

Paediatric Asthma and Smoking Initiative to Identify and Treat

People and Place project in Oldham





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Foreword

The legacy of the COVID-19 pandemic continues to put added strain onto our economy and our health and care system, across not just Greater Manchester, but the whole of the United Kingdom. Rising cost of living and a continued stretch on our NHS services means that tackling issues of inequality has never been more vital.

Greater Manchester has one of the highest rates of paediatric asthma hospital admissions in England at 198 per 100,000 for people aged under 19. In addition, Greater Manchester also has a higher prevalence rate of smoking (14.3%), compared to the rest of England (12.7%), approximately 200,000 people in Greater Manchester living with asthma. The system wide Make Smoking History programme has delivered the lowest prevalence the city region has ever seen and is beginning to close the gap but remains lots of work still to be done to reach our 2030 smokefree ambitions.

If we focus at a more local level, Greater Manchester also has certain localities with high rates of deprivation and healthcare inequalities. The chosen pilot location, Oldham has a high level of poverty with an IMD score of 33.2 and 28.9% of under 16s coming from low-income families it has one of the highest child poverty rates in the region, with 36.2% of children being raised with limited access, or in some cases no access, to essential resources needed to survive.

The Quality Outcomes Framework data from Primary Care records shows a consistently higher rate than the England average, with rates of smokers standing at 17.5% in 2021/2. In recent years, smoking prevalence has decreased in all socioeconomic groups in Oldham, with the exception of never worked and long-term unemployed groups which has increased to 21.8%.

The issues in Oldham are also compounded by a significant increase in population (now surpassing 242,000 people) and is one of the more culturally diverse communities in Greater Manchester, with a higher proportion (over 20%) of diverse ethnic group residents than in Greater Manchester (16.3%), engaging with some groups could be seen as a real issue when we analyse how we can best support those in most need.



Greater Manchester paediatric hospital admissions - 198 per 100,000 for people aged under 19 admitted.



Approximately 200,000 people in Greater Manchester living with asthma.



Greater Manchester has a higher prevalence rate of smoking (14.3%), compared to the rest of England (12.7%).

Foreword

After highlighting such areas of health inequalities, Oldham was identified as a place where the project could have the most impact. Thus, an innovative pilot was launched on the children's ward at the Royal Oldham Hospital (ROH). The aim of this pilot has been to transform services for children and young people living with asthma and related conditions as well as reducing avoidable harms caused by smoking or second-hand smoke inside the home.

The national Innovation for Healthcare Inequalities Programme (InHIP) was launched to address local healthcare inequalities experienced by deprived and other under-served populations, and to align with wider work between national organisations including the Accelerated Access Collaborative (AAC), NHS England's National Healthcare Inequalities Improvement Programme and the Health Innovation Network (HIN) and to be delivered in partnership with Greater Manchester Integrated Care Partnership (ICPs).

We would like to thank all involved for their valued contributions, and to thank the community members who played an integral part in sharing their insight and lived experience to be involved with this project. Their willingness and honesty have been invaluable for us to understand what is important to them and will allow worthwhile educational resources to be co-developed and co-designed as a product of this collaborative work with our partners.

Thank you for joining us on this journey as we work to address local healthcare inequalities experienced by deprived and other under-served populations. We encourage you to engage with the material that we have compiled and share your thoughts, as we strive for continued improvement to the delivery of care across Oldham, Greater Manchester and beyond.

Jane Coyne, Treating Tobacco Dependency Programme Lead at Greater Manchester Integrated Care Partnership.

Rebecca Fletcher, Director of Public Health, Oldham Council.

Aim

This document aims to provide detailed insight into the project undertaken in Oldham. It highlights the importance of understanding people and place when transforming services and implementing a broad range of activities and approaches which focus on individuals, community and environmental influences on human behaviour. The initiative was developed and delivered in partnership between Greater Manchester Integrated Care and Health Innovation Manchester.

This pack will outline the steps taken to target asthma management in children and young people. It is supported by a practical toolkit developed by Health Innovation Manchester which provides resources to help teams replicate this approach.



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Why Oldham?

