# Nottingham and Nottinghamshire ICS Respiratory (Asthma and Chronic Obstructive Pulmonary Disease (COPD)) Clinical and Community Services Strategy Final V4.0 March 2020

# Contents

# 1. Executive Summary



The Integrated Care System (ICS) ambition across Nottinghamshire is to both increase the duration of people's lives and to improve the quality of those additional years, allowing people to live longer, happier, healthier and more independently into their old age. The aim of the Clinical and Community Services Strategy (CCSS) is to support the system to achieve this by shifting the focus of our health and care delivery from reactive, hospital based treatment models to a pro-active approach of prevention and early intervention, delivered in people's homes or in community locations where this is appropriate with a long term view of beyond 5 years.

Respiratory disease is the third biggest killer in England affecting one in five people. In the past seven years hospital admissions resulting from lung disease have risen at three times the rate of all admissions and are a major factor in winter pressures faced by the National Health Service (NHS) when non-elective admissions double for respiratory conditions. Consequently, this is now seen as a major priority in the NHS Long Term Plan (LTP), which states:

> *"Over the next ten years we will be targeting investment in improved treatment and support for those with respiratory disease, with an ambition to transform our outcomes to equal, or better, our international counterparts."*

More than 3,500 people die each year from complications due to asthma, but asthma is a manageable disease. Annually asthma and chronic obstructive pulmonary disease (COPD) costs the NHS £3 billion and £1.9 billion respectively in the UK, with £11 billion spent annually in total on all lung conditions. It is becoming well known that incidence and mortality rates from respiratory disease are higher in disadvantaged groups and areas of social deprivation and with this gap widening it is leading to worse health outcomes. This mainly results from higher incidence of smoking rates and poor housing conditions within the most deprived communities, exposure to higher levels of air pollution and exposure to occupational hazards.

This asthma and COPD service review has been undertaken as part of the ICS CCSS work stream. This has been supported by clinical experts and stakeholders in the development of place based service models for the future, to support the long term needs of our existing citizens. The review also focuses on embedding prevention in our population over the next 5-10 years, by shifting our culture from one of illness to one of healthier lifestyles and self-care.

The strategy identifies major stages in the asthma or COPD patient's journey and stresses a need to reorganise the way in which these services are delivered, from prevention through to longer term support for those at highest risk or those living with these conditions. A whole pathway approach in the provision of asthma and COPD services is crucial in order to maximise the clinical outcome for patients, their quality of life and experience of asthma and COPD services.

Key themes have been identified along with key transformational opportunities and potential impacts have been developed which include: prevention strategies to promote healthy ageing and independence and reduce avoidable admissions; improved access & shared communication about patients' past medical history from East Midlands Ambulance Service (EMAS) crews attending an emergency, acute care settings to community settings; appropriate levels of workforce skill mix 24/7 across the ICS; standardise access to smoking cessation and pulmonary rehabilitation across the ICS based on best evidence model.

A transformational 'Bridge to the Future' highlights current service offers across the ICS and identifies some potential long term next steps that can be taken to achieve the identified opportunities with proposed timelines and the expected outcome for our citizens of Nottinghamshire.

The recommended next steps are vital in keeping the momentum of change in the future offer of improved prevention and better health for our citizens; providing the right tools for our population to support their wellbeing; providing strong communication links for our staff is vital to enable them to provide the best care for our citizens; the most appropriate models of care in acute settings, neighbourhood and home need to be provided equitably across the ICS and be provided using best evidence, flexibly and in a patient centred way for them to fulfil their maximum potential throughout their lifetime.

# 2. Introduction



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| **Background and Purpose** | In Nottinghamshire we have made great progress in improving people's health and wellbeing. Today, we can treat diseases and conditions we once thought untreatable. However, our health and care system faces change and this will impact on our services, for example, the growing prevalence of long-term health conditions places new strains on our system. There is inequality evident in both the location of challenges and in access to services. In some areas, it is easier to access a GP than in others, or to find things to do to enable citizens to stay active and fit.<br><br>The ICS ambition across Nottinghamshire is to both increase the duration of people's lives and to improve those additional years, allowing people to live longer, happier, healthier and more independently into their old age.<br><br>The requirement for a CCSS came from the recognition that to achieve this ambition the system has to change as a whole, rather than just in its individual acute, primary care, community and social care elements. It is recognised that only by working together to describe changes in how care is provided across the system, rather than through individual organisations, will we deliver the scale of change required. |
| **The ICS Clinical and Community Services Strategy** | The aim of the CCSS is to support the system to achieve this by shifting the focus of our health and care delivery from reactive, hospital based treatment models to a pro-active approach of prevention and early intervention. This should be delivered closer to people's homes or in community locations where this enables better prevention, more supported self-care and earlier intervention to support citizens. The Strategy recognises that achieving this change is a long term programme that will be delivered over the next 5 years and beyond. This is also necessary to enable a necessary long term investment in the health and care buildings and infrastructure in the system.<br><br>An overall CCSS whole life model framework has been developed to focus on the need to support people through their lives from living healthy, supporting people with illness and urgent and emergency care through to end of life care. Citizens can experience different parts of the system at different stages in their lives. With the development of the overall Strategy framework the next phase of work is to review the 20 areas of service across the ICS that collectively form approximately 80% of the volume of clinical work in the ICS. This will ensure that overall the Strategy is described as a coherent whole and generates a programme of change for the whole ICS. This review of asthma and COPD is one such review and is part of the first phase of work. |
| **NHS Long Term Plan** | The NHS LTP is clear that to meet the challenges that face the NHS it will increasingly need to be: more joined up and coordinated in its care; More proactive in the services it provides; More differentiated in its support offer to its individuals.<br>The ICS has focused on describing 5 areas of focus for the delivery of the NHS LTP. These requirements are reflected in each of the service reviews that collectively will describe the CCSS<br>**1. Prevention and the wider determinants of health -** More action on and improvements in the upstream prevention of avoidable illness and its exacerbations<br>**2. Proactive care, self management and personalisation -** Improve support to people at risk of and living with single and multiple long term conditions and disabilities through greater proactive care, self-management and personalisation<br>**3. Urgent and emergency care -** Redesign the urgent and emergency care system, including integrated primary care models, to ensure timely care in the most appropriate setting<br>**4. Mental health** - Re-shape and transform services and other interventions so they better respond to the mental health and care needs of our population<br>**5. Value, resilience and sustainability -** Deliver increased value, resilience and sustainability across the system (including estates) |

# 3. Approach and Scope



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| **Approach** | This strategy has been developed through an open and inclusive process which weaves together the expertise of clinicians and care experts with commissioners and citizens in determining the future shape of services across the system. There have been a variety of stakeholder and service user events to develop a clinical and community services model. An extensive system wide piece of work is taking place across a minimum of 20 services. The CCSS Programme Board have reviewed these services against a range of quantitative and qualitative criteria and agreed the prioritisation of five service reviews. These include; Cardiovascular Disease (CVD) to Stroke ; Respiratory – Asthma and COPD; Frailty; Children and Young People (CYP); Maternity and Neonates.<br><br>This document discusses the approach, scope, the key issues and potential transformational opportunities within Respiratory (asthma and COPD) services across the ICS. Health, social care, public health and the voluntary sectors have all been considered through reviewing the current service offer across the ICS. The service review was taken over approximately 24 weeks and there were two workshops held with stakeholders across the ICS. An evidence review pack was developed which considered national and local best practice to inform the development of potential themes and new models of care where transformational change may take place across the ICS in the future. |
| **Scope** | **In scope:** Respiratory as a service includes a wide base of conditions, which presents a challenge in itself to review such a big area. However, as 80% of respiratory patients suffer from asthma or COPD, the Respiratory Steering group working with the Clinical and Community Services Strategy team agreed to focus on these two areas. Many of the principles around transforming services in asthma and COPD can also be applied to other respiratory disease areas.<br><br>The review includes all adults and young people 17 years and older, in Nottingham and Nottinghamshire ICS whose respiratory disease (asthma or COPD) risk could be reduced and those that have developed asthma or COPD.<br><br>There is a defined evidence based pathway which include the following:<br>• Prevention will be embedded throughout the whole of the patient journey, with a particular emphasis on a healthier lifestyle. This particularly links to addressing the issues with smoking prevention and pollution for this cohort<br>• Early detection and accurate diagnosis of asthma and COPD with appropriate Fractional Exhaled Nitric Oxide (FeNO) and spirometry testing<br>• Acute treatment management at the right time and in the right place<br>• Chronic disease management includes complex patients and comorbidities and access to Palliative and End of Life Care (EoL), with strong emphasis on pulmonary rehab<br><br>**Not in scope:** The review does not include children with asthma, although there is emphasis on early prevention. The importance of transition from children's to adult service was recognised by the steering group, however, this work was kept outside this specific review. |
| **Engagement** | The asthma and COPD services review has been supported by an overarching Clinical Design Group and a tailored Respiratory (asthma and COPD) Steering Group comprising of stakeholders and clinical experts from across the ICS. They have provided expert advice, guided, confirmed and challenged assumptions throughout the period of review and connected to other workstreams. These two groups have formed part of the governance process along with the CCSS Programme Board.<br><br>Two workshops have been held enabling a wide breadth of stakeholders (Patients, Clinicians, Allied Health Professional (AHP), Nurses, Breathe Easy/ British Lung Foundation (BLF), Heads of Service, Social Care, Public Health, Commissioners and others) to be proactively involved in re-evaluating current service offers across the ICS, in developing potential themes and agreeing transformational change for the future Clinical and Community Services Strategy.<br><br>In addition two patient focus groups have been held in collaboration with Breathe Easy/ BLF representatives and 1:1 conversations held with asthma patients in clinics, which has enabled them to confirm and challenge assumptions and play an active part in the co-design of any future service changes across the ICS. |

