severe Therapy Resistant Asthma (STRA).
- DA is amenable to improvement by addressing relevant adherence, allergy and psychosocial issues.
- At least 50% of paediatric patients with PSA are classified as DA; with non-adherence being an issue for around half of these patients (Bracken et al., 2009).

Aims:
1. To identify the modifiable causes of non-adherence in children with PSA to inform an adherence intervention.
2. To use the Medical Research Council (MRC) (Craig et al., 2008) guidance to develop an intervention for children with DA by tailoring support to overcome the perceptual and practical barriers to adhering to treatments, as recommended in the NICE Guidelines (Nunes et al., 2009).

Methods:
Study 1: Literature reviews
- Literature Review: The known reasons for non-adherence in children with PSA
- Systematic Review: Effective components of previous asthma adherence interventions

Study 2: SmartInhaler Data
- Secondary analysis will be conducted, using electronic monitoring (SmartInhaler) collected in over 100 children with asthma, to investigate patterns of non-adherence to inform the intervention.

Study 3: A Mixed-Methods Cross-Sectional Study
- This study will use validated questionnaires and qualitative interviews with children and their parents to identify potentially modifiable factors associated with non-adherence.

Study 4: Intervention Development Group (IDG)
- A group consisting of researchers, clinicians and patients will be established. The IDG will use the PhD results to develop the intervention manual.

Study 5: Feasibility and Acceptability
- Finally, a feasibility and acceptability pilot study of the intervention will be conducted.

Potential Implications:
This PhD addresses the crucial question of non-adherence in children with PSA.
It is intended that the intervention developed will lead to a definitive multi-site Randomised Control Trial and roll-out within the wider NHS.

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References