About The Project

In July 2022, the NHS England’s Accelerated Access Collaborative (AAC) launched the Innovation for Healthcare Inequalities Programme (InHIP). The programmes aim was to enable quicker access to NICE-approved innovations for people suffering healthcare inequalities across one of the five Core20Plus5 clinical areas for either adults or children and young people. Locally, Health Innovation Manchester (HInM) worked collaboratively with Greater Manchester Integrated Care Partnership (GMICP) to start to identify healthcare inequalities in paediatric asthma.

The NHS England National Asthma Bundle of Care (BoC) identifies the environment as one factor impacting asthma. This encompasses air pollution, indoor air quality and parental smoking. The link between parental smoking and an increased risk of asthma in CYP is well documented. In a European study, children with high early-life exposure to tobacco smoke were more likely than unexposed children to have early transient and persistent asthma.

This need is larger in Greater Manchester which has a higher average of smokers (14.34%), compared to England (12.7%). Notably, smoking rates among routine and manual populations are as high as 24.3% and at 23.1% for never worked and long-term unemployed. As a result, GM have an ambition of being a smoke-free city region by 2030.



Asthma is the most common long-term medical condition in children in the UK, with around 1 in 11 children and young people (CYP) living with asthma.

Childhood asthma has a lifelong impact on lung health.



The UK has some of the highest prevalence rates, emergency admissions and death rates for childhood asthma in Europe.

Asthma and Lung UK advise outcomes to be worse for children and young people living in the most deprived areas, compared to less deprived areas.



According to the Asthma friendly schools’ pilot 6,482 children and young people (0-19 years) attended A&E in GM due to asthma and 1,346 were admitted to hospital between January 2022 and January 2023 alone.

Oldham has a child poverty rate of 34% (21/22) and around 38% of children living in poverty live in a smoking household within the Northwest of England.



About The Project

Asthma and smoking prevalence data identified the populations at greatest risk in Oldham. Oldham has a high level of poverty with an Index of Multiple Deprivation (IMD) score of 33.2 and 28.9% of under 16s coming from absolute low-income families.

Annual Population Survey (APS) data from 2022 shows **10.9% of adults in Oldham are smokers**. In recent years, smoking prevalence has decreased in all socioeconomic groups in Oldham, except in the 'never worked and long-term unemployed' category which has increased to 21.8%. The images to the right show the area of Oldham with high prevalence rates for childhood asthma and smoking.

As is evident in these images, the high prevalence of both asthma and smoking is clustered within the IMD deciles 1 and 2. This suggests a correlation between asthma, smoking and deprivation. Additional data has shown the most affected ethnic groups in Oldham to be the White British, Pakistani and Bangladeshi populations.

Asthma Prevalence

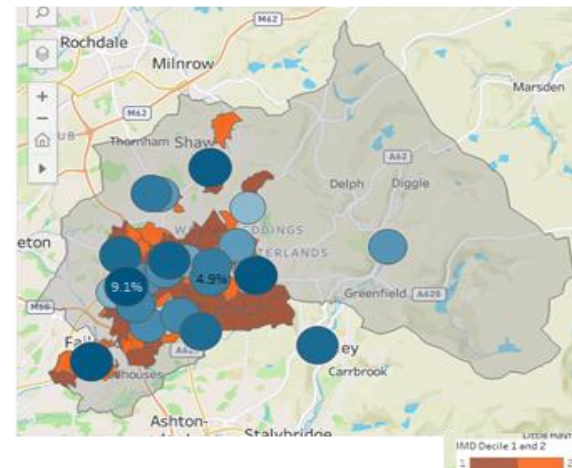


Image 1 Orange areas represent IMD deciles 1 and 2.

Blue circles represent asthma prevalence.

Smoking Prevalence

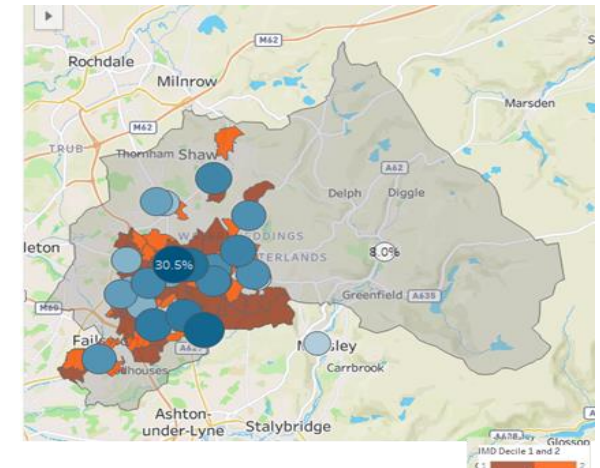


Image 2 Orange areas represent IMD deciles 1 and 2.