# 4. Contents



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| **Strategy Development** | This Strategy Document consists of five key elements. These have been developed through a process of design and iteration at the two workshops and steering groups. The strategy has been developed with reference to the Evidence Review document and the patient focus groups that have been held. |
| **Priorities for Change** | The work of the Steering Group and the first workshop identified four key areas of focus that need to change in the ICS for asthma and COPD care. These were based on a review of the current issues facing the ICS and the views of the Steering Group and workshop attendees. |
| **Proposed Future Care System** | Following the evidence review at an extended steering group meeting, attendees at Workshop 2 started to develop the future care system for asthma and COPD to address the Priorities for Change. The future care system is described against two dimensions<br>• **Location** split between - Home (usual place of residence) – Acute Hospital with 24/7 medical presence – Neighbourhood representing all community/primary care and ambulatory care settings<br>• **Urgency** split between - **Emergency/Crisis** requiring a service provided 24/7 to avoid crisis or risk to life – **Urgent** requiring a service 7/7 but not 24/7 to meet urgent care needs – **Scheduled** reflecting any arrangement where an appointment is agreed between a professional and a citizen<br>The intention of the system model is to focus future care delivery closer to home and also with greater levels of scheduled care to best use the available resources and reduce demand on urgent and emergency care services. The new system to address the Priorities for Change is presented for each location and then summarised overall for the ICS. |
| **Transformation Proposal** | The Transformation proposal described the key initiatives or programmes that are required to deliver this new model. Namely,<br>• **Priority** – What is the priority of the initiative in the view of the steering group and workshop attendees?<br>• **Alignment** – At what level of the system should we aim to deliver each initiative? In most instances this is Integrated Care Provider (ICP) level but there are some instances where the recommendation is for delivery to be at ICS level where the greater value is perceived to be in an overall consistent approach. Alternatively, it is at Primary Care Network (PCN) level where differential delivery would benefit the needs of very local populations<br>• **Enabling Requirements** – What is required to enable each Programme to deliver? This includes workforce, technology, estate or service configuration. There are also requirements of culture or finance and commissioning to allow the system to work together differently<br>• **Benefits and Costs** – Where available, the key benefits of the initiative at system level are summarised |
| **Bridge to the Future** | The 'Bridge to the Future' was generated at an extended steering group meeting prior to Workshop 2. It summarises the current challenges for the asthma and COPD system in the ICS now (Priorities for Change), where we would like to be and how we plan to get there. Progress with the 'Bridge to the Future' and the partnering vision can be returned to with stakeholders as the work develops to ensure the work remains on track. |

# Asthma and COPD Care Key Themes

## Prevention

- Smoking Cessation/ Pollution awareness and avoidance
- Self-Management Action Plans - avoiding exacerbations and hospital readmissions

## Detection & Diagnosis

- Early Detection
- Accurate Diagnosis
- Appropriate FeNO/ Spirometry accessible locally

## Acute Treatment Management

- Right treatment at the right time in the right place/ consider comorbidities
- COPD or Asthma discharge bundle including inhaler techniques
  Appropriate emergency oxygen
- Management of acute exacerbations/ Education for self management – inhalers, smoking advice, preventing subsequent admissions

## Chronic Disease Management

- Stratification of patients for personalised approaches including management of frailty and comorbidities/ EoL where appropriate
- Regular reviews and education/ Inhaler devices and techniques/ route of administration
- Pulmonary Rehabilitation

Multidisciplinary Team (MDT)

# Asthma and COPD in the ICS



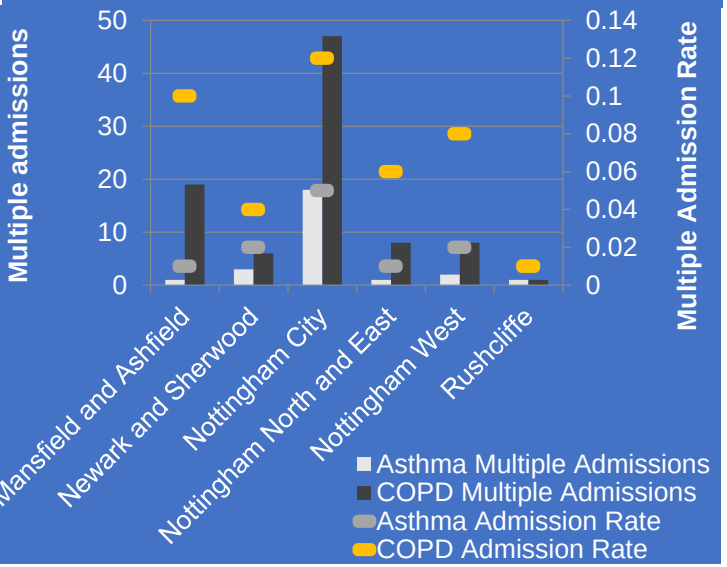
* Rate per 1,000 registered persons

| CCG | Asthma Patients | COPD Patients | Current Smokers | CCG Population | Asthma Rate* | COPD Rate* | Smoking Rate* |
|---|---|---|---|---|---|---|---|
| Mansfield and Ashfield | 18,259 | 4,940 | 39,546 | 194,801 | 93.73 | 25.36 | 203.01 |
| Newark and Sherwood | 13,450 | 3,039 | 21,202 | 135,635 | 99.16 | 22.41 | 156.32 |
| Nottingham City | 36,359 | 6,595 | 71,102 | 384,245 | 94.62 | 17.16 | 185.04 |
| Nottingham North and East | 16,387 | 2,811 | 20,022 | 140,334 | 116.77 | 20.03 | 142.67 |
| Nottingham West | 11,456 | 2,321 | 13,887 | 106,055 | 108.02 | 21.88 | 130.94 |
| Rushcliffe | 13,752 | 1,935 | 13,002 | 127,866 | 107.55 | 15.13 | 101.68 |

Asthma is the most common and COPD the 2nd most common lung disorder in UK.

In the next 20 years respiratory diseases are expected to **double**.

**Multiple emergency admissions (3+) June 2018 - May 2019**




| | | Inpatient Asthma 2018-19 | | | | Inpatient COPD 2018-19 | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | NUH City | NUH QMC | SFH Kings Mill | Other | NUH City | NUH QMC | SFH Kings Mill | Other |
| Emergency | Activity | 542 | 317 | 312 | 67 | 1,286 | 601 | 884 | 108 |
| | Bed Days | 1,689 | 709 | 888 | 134 | 6,014 | 3,573 | 4,298 | 507 |
| | Cost | £779,037 | £350,614 | £402,947 | £77,247 | £2,630,583 | £1,421,409 | £2,073,554 | £188,640 |
| Elective | Activity | 2 | 7 | 2 | 0 | 12 | 6 | 3 | 14 |
| | Bed Days | 8 | 10 | 6 | 0 | 71 | 40 | 11 | 256 |
| | Cost | £1,816 | £6,778 | £1,163 | £0 | £54,222 | £19,249 | £11,161 | £12,698 |
| Daycase | Activity | 8 | 3 | 3 | 18 | 21 | 2 | 4 | 1 |
| | Cost | £5,099 | £4,191 | £1,349 | £9,353 | £10,249 | £3,206 | £1,985 | £501 |

Nottingham City has the highest rate of new asthma diagnosis, but new COPD rates are low in Nottingham City compared with the rest of the ICS. (Nottingham has a higher proportion of younger citizens with 2 large universities).

Nottingham City has both the highest multiple asthma and COPD admissions (and multiple admission rates for both.)

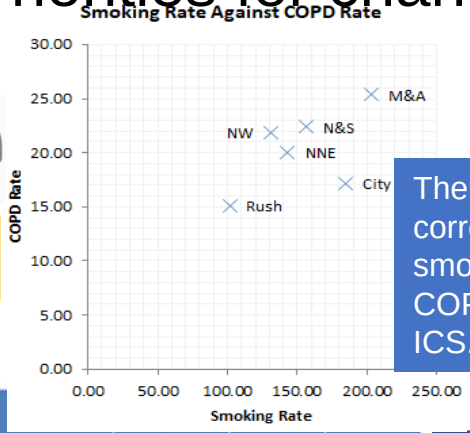
New cases of asthma and COPD: June 2018 - Mav 2019

| CCG | Asthma Patients | COPD Patients | Asthma Diagnosis Rate | COPD Diagnosis Rate |
|---|---|---|---|---|
| Mansfield and Ashfield | 471 | 477 | 2.42 | 2.45 |
| Newark and Sherwood | 348 | 240 | 2.57 | 1.77 |
| Nottingham City | 1051 | 607 | 2.74 | 1.58 |
| Nottingham North and East | 336 | 280 | 2.39 | 2.00 |
| Nottingham West | 239 | 184 | 2.25 | 1.73 |
| Rushcliffe | 260 | 188 | 2.03 | 1.47 |

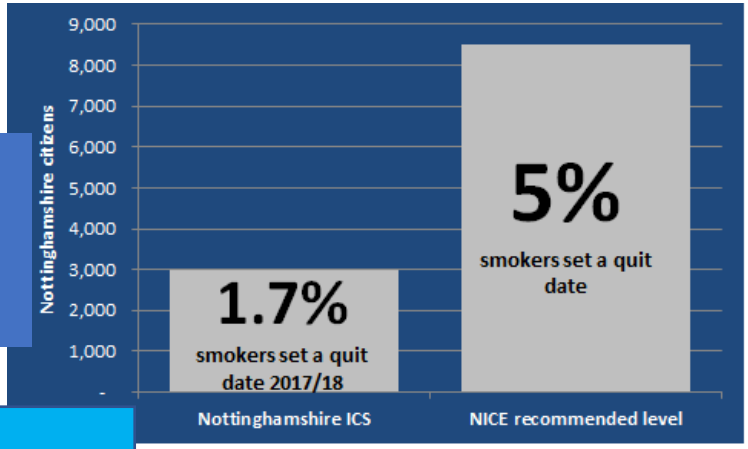
# Priorities for change



Smoking is responsible for **9** out of **10** cases of COPD

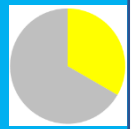


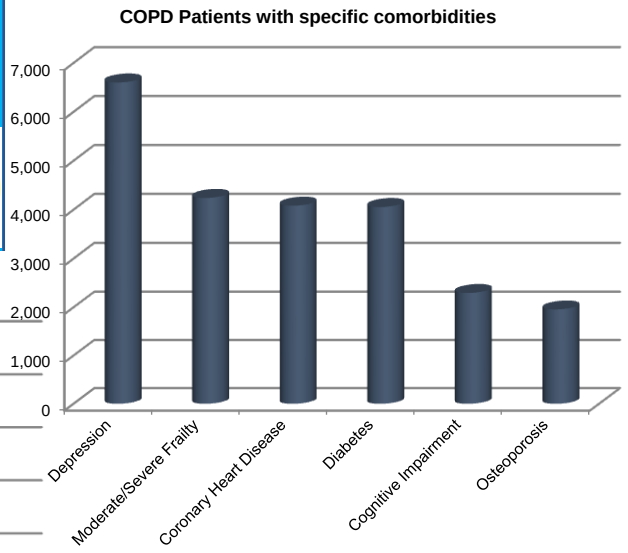

There is a correlation between smoking rates and COPD rates in our ICS.



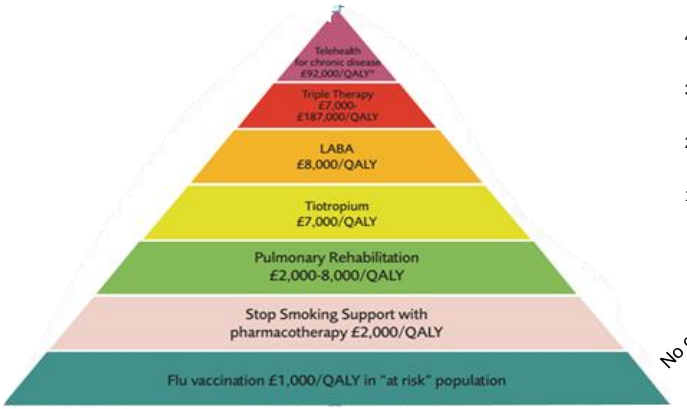

| | Department of Health & Social Care Ambition | NHS Mansfield and Ashfield CCG | NHS Newark and Sherwood CCG | NHS Nottingham City CCG | NHS Nottingham North and East CCG | NHS Nottingham West CCG | NHS Rushcliffe CCG |
|---|---|---|---|---|---|---|---|
| Prevalence in adults | 12% by 2022 | 20.5% (33K) | 16.7% (19K) | 20.8% (66K) | 16.2% (21K) | 15.3% (12K) | 10.7% (11K) |
| Prevalence in people with LTC | | 17.6% (8K) | 14.5% (5K) | 22.8% (15K) | 14.3% (5K) | 13.7% (3K) | 10.2% (3K) |

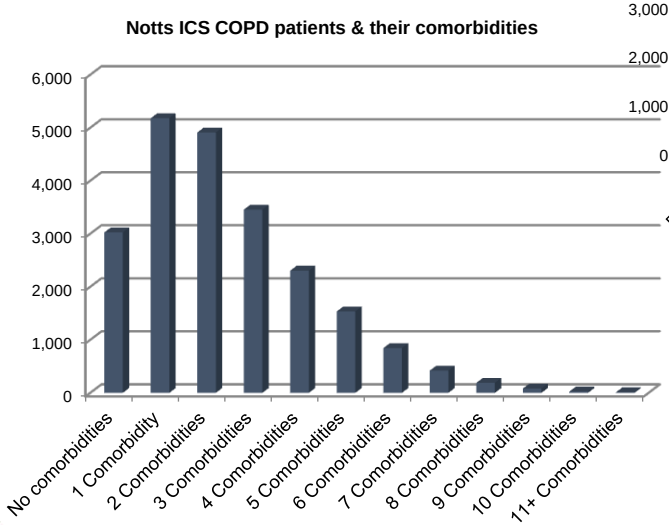
Physiotherapy-led pulmonary rehabilitation reduces exacerbations by **33%**






## London Respiratory Network COPD pyramid:

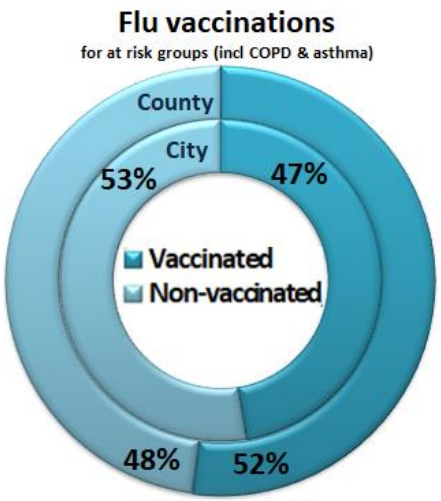



Citizens with COPD in our ICS:
**30%** also suffer with depression
**20%** also suffer with frailty
Only **14%** have no comorbidities
**40%** have 3+ comorbidities