Blue circles represent smoking prevalence.

How did we do it?

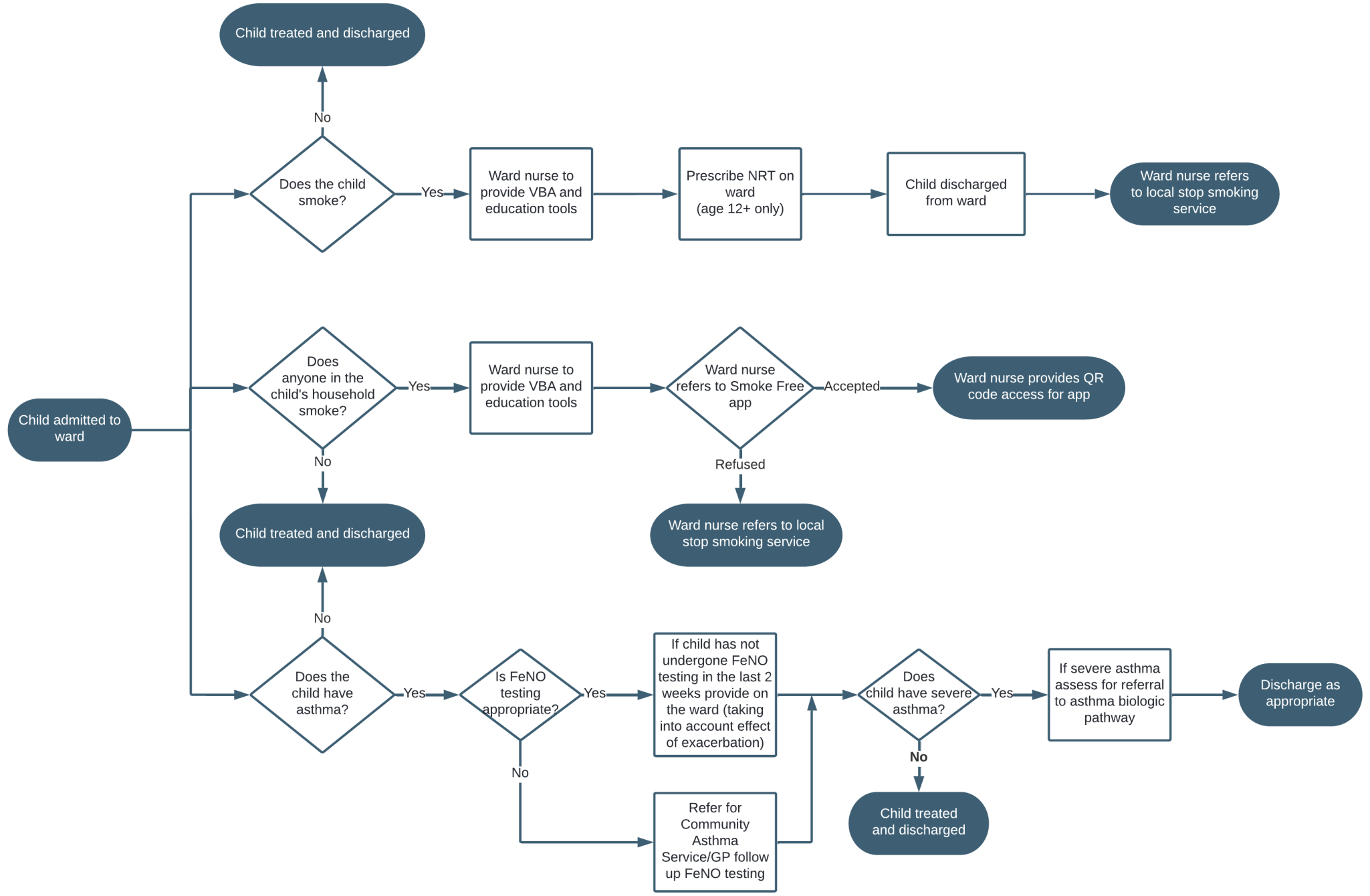
We reviewed the current pathway for CYP admissions to see where the innovations would best fit and what that pathway would look like if we introduced these innovations.