# Priorities for change

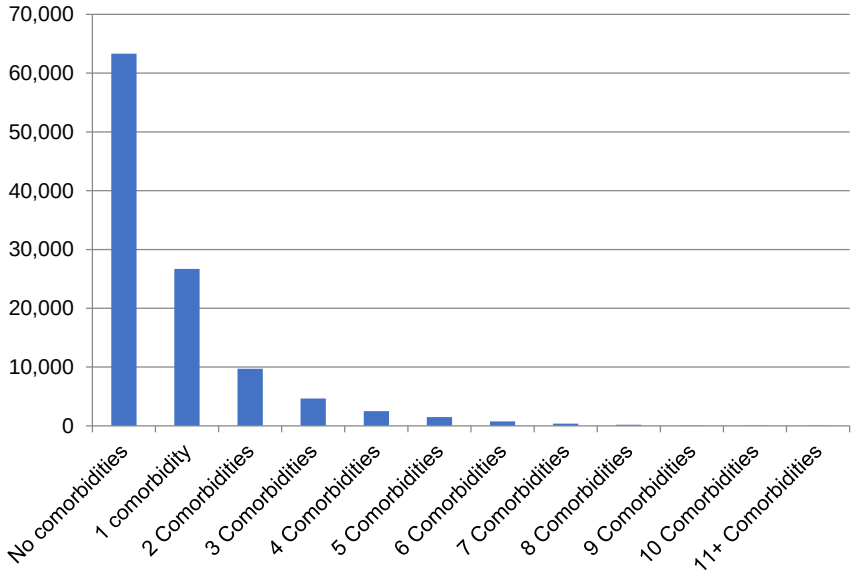




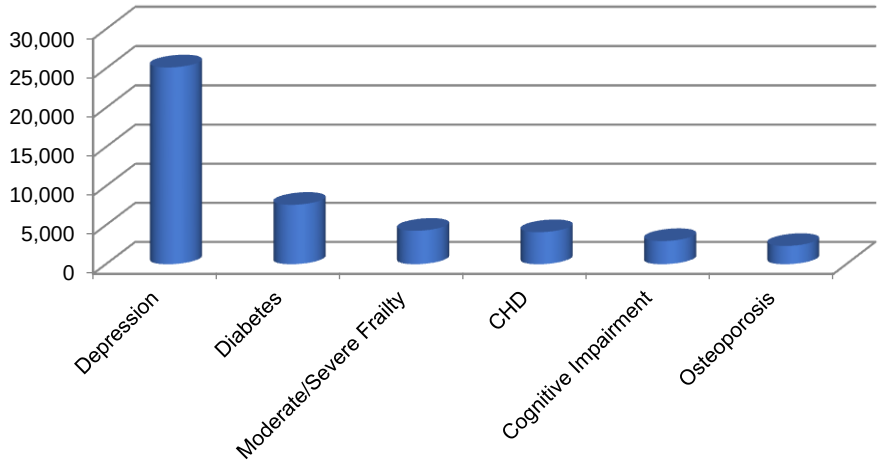

**1 in 3 patients diagnosed with asthma are not actually asthmatic**


Asthma patients with an action plan are **4x** less likely to have a hospital admission.

## Asthma patients comorbidities




## Asthma patients comorbidities




Citizens with Asthma in our ICS:

**23%** also suffer with depression

**58%** have no comorbidities

**24%** have 1 comorbidity

# 5. Priorities for Change



The workshops identified 4 key themes highlighting potential areas of change which include:

- Prevention (with emphasis on smoking, air pollution and education to enable better self-management for upstream prevention);
- Early detection and accurate diagnosis (improved early assessments and knowing who the high risk patients are, ensuring appropriate FeNO or spirometry testing is accessible locally);
- Acute treatment management (ensuring the right treatment is available in the right place in a timely manner, whilst considering comorbidities, offering COPD and asthma discharge bundles consistently to help patients understand their condition and improve self-management);
- Chronic disease management (with stratification of patients for personalised approaches, including end of life where appropriate, ensuring patients with COPD and asthma have planned and regular reviews with education on inhaler techniques and importance of medicines adherence, ensuring patients are consistently offered pulmonary rehabilitation where this clearly benefits them)

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|---|---|
| **Prevention** | **Primary prevention – Smoking cessation, pollution awareness** - Smoking remains the leading cause of preventable illness and premature death in England. In 2016 alone, there were estimated to be 77,900 deaths attributable to smoking, representing 16% of all deaths across the UK. Deprivation is heavily linked with smoking. Nationally, of those earning less than £10k per annum 19% are smokers, whereas of those earning more than £40k per annum, only 10% are smokers. Locally, better prevention is required with large areas of deprivation across parts of Nottingham and Nottinghamshire, so effective and accessible smoking cessation support is vital. The smoking cessation offer across Nottinghamshire is variable – *Smokefree Life* is available in Mid-Notts, easily accessible with self-referral possible even from your phone. *Stub-It* is the Stop Smoking Service available in Nottingham City via the Nottingham City General Practice Alliance (NCGPA), with advice available daily. This service requires a GP referral.<br><br>Air pollution has a significant effect on public health, and poor air quality is the largest environmental risk to public health in the UK. In 2010, the Environment Audit Committee considered that the cost of health impacts of air pollution was likely to exceed estimates of £8 to 20 billion. There is increasing evidence of air pollution having a potential role in causing asthma, especially in people who live near busy roads, as well as being a trigger that can make an asthmatic's symptoms worse. Locally, *Better Air Quality and Environment (Local transport for Nottingham)* sets out the Greater Nottingham approach to tackling transport related environmental issues including the response to the Government's Shared Priority for achieving better air quality, however, local Nottingham City pollution maps show there is still some way to go to tackle issues around the main areas of congestion. There are also challenges people face with pollutants to triggers within their homes, including damp releasing spores from mould.<br><br>In addition to GPs, the role of health care professionals in primary care can significantly contribute to not only primary prevention but also to the secondary prevention agenda. In 2015 the government made the supply of influenza vaccination through community pharmacies a nationally funded service. Community pharmacies provide influenza vaccinations to the general public who are considered at higher risk of contracting influenza or putting those in their care at risk of contracting the disease and this includes those with long term conditions such as asthma and COPD. There are great gains to be made locally for the ICS population by broadening the scope of those who can vaccinate – better controlled provision across the community is easily achievable through community pharmacies, but often commissioning complexities prevent this being achieved. A single database of those vaccinated would help with monitoring and promote access through understanding who the high risk patients are. |

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| **Early Detection and Accurate Diagnosis** | COPD can be challenging to identify, because symptoms are often mistaken for the gradual aging process. In fact, COPD can develop over the course of several years without any signs of shortness of breath. For this reason, COPD often goes undetected for far too long. Post-bronchodilator spirometry is used to identify abnormalities in lung volumes and air flow. Spirometry should be performed by a healthcare professional (HCP) who has had appropriate training and who has up-to-date skills. An accreditation scheme to meet the Association for Respiratory Technology and Physiology (ARTP) Spirometry Accreditation standards is being rolled out across the ICS, with HCPs trained as appropriate to their role to go on the register by 2021. There is still some way to go, where a truly dedicated service can provide consistent and equitable measurement and interpretation of spirometry delivered locally, via a universal ICS approach. For asthma there is no single diagnostic test to confirm a diagnosis. NICE states using clinical judgement to determine the probability of an asthma diagnosis, based on a combination of factors including the need for fractional exhaled nitric oxide (FeNO) testing. Local spirometry practices differ largely as a result of the required accreditation, which is a strong area of current focus across the county. |
| **Acute Treatment Management** | Supporting people to manage their own conditions is an important goal within the NHS Outcomes Framework, however, across Nottinghamshire there is currently inequitable or inconsistent access to smoking cessation and pulmonary rehabilitation (PR), leading to avoidable exacerbations for COPD patients. Some patients spoke about poor follow up and lack of understanding of what support was available.<br><br>Despite the improvements in efficacious treatments for asthma in the UK, rates of admissions and deaths remain at a plateau, where two-thirds of asthma deaths are preventable. Treatments are ineffective in more than half the people with asthma because the medication is not taken as prescribed. So rather than simply offering incrementally better medicines, we need new ways of delivering asthma care and activating patient self-management - much of this lies in patient education around inhaler use and smoking advice to prevent the next admission. By providing appropriate asthma and COPD discharge care bundles across the ICS and self-management action plans for patients.<br><br>Long Term Oxygen Therapy (LTOT) is used to treat people with stable COPD who have developed daytime hypoxaemia. National Institute for Clinical Excellence (NICE) Guidance states that people with stable COPD and a persistent resting stable oxygen saturation level of 92% or less should have their arterial blood gases measured to assess whether they need LTOT. Across Nottinghamshire, there is a need to optimise the appropriate use of oxygen across the region. |
| **Chronic Disease Management** | With clear stratification of patients it enables improved personalised care, ensuring management of comorbidities are captured including frailty and where appropriate consideration of end of life care. The number of patients with comorbidities is expected to rise and it is therefore, important, to ensure improved multi-disciplinary working across pathways (currently in Nottinghamshire 40% of COPD patients have 3 or more comorbidities, with 30% suffering with depression and 23% of asthma patients in the ICS also suffer with depression).<br><br>90% of NHS spend on asthma goes on medicines, but incorrect use of medication can also contribute to poorer health outcomes and increased risk of exacerbations, or even admission. It is essential therefore that clear education on inhaler techniques with regular recorded reviews are deployed consistently across all primary care and health community partners. NICE Guidance says to review people with COPD at least once per year and more frequently if indicated. For most people with stable severe COPD, regular hospital review is not necessary, but there should be locally agreed mechanisms to allow rapid access to hospital assessment when needed.<br><br>Pulmonary Rehabilitation (PR) is recognised as an evidence based treatment in improving dyspnoea and the quality of life for patients with COPD. It is proven that PR is highly effective in improving the exercise capacity of patients with COPD, with better results in patients with more severe disease. Of patients that would benefit from PR, currently 20% are referred for PR across Greater Notts, 25% in Mansfield and Ashfield and 30% in Newark and Sherwood (only 13% nationally). |

# 6. Proposed future care system

Home

## Planned/Scheduled

Prevention – risk factors/ primary , secondary, tertiary preventions
- Awareness raising, e.g. asthma radio/ Twitter, Notts TV
- Smoking cessation – online or face to face (house bound)
- Home Flu vaccine for house bound– visible on electronic Shared Care Record
- Expert education on air pollution – occupational exposure, housing support for at risk/ disadvantaged groups
- Mental Health/ Social care support for anxiety management at home
- Regular medication review/ flag if not required/ irregular usage quantity to flag at GP practice/ pharmacy
- Giving people knowledge, skills and confidence to take control of their lives, health and social care, making healthy choices as easy as possible.
- Diet/ exercise – voluntary sector groups

Sustainable by:
- Improved support and understanding of risks allows early prevention
- Promotes awareness to support self-care as secondary prevention
- Improved outcomes - reduced rate of disease progression and improved management by lowering smoking prevalence and improving awareness

Detection and Diagnosis – early detection & accurate diagnosis/ identical practice across region
- Spirometry for those housebound

Sustainable by:
- Encourages early detection

Acute Treatment Management – treatment/ therapies/ comorbidities/ inhaler devices and techniques
- Self Management Plan and Rescue Pack (during breathlessness) – system wide approach

Sustainable by:
- Prevents admission/ acute exacerbation and is evidence based NICE 2018 for COPD

Chronic Disease Management – prescribing optimal therapies/ regular reviews/ education and pulmonary rehab
- Home Pulmonary rehab – housebound/ online, DVD, video, etc.
- Clinical technology as a new way of delivering asthma care and activating patient self-management, e.g. App-based support
- Dietician input for nutritional advice to maintain healthy weight
- Written Asthma Plan

Sustainable by:
- Provides home support and promotes self-care and awareness for secondary and tertiary prevention – reduced admissions/ exacerbations
- Deliver evidence based medicines optimisation
- Healthy diet helps reduce breathlessness and helps maintains energy
- Reduce likelihood of emergency admission

## Urgent – 24 hours

Prevention – risk factors/ primary , secondary, tertiary preventions
- Mental health/ Social care support and safeguarding

Sustainable by:
- Provides quick response enables earlier intervention and support to avoid crisis services

Acute Treatment Management – treatment/ therapies/ comorbidities/ inhaler devices and techniques
- $O_2$ follow up within 24 hours
- Respiratory exacerbation management through urgent response from community team
- Crisis management response at home for COPD patients – consistent system-wide offer across 7 days

Sustainable by:
- Reduces chance of acute exacerbation and admission, communication with patient through technology Apps – provides timely response for urgent intervention promoting self-care.

## Emergency/Crisis – 4 hours

Acute Treatment Management – treatment/ therapies/ comorbidities/ inhaler devices and techniques
- Acute crisis management 4 hour response system-wide EMAS supported – requires system-wide access to basic records

Sustainable by:
- Prevents acute admission

Colour KEY to information source: Steering Group/ Workshop 1 Evidence Document/ Guideline Patient Focus Groups

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# 6. Proposed future care system

Neighbourhood

## Planned/Scheduled

Prevention – risk factors/ primary , secondary, tertiary preventions
- Enhance early identification across system of key risk factors between partners (dentists, pharmacists, employers) with early lung health screening
- Accommodate appointments outside working hours
- Public Health to fully support and develop multi-skilled workforce in community hubs/GP practices – all contact to be able to advise and support prevention agenda (incl. family nurses, pharmacists, dentists, social services and voluntary and community sectors) – having prevention informed workforce
- Smoking cessation access at support groups, community pharmacy, GP/ community hub, dentists – brief intervention and referral –system-wide
- Nicotine Replacement Therapy and advice to be made available locally (target areas of disadvantaged groups)
- Anxiety management, Cognitive Behaviour Therapy (CBT), Improving Access to Psychological Therapies (IAPT)/ mental health support
- Improved support for smoking – commissioned unrestricted services (incl. <18yrs) - staff training to provide accessibility/ signposting to same support
- Flu vaccines via multiple providers/ community nursing teams – access to high risk patient (identifiers to be added to the electronic shared care record (eSCR))

Sustainable by:
- Long term prevention initiatives reduce burden on future demand across services

Detection and Diagnosis – early detection & accurate diagnosis/ identical practice across region
- Universal Spirometry offer – best model to be agreed with appropriate training/ accreditation commissioned across system – measure, interpret and diagnose
- Have FeNO test routinely available locally in GP Practice/community (diagnostic) hubs
- Ear Lobe Blood Gas/ Oxygen Assessment acute into community hub in-reach to outreach then follows Chronic Disease Management

Sustainable by:
- Improves early detection and accurate diagnosis – reduces unnecessary steroids and over-diagnosis, reduces acute emergency admissions

Acute Treatment Management – treatment/ therapies/ comorbidities/ inhaler devices and techniques
- Inhaler technique training to all contact groups to advise and optimise correct use of inhaled therapies (incl. family nurses, pharmacists, dentists, social services and voluntary and community sectors)
- MDT approach to cross organisational inclusion of professionals including community and acute teams

Sustainable by:
- Reduce over-prescribing, improve outcomes, reduce admissions

Chronic Disease Management – prescribing optimal therapies/ regular reviews/ education and pulmonary rehab
- Improved and earlier pulmonary rehab in community setting – group, sports clubs, gym/ leisure centres – train to support follow up/ maintenance classes
- Consultant based community scheduled clinics with access to chest X-ray in community hub
- Anxiety management, Cognitive Behaviour Therapy
- Clinical technology as a new way of delivering asthma care and activating patient self-management, e.g. App-based support
- Social Prescribing – focus on 'what matters to me' and take a holistic approach
- Periodic Audit/ Review – COPD and Asthma requires eSCR so 'every contact counts' allows GP, Community Pharmacist, Community groups – hub based, to provide in-depth review, esp. high risk patients – system wide use of appointment or review prompts
- Oxygen assessment/ management
- Integrated advance disease planning/ End of Life planning–palliative care for respiratory in the community, RESPECT.

Sustainable by:
- Provides home support and promotes self-care and awareness for secondary and tertiary prevention – reduced admissions/ exacerbations
- Deliver evidence based medicines optimisation
- Peer support programmes to encourage self-care management
- Reduce likelihood of emergency admission

## Urgent – 24 hours

Prevention – risk factors/ primary , secondary, tertiary preventions
- Urgent mental health and social care support for patients with anxiety to help manage –CBT/ IAPT approaches

Sustainable by:
- Provides local access to required support in community hub or GP practice to prevent admissions

Detection and Diagnosis – early detection & accurate diagnosis/ identical practice across region
- Access to local X-ray for persistent exacerbation – community (diagnostic) hub. Community Respiratory Nurses to be able to request X-Rays

Sustainable by:
- Improves early detection and accurate diagnosis – reduces unnecessary steroids and over-diagnosis, reduces acute emergency admissions

Acute Treatment Management – treatment/ therapies/ comorbidities/ inhaler devices and techniques
- Ability for $O_2$ wean as early supported discharge
- In-reach to outreach
- Access to blood gases

Sustainable by:
- Reduce over-prescribing, improve outcomes, reduce admissions

Chronic Disease Management – prescribing optimal therapies/ regular reviews/ education and pulmonary rehab
- Crisis Management (Rescue pack support – 7 days per week)
- Access to X-ray and follow up in persistent exacerbation – similar to hot clinics, need input but not admission

Sustainable by:
- Response within 24 hours to prevent admission

## Emergency/Crisis – 4 hours

Colour KEY to information source: Steering Group/ Workshop 1 Evidence Document/ Guideline Patient Focus Groups

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# 6. Proposed future care system