We identified the aims and measures we wanted to achieve from the initiative.

We identified the innovations that we wanted to introduce and test.

We identified which smoking initiatives would work best for the population taking account of accessibility, language barriers, what patients/target population wanted, identified barriers for clinicians and the target populations.

Oldham Pilot Pathway



The Aim of the Project

Aim:

- To increase access to FeNO testing on the ward
- To improve management of asthma in the children admitted on the ward
- To increase the number of smokefree households

Measures:

1. Admission numbers
2. Number of FeNO tests given
3. Number of referrals to the asthma biologic pathway
4. Asthma biologic uptake numbers
5. Number of referrals to the stop smoking services
6. Smoking quit rate

Primary Drivers

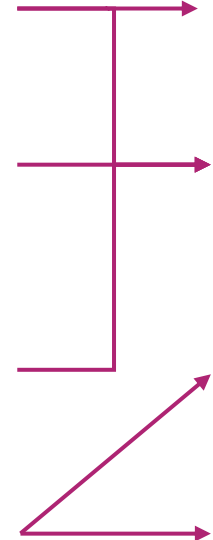
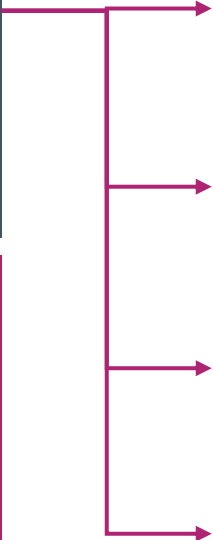
- Increased uptake of FeNO monitoring on the ward
- Increased referral to paediatric asthma biologic pathway for those with uncontrolled asthma
- Smoking cessation support provided to children admitted to the ward as applicable
- Smoking cessation support provided to household members of the children on the ward as applicable

Secondary Drivers

- Identification of children with asthma admitted to the ward
- Increased number of FeNO devices on the ward
- Increased Capacity on the ward to identify appropriate individuals
- Improved ability of ward team to provide smoking cessation advice

Change Ideas

- Recruitment of 0.6WTE Band 4 Nurse
- Procurement of FeNO device for the ward
- Procurement/provision of smoke free app licences
- Upskilling of ward staff on giving smoking cessation advice



Identifying the Innovations

Aim: To improve paediatric asthma management given the high rates of CYP asthma in Oldham, utilising a whole-household preventative approach to asthma and smoking.

What we wanted to achieve: Fewer asthma attacks, less time off school and less admissions to hospital.

The Innovation: Fractional Exhaled Nitric Oxide (FeNO) testing on the hospital ward and repeated in the community after discharge.

The Innovation: If the child or young person's asthma is uncontrolled, they can be referred for specialist treatment, to assess if they are eligible for biologic therapy medication.

Why FeNO: FeNO is a breath test used to monitor the level of inflammation or irritation in the lungs and aids in the diagnosis of asthma. With a regular test, an asthma nurse can monitor whether the child's asthma treatment plan is working.

Why Asthma Biologics: Biologic therapy medication is a specialist medicine used to help the body gain long-term control of everyday asthma symptoms which reduces the overall risk of an asthma attack.

What we learned

Pilot Outcomes – Children and Young People

The project aims were to treat children effectively when admitted to the ward for their asthma or respiratory condition. An additional aim was to increase FeNO testing on the ward to improve accurate diagnosis of asthma severity.

Hospital admissions

93 Children admitted to the ward

51% Living in a smoking household

48% With confirmed Asthma

Female

Male



37



56



42% White British

33% Pakistani

14% Bangladeshi

Of the 61 children admitted aged 5yrs or over, 23.0% (n=14) had a FeNO test carried out on the ward, with only 6 successfully obtaining a result. Reasons such as **poor technique or exacerbations of asthma** were cited as reasons for being unable to obtain a FeNO result.