Acute Hospital

| Planned/Scheduled | Urgent – 24 hours | Emergency/Crisis – 4 hours |
|---|---|---|
| Prevention – risk factors/ primary , secondary, tertiary preventions<br>• Mandatory training for acute staff on smoking cessation<br>• In-hospital smoking counselling and nicotine replacement therapy (NRT) advice/ service<br>• Flu vaccine for high risk unvaccinated patients<br>• Strictly enforced no smoking policy in hospital grounds<br>Sustainable by:<br>• Reduced risks and secondary/ tertiary prevention | Prevention – risk factors/ primary , secondary, tertiary preventions<br>• Brief intervention and smoking cessation offer<br>Sustainable by:<br>• Improved signposting, opportunity for access for urgent cases | |
| Detection and Diagnosis – early detection & accurate diagnosis/ identical practice across region<br>• Visible spirometry and access to records from community hubs<br>• Robust pathway of care with a multidisciplinary approach supported by robust communication and shared records between different professions (Clinician/ AHP/Social Care)<br>• Specialist diagnostic testing such as FeNO, Lung volumes<br>• Ear Lobe Blood Gas/ Oxygen Assessment acute into community hub in-reach to outreach then follows Chronic Disease Management<br>Sustainable how?<br>• Universal/ consistent offer of early detection and accurate diagnosis | Detection and Diagnosis – early detection & accurate diagnosis/ identical practice across region<br>• ELBG/ Oxygen assessment also within 24 hours<br>Sustainable by:<br>• Earlier intervention to avoid crisis services | |
| Acute Treatment Management – treatment/ therapies/ comorbidities/ inhaler devices and techniques<br>• Universal acute treatment pathways across the system<br>• Improved discharge planning and follow up personalised pulmonary rehab offer (not limited to fixed time period)<br>• Appropriate social care access from acute to community and home<br>Sustainable by:<br>• Equity of care providing consistently improved outcomes<br>• Patient satisfaction and improved outcomes | Acute Treatment Management – treatment/ therapies/ comorbidities/ inhaler devices and techniques<br>• Urgent response of oxygen wean to support early discharge – in reach to outreach<br>Sustainable by:<br>• Provides managed discharge response within 24 hours | Acute Treatment Management – treatment/ therapies/ comorbidities/ inhaler devices and techniques<br>• System wide access to clinical information including for EMAS<br>• Emergency non-Invasive outreach from Respiratory wards<br>• Recognition and response for acute cases, e.g. cyanosis, peripheral oedema –EMAS<br>Sustainable by:<br>• Earlier intervention to reduce acute deterioration/ risk to life |
| Chronic Disease Management – prescribing optimal therapies/ regular reviews/ education and pulmonary rehab<br>• Acute to community hub process – in reach to outreach planning<br>• MDT working across places, roles and organisations, including Integrated End of Life Planning<br>Sustainable by:<br>• Aligns with national objectives, improves outcomes | Chronic Disease Management – prescribing optimal therapies/ regular reviews/ education and pulmonary rehab<br>• Quick response early discharge bundle<br>Sustainable by:<br>• Provides managed discharge response within 24 hours | |

Colour KEY to information source: Steering Group/ Workshop 1 Evidence Document/ Guideline Patient Focus Groups

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# 6. Proposed future care system



Availability

Level of Care

| | Acute/ MH Hospital | Neighbourhood | Home |
|---|---|---|---|
| 4 hours or less / 24/7 | • System wide access to clinical information including for EMAS<br>• Emergency non-Invasive outreach from Respiratory wards<br>• Recognition and response for acute cases, e.g. cyanosis, peripheral oedema –EMAS | | • Acute crisis management 4 hour response system-wide EMAS supported – requires system-wide access to basic records |
| 24 hours/ Walk up and wait / 7 days | • Brief intervention and smoking cessation offer<br>• ELBG/ Oxygen assessment also within 24 hours<br>• Urgent response of oxygen wean to support early discharge – in reach to outreach<br>• Quick response early discharge bundle | • Urgent mental health and social care support for patients with anxiety to help manage –CBT/ IAPT approaches<br>• Access to local X-ray for persistent exacerbation - Community Respiratory Nurses to be able to request X-Rays – Community Respiratory Clinics, need input but not admission | • Mental health/ Social care support and safeguarding<br>• $O_2$ follow up within 24 hours<br>• Respiratory exacerbation management through urgent response from community team<br>• Crisis management response at home for COPD patients – consistent system-wide offer across 7 days |
| Scheduled / Appt based | • Flu vaccine for high risk unvaccinated patients<br>• Strictly enforced no smoking policy in hospital grounds<br>• Specialist diagnostic testing such as FeNO<br>• MDT working across places, roles and organisations, including Integrated End of Life Planning | • Smoking cessation access at support groups, community pharmacy, GP/ community hub, dentists – brief intervention and referral –system-wide<br>• MDT approach to cross organisational inclusion of professionals including community and acute teams<br>• Anxiety management, Cognitive Behaviour Therapy<br>• Social prescribing | • Awareness raising, e.g. asthma radio/ Twitter, Notts TV<br>• Smoking cessation – online or face to face (housebound)<br>• Spirometry for those housebound<br>• Clinical technology as a new way of delivering asthma care and activating patient self-management, e.g. App-based support |

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|---|---|
| Early and accurate diagnosis to include appropriate FeNO, spirometry testing accessible locally<br><br>**High Priority** | COPD can develop over the course of several years without signs of breathlessness. For this reason COPD often goes undetected for far too long. Furthermore, health and social care providers do not currently do enough to identify the people most at risk. Through improved recording of smokers (Ask, Advice, Assist), identifying and supporting those families in poor housing conditions (e.g. cold and damp), flagging patients presenting with a high risk factor (smokers, those exposed to high levels of pollution - within or outside the home), more can be done to help reduce the incidence of asthma and COPD. People over 35 who present with a high risk factor and one or more symptoms of COPD should have post-bronchodilator spirometry (NICE Guidance, 2019). For patients who are symptomatic of either asthma and COPD, it is imperative that spirometry or fractional exhaled nitric oxide FeNO tests are undertaken. In order to guarantee consistently improved earlier and accurate diagnosis these test should be performed and accessible locally by accredited HCPs who can undertake testing and interpret the results, whilst considering the results in the context of other clinical information, otherwise, evidence suggests significant misdiagnosis and less than optimal or appropriate treatments. More needs to be done across both primary and secondary care to:<br>• Identify the patients at risk (this may be flagged by any HCP trained to see the signs)<br>• Signpost to the local accredited HCP – who can undertake quality assured testing, interpretation and aid more accurate diagnosis<br>**Impact & Benefit**<br>• Early and correct diagnosis, reduce clinical variation ensuring the right care in the right place in a timely fashion<br>• Improved patient outcome through earlier intervention and improved disease management<br>• Reduced medicines spend due to accurate diagnosis and correct treatments<br>**Alignment –** For early and accurate diagnosis of both asthma and COPD a standard approach is required across the ICS to ensure consistency of access to FeNO and spirometry with effective interpretation of result made by HCPs accredited to the National Register of Certified Professionals (NRCP). Moreover, the links between primary and secondary care need to improve through better shared care records and making each contact with the patient more effective. |
| Respiratory education for citizens, healthcare professionals and respiratory patients across Nottinghamshire<br><br>**Med Priority** | The NHS LTP recognises that more needs to be done to support those people with respiratory disease to receive the right medication. 90% of NHS spend on asthma goes on medicines, but incorrect use of medication can also contribute to poorer health outcomes and increase risk of exacerbations, or even admission. The *Nottinghamshire Warm Homes on Prescription* project aimed to help low income residents with cold-sensitive long-term health conditions to achieve affordable warmth. This 12 months pilot helped residents in Nottinghamshire County Council area by making heating improvements such as boiler repairs/replacement (not an emergency service), new heating controls, insulation and draught proofing. Such schemes need to be more widely accessible across the county.<br>Through a three-tiered approach to respiratory education this can improve prevention, early detection and self-management of respiratory disease across the ICS for:<br>• ICS Population – making the population aware of high risk factors and providing early support and access through improved education, social and mental health support for anxiety management, universal access to smoking cessation<br>• Healthcare professionals/ voluntary sector support groups – enabling the wider partners to provide early support and advice to those at highest risk, with clear signposting of robust accessible services<br>• Patients (inhaler techniques, rescue medicines, medicines adherence) – giving patients the confidence and understanding to self-manage their conditions and reduce exacerbations and admissions through improved access to a robust support structure<br>**Impact & Benefit**<br>• The opportunity to educate across the ICS allows smokers to be flagged with health care professionals not just Asking, but confident to Advise and Act (with Assess and Assist appropriately aligned). Education also greatly improves self-management<br>• Has potential to drastically reduce spend on medicines and acute admission episodes through correct use of medication<br>**Alignment –** Education at all levels to be across the ICS with local signposting and support structures providing the same access |