Community appointments

42 of the 93 children admitted to hospital were seen in community follow-up clinics or at home. FeNO testing was carried out with all (100%) of the children attending. Due to the difficulties in obtaining a successful FeNO reading in the hospital, the results were not used to compare with those obtained in the community setting.

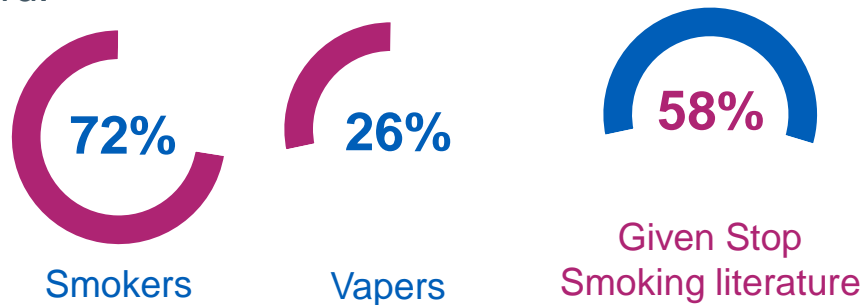
For those children where multiple FeNO readings were obtained in more than one follow-up (13 children), **nearly half of them showed improvements/reductions in their FeNO result**, indicating an improvement in their asthma following treatment and education for management to parents and eligible children.

Pilot Outcomes – Household members

The key outcomes for household members were to receive smoking cessation support, either through the Smoke Free app or by referral to the Your Health Oldham Stop Smoking service, with the aim of encouraging a smoke-free household that will help reduce exacerbations of the child’s asthma or respiratory condition.

Smoking Cessation

Of the 77 household members engaging with the project, 72% (n=56) were smokers and 26% (n=22) were vapers. 58% (n=45) were provided with Stop Smoking literature on the ward.



Quit Rates

Overall, the 3 successful quitters led to **3 households becoming smoke free**, but this is significantly lower than anticipated. NHS Stop Smoking Services data suggests that 53% of smokers are self-reported to have stopped smoking after 4 weeks of setting a quit date. As this data relates to smokers who are ready to quit, this suggests the lower percentage quitters engaged in this project are not ready to quit at the time of receiving the offer of support.

Household Member Smoking Interventions



48 Referrals
18 Set a quit date
2 Successfully quit



19 Referrals
5 Set a quit date
1 Successfully quit

Pilot Comms

The Oldham pilot has demonstrated the value of a robust communications campaign in raising awareness of impactful change. This campaign has resulted in local and national interest to implement this pathway in other areas.

The comms consisted of:

- a news story for the launch of the pilot
- a patient case study
- showcasing the pilot at TTD and CYP asthma steering groups and to the Health Innovation Network
- showcasing the pilot at conferences (SCAH, RSM, Oldham respiratory conference)
- thought leadership blogs from the Oldham and Tameside Directors of Public Health
- a series of engagement videos including a patient, the clinical team and the stop smoking services
- a news story for the launch of the educational resources
- a news story for the close of the pilot

These news stories and case studies can be found on the Health Innovation Manchester website here:

<https://healthinnovationmanchester.com/our-work/innovation-for-healthcare-inequalities-programme-inhip/>

Lessons Learned - Successes



Effective project governance and processes



Impactful Comms and resource development



Reimagined pathway transformation



Clinical and Caldicott Guardian data sign-off



Effective budget and resource management



Strong community engagement



Innovative data capture aligned to DPIA approval



Original objectives have been achieved



Solution focused project and stakeholder team



National recognition

Lessons Learned - Challenges



Defining the scope



Budget – limited funding.