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|---|---|
| Smoking cessation intervention with universal offer for citizens across Notts<br><br>**High Priority** | In England 60% of smokers want to quit, 10% of which intend to do so within three months, however, trying to quit on will-power alone is the least effective method. Getting support can greatly increase a person's chance of quitting successfully with local smoking cessation services known to have the highest success rates. Nottinghamshire needs a universal offer of smoking cessation for all those that need it, irrespective of postcode. Having a centralised approach (single point of contact) with locally delivered access can provide a universal offering, with particular emphasis and support in areas of social deprivation. Researchers have repeatedly demonstrated the effectiveness and cost-effectiveness of smoking cessation (£2000 per quality adjusted life year (QALY) with pharmacotherapy, of which £20,000the NHS deemed cost-effective), especially in community pharmacy led smoking cessation services. The ICS needs to exploit the opportunity to provide smoking advice or signposting through its host of healthcare professionals, whilst addressing the social and mental-health determinants that make people want to smoke in the first place. Social prescribing is a way of linking patients in primary care with sources of support within the community. It provides GPs with a non-medical referral option that can operate alongside existing treatments to improve health and wellbeing. This aligns with the NHS Long Term Plan to provide social prescribing to 2.5 million more people.<br>**Impact & Benefit**<br>• Help those that want to quit, improving healthy living for the ICS population and reducing progression of respiratory disease (WHO: the life expectancy increases for those already with a smoking related illness that quit)<br>• Long term financial gains can be realised through effective smoking cessation over time, but short term impact includes shorter LoS, less readmissions due to acute exacerbations<br>**Alignment –** Smoking cessation needs to be aligned to an ICS level, with robust support structure, accessible locally for all. |
| Accessible and timely pulmonary rehab offer as rolling programme<br><br>**High Priority** | Patients' focus groups have outlined that pulmonary rehabilitation (PR) across Nottinghamshire is "hit and miss" with some COPD patients reportedly not being offered PR when needed following their initial acute admission and diagnosis. The NHS LTP reports that 90% of patients that complete the PR programme experience improved exercise capacity or increased quality of life, but nationally PR is only offered to 13% of patients that would benefit from it (20% in Greater Notts, 25% Mansfield and Ashfield, 30% in Newark and Sherwood). By expanding PR services over 10 years, 500,000 exacerbations can be prevented and 80,000 admissions avoided nationally. By offering an accessible and timely rolling pulmonary rehab programme across Nottinghamshire, this can reach all patients and prevent avoidable exacerbations improving self-management of their condition. Furthermore, in COPD patients suffering with mild depression PR with cognitive behavioural therapy are effective and this needs to be built into a coordinated referral programme together with access to Improving Access to Psychological Therapies (IAPT).<br>Awareness of Breathe Easy support needs to be improved, especially in primary care across the community including GP practices – their management classes have been effective in further reducing GP attendances and acute admissions.<br>**Impact & Benefit**<br>• Reduced hospital admissions for acute exacerbations<br>• Improved quality of life through continued support and education<br>• Increase exercise capacity<br>• Reduced GP attendances<br>• Improved social and mental health wellbeing with access to anxiety management, CBT, IAPT<br>In turn many of these benefits reduce the financial burden on the health care sector British Medical Journal (BMJ) report between £2k and £8k per QALY).<br>**Alignment –** Pulmonary rehab should be made available county-wide, with structured services delivered through each of its ICPs |



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|---|---|
| Universal offer for oxygen services with consistent approach in assessment and subsequent provision as required<br><br>**High Priority**<br>(Quick win £) | Long Term Oxygen Therapy (LTOT) is used to treat people with stable COPD who have developed daytime hypoxaemia. NICE Guidance states that people with stable COPD and a persistent resting stable oxygen saturation level of 92% or less should have their arterial blood gases measured to assess whether they need LTOT. Across the ICS we need to optimise the appropriate use of oxygen across the region with effective assessment from secondary to primary care use. This is important for sustainability as often patients on LTOT do not receive reviews or have appropriate assessments from the outset. Work on this is currently in phase 1 and has started in Greater Notts but will join up with Mid Notts in phase 2 to develop an in reach service to the hospitals based on successful Bassetlaw and Derby models. The current supplier of home oxygen has recently introduced new technology, a portal that is eliminating prescribing errors.<br><br>**Impact & Benefit**<br>• Uniform provision, no variation in access<br>• Potential savings –this is an enabler for other priorities by releasing funds<br>• Equity of service wherever patients' normal place of home is across Nottinghamshire<br>• Upskilling professionals to recognise those oxygen users that may require more effective management/ optimisation<br><br>**Alignment –** By rolling out a uniform programme across the ICS, it will enable consistent processes to be adopted optimising the use of oxygen giving significant savings as a quick win. |
| Community response for urgent respiratory care<br><br>**Medium Priority** | Lancaster Care NHS FT (2016), found that 'Better care, better value' data, supported by local intelligence, highlighted a greater number of admissions for respiratory disease and COPD than for comparable populations and higher than expected hospital mortality rates. The acute trust had a high level of emergency admissions for COPD, which resulted in a zero to one day LoS. National evidence suggests that short stay emergency admissions are avoidable if there is appropriate alternative community provision (Foster, 2012).<br><br>Although there is currently some community provision for asthma and COPD patients, a universal offer of care across the county is required to benefit all patients and provide response for urgent respiratory care to avoid acute admissions. This requires closer partnership working with GP practices, to keep patients 'visible' and will enable improved monitoring and coordination of therapies and earlier diagnostics (access to local X-ray for persistent exacerbation in community (diagnostic) hub, with Community Respiratory Nurses to be able to request X-Rays)<br><br>**Impact & Benefit**<br>• Reduces variation<br>• Increase access and reduces acute admissions<br>• Community intervention for asthma patients – high risk patients, but often hard to reach<br>• Potential to use Advanced Care Practitioner (ACP) role can catch patients earlier to reduce admissions, also reduces impact on GP admissions if they saw some of these patients<br><br>**Alignment –** Community response for urgent respiratory care should be aligned primarily at ICP level, however, given the diverse population, with areas of greater deprivation tending to have a greater need, it is important that universal pathways are delivered at PCN level. |



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| Increase the uptake of flu vaccinations offer for high risk groups available locally<br><br>**Low Priority (Can achieve as quick win)** | Asthma is not known to be a risk factor for flu, but flu infection can be more serious for people with asthma, even if their asthma is mild or their symptoms are well-controlled by medication. This is because people with asthma have swollen and sensitive airways, and influenza can cause further inflammation of the airways and lungs. Influenza infection in the lungs can trigger asthma attacks and a worsening of asthma symptoms. It also can lead to pneumonia and other acute respiratory diseases. In fact, adults and children with asthma are more likely to develop pneumonia after getting sick with flu than people who do not have asthma. Similarly having COPD makes you more likely to have serious complications from flu and are more likely to be hospitalized if infected. Flu vaccination is the cheapest way of improving QALY (quality adjusted life years) for those with respiratory diseases. Vaccinations in people living with lung disease can reduce hospital admissions by up to 52% and reduce mortality by 70%. But uptake of the vaccine in people with chronic respiratory conditions can be further improved (81% in our ICS, 78.1% in England). This leaves many people with lung disease at risk of complications associated with flu. Despite national drivers to improve the uptake of flu vaccinations, there are still many at high risk not receiving them. There are quick wins to be gained through focus on improving this, including improved quality of life for those at high risk and savings through reduced admissions to acute hospitals.<br><br>**Impact & Benefit**<br>• Improve quality of life through reduced exacerbations in asthma and COPD patients<br>• Potential savings through reduced acute admissions – this is an enabler for other priorities by releasing funds<br>• Flu vaccine is already available to high risk groups – the means to deliver this needs to be optimised<br><br>**Alignment –** Improving the uptake of flu vaccinations needs to be aligned to an ICS level, appropriate training and support at local PCN levels to increase accessibility through a range of healthcare professionals |
| Development of MDT approach to support holistic care across the pathway<br><br>**High Priority** | Up to 10% of asthmatics have “difficult asthma”, however, they account for 80% of asthma-related expenditure and run the highest risk of acute exacerbations (British Thoracic Society (BTS) guidelines). An estimated 75% of admissions for asthma are avoidable. Guidelines advise that these patients be managed by an experienced multidisciplinary team (MDT). Introducing an MDT at University Hospital Southampton FT showed that MDT case management approach significantly reduces hospitalisation in asthma patients with prior frequent admissions. Right Care (NICE CG101) recommend multidisciplinary working for COPD management. MDT meetings should aim to optimise management and improve pathways for respiratory patients by improving communication between providers across settings and disciplines also promoting the benefits of holistic care across the pathway. Education of the MDT members would also occur with the benefit of safer practice. The MDT can allow discussion of complex patients characterised by (multiple) comorbidities, frequent exacerbations and admissions, social and mental health problems, unclear diagnosis and suboptimal responses to interventions. They should also include access to palliative care and end of life (EoL). With the high rate of comorbidities in the region, especially for COPD patients, could the introduction of joint outpatient clinics provide improved management of comorbidities?<br>**Impact & Benefit**<br>• Making use of technology (e.g. Guidance on Risk Assessment for Stroke Prevention for Chronic Obstructive Pulmonary Disease (GRASP-COPD)), target those complex/ advanced patients that require a different approach including those requiring frequent, unplanned acute care – risk stratifying to optimise for the longer term<br>• Promotes self-management through development of individualised plans in collaboration with each patient and their families or carers<br><br>**Alignment –** Personalised care and MDT management of patients should be aligned at ICP level with the same standards across the ICS. |