Future proof data collection/
sustainability model



Staff resource – build in contingency for absence, leave, recruitment



Increased clinical oversight



Future poverty proofing for people and place



Improve onboarding to smoke free app



Improve planning for co-production activities



Define roles and responsibilities on the project



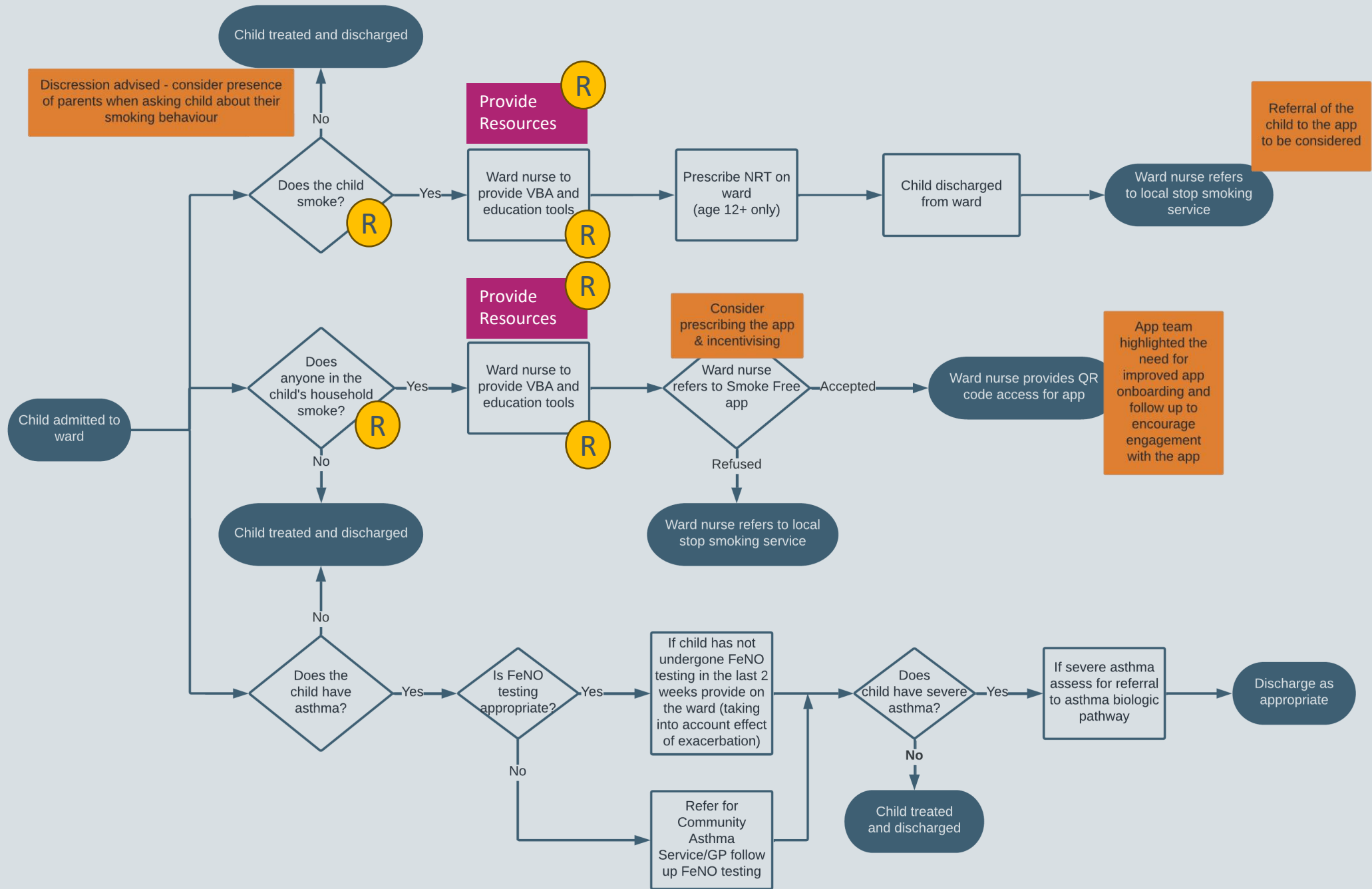
Communications – getting the right comms team involved at the start

Enhanced Pathway

Considerations, following lessons learned, to improve outcomes

Key:

- Pathway design change
- Provision of new educational resources
- R Data recording points



Guidance and tools to implement this pathway in your locality can be accessed here:

<https://healthinnovationmanchester.com/our-work/innovation-for-healthcare-inequalities-programme-inhip/>