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# 7. Transformation Proposal



| | Priority (High/ Med/ Low) | Alignment (ICS/ ICP/ PCN) | Workforce | Technology | Estate/ Configuration | Finance/ Commissioning | Culture | Benefits (*Less than £20,000 per QALY is cost effective) |
|---|---|---|---|---|---|---|---|---|
| Early and accurate diagnosis to include appropriate FeNO, spirometry, accessible locally with access to another level of diagnostics input if/ as required | High | ICS | Apprenticeships/ physiologists providing quality assured practitioners working across the sector linking 1° and 2° care | History - care record/ single ICS wide IT System | Locating community hubs with good transport links and parking on flat. | | Encouragement to come to community. Reduce isolation. Communication with patients to define the diagnosis. | Mansfield & Ashfield taking part in phase 1 Lung Health Checks Project expected to discover 800 new cases of COPD.<br>1/3 first hospital admissions for COPD are undiagnosed |
| 3 tiered approach to respiratory education across Nottinghamshire, include smoking, diet, pollution awareness:<br>• ICS Population<br>• Healthcare professionals/ voluntary<br>• Patients (inhaler techniques, rescue meds) | Med | ICS | PH Consultant led education/ training for joined up teams across the system | App/ Web/ TV based advice/ information – displays in healthcare environments | | | Linking services + sharing to prevent patients needing to repeat themselves | |
| Smoking cessation intervention:<br>• Identify smokers (Ask, Advice, Act) and provide access to therapies<br>• Universal offer for citizens across Notts, convenient time access | High | ICS (with single point of contact) | Training to feel confident in providing that initial advice at patient contact in hospital<br>Community pharmacy | Apps for cessation support.<br>Skype consultations with technology that can handle it. | | | Making smoking cessation an integrated part of the LTC Treatment<br>Central phone number for all smoking cessation services | *£2,000 per QALY (with pharmacotherapy- BMJ) |
| Accessible and timely pulmonary rehab offer as rolling programme:<br>• Coordinated referral process<br>• Universal offer across Nottinghamshire for the right patients at time of need<br>• Anxiety management, IAPT/ CBT as part of PR but also accessible pre/ post diagnosis<br>• Breathe Easy access - awareness to be raised – Social Prescribing<br>• Post PR exercise access available to suit | High | ICP | More staff (physiotherapists, nurses and community support workers, dieticians, psychological therapists) needed to provide extra classes<br>Training to allow improved signposting , especially awareness of Breathe Easy support | | Community hub to host rolling programme | | Giving patients the continuity. Leading onto Breathe Easy or similar group, but supported by nurses. Post rehab exercise classes | Net saving £152 per person (not sig)* £0 per QALY (0.65-0.76 probability <£0 per QALY), 0.03 QALY pp<br>BMJ- £2-8K / QALY<br><br>Cost £606 - £713 (17 - 20 attend) |
| Universal offer for oxygen services with consistent approach in assessment and subsequent provision as required | High (quick win to save) | ICS | Integrated oxygen service in community + hospital to assess/ prescribe/ manage $O_2$ needs | New portal introduced by supplier will eliminate prescribing errors, not only providing a QIPP, but increased safety for patients. | | | 2° care to 1° care. Oxygen specialists' managing the oxygen needs more effectively | Quick win, PID to be shared w/c 30/9/18, financial benefit understood better then £107k saving over two years |
| Community response for urgent respiratory care and appropriate follow up to prevent/ reduce future risk | Med | ICP/ PCN | ACPs to be able to deliver out of hospital urgent care to prevent admissions | Mobile tech. for shared records – with right skill set | Likely to be community hub based with home visits as required | | Need to keep patients visible and on the books/ records to monitor therapies. | £200-£900k saving assuming 20%-90% eligible for community response |
| Increase the uptake of flu vaccinations offer for high risk groups available locally<br>• Data sharing to confirm whether vaccinated or not<br>• Provide through range of HCPs able to vaccinate (e.g. community pharmacists/ dentists) | Low – can achieve as quick win | ICS | Training programme for all appropriate staff | Shared care record/ single ICS wide IT System – read/ write access to update | | Money to follow patient | Prevent perverse incentives creating competition for income. Improve communication across all professionals | *£1,000 per QALY (BMJ)<br>Hospital admissions reduced up to 52% mortality reduced up to 70%<br>Cost £15 per vaccination. |
| To encompass personalised medicine, development of MDT approach to support holistic care across the pathway, including medicines management, managing complex patients and access to palliative care/ EoL, including comorbidities | High | ICP with same stds. across ICS | Need for clinician, nurse, therapy, dietetics, pharmacy, GP, psychology, care coordinators | Technology that stratifies patients within the healthcare system, e.g. GRASP-COPD or similar | Via community Hub | Money to follow patient Commissioning consultants for community clinics | Truly integrated and aligned – create trust to prevent repeating questions to patients | Asthma review average cost £32.17 average cost of admission £743. Cost effective. Including psychological component in a breathlessness clinic for COPD in Hillingdon Hospital led to fewer A&E presentations and fewer bed days pp in the next 6 months saving of £837pp – around four times the upfront cost |

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# 8. Enabling Requirements



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| **Workforce** | Enhancing the future health and social care for asthma and COPD services, requires the following main considerations for workforce:<br>• Cross pathway working (primary and secondary care) for physiologists, perhaps introducing apprenticeship opportunities<br>• Strong involvement from Public Health consultants to lead the prevention agenda, providing appropriate training across the service<br>• Widespread training of healthcare professionals (HCPs) to empower them to provide appropriate advice or signposting for smoking cessation<br>• More staff required to provide county-wide pulmonary rehab and training to improve signposting of available support, including voluntary sector<br>• Appropriate staff trained to optimally assess, prescribe and manage oxygen needs across primary and secondary care<br>• Inclusion of MDT working as appropriate in job plans to ensure adherence/ attendance |
| **Technology** | The main areas in which technology can effect transformation for COPD and asthma care include:<br>• A single IT system providing appropriate access to electronic shared care records – across both health and social care settings<br>• App development/ promotion for smoking cessation/ signposting locally. Waiting rooms in various health and social care settings to use screens with rolling information on health and social care advice/ support services available – promote healthier living<br>• Better use of reliable handheld devices across community and home settings to improve access to records<br>• Technology to stratify patients to match risk/ service needs (e.g. GRASP) |
| **Estate** | • With strong emphasis on making respiratory care more locally accessible, there is a drive to host services in local community hubs.<br>• Spirometry and FeNO testing accessed locally through accredited respiratory nurse<br>• Increased access to pulmonary rehab closer to home<br>• Universal smoking cessation offer with consistent services accessed locally |
| **Culture** | • To drive a culture change we need shared and integrated use of workforce across organisations to enable the sharing of resources as there are limited staff groups and expertise, with the introduction of MDTs this should improve education across the workforce.<br>• Organisational trust and changes in how future services are commissioned will provide the greatest influence on the future of integrated service provision and how best evidence can influence the future asthma and COPD service offer across the ICS. |

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# 9. Asthma and COPD Services Vision



From…

To…

| | 2021/22 Phase 1 | 2022-2025 Phase 2 | 2025+ Phase 3 | |
|---|---|---|---|---|
| • Inconsistent smoking cessation, support and education<br>• Varied take up of flu vaccine for high-risk groups<br>• Low awareness of long term risks early enough | **Prevention**<br>Build in 'Every contact counts'<br>Dismiss myths about flu where appropriate give on discharge from hospital<br>County wide contact to signpost to services<br>Develop platform for single point of access to smoking cessation | Rollout platform for local smoking cessation from ICS centrally<br>Make vaccinations more accessible – countywide register to be developed and accessible for HCPs<br>Deeper dive into measure of social deprivation | Using influences positively<br>All HCPs to be able to give flu jabs in all areas<br>Smoking cessation signposted or advice given across range of HCPs | • Reduction in new smokers<br>• Easy and equitable access to smoking cessation for all patients<br>• High take-up of flu vaccines for all high risk patients + care workers, social staff and families<br>• Wide-spread public awareness of smoking related activity |
| • Inaccurate or delayed diagnosis with ongoing symptoms<br>• Variable spirometry, FeNO and peak flow use regionally<br>• Over-diagnosis of asthma and COPD | **Detection and Diagnosis**<br>Review and standardise commissioning<br>Start with those already providing spirometry and ensure accreditation to NRCP<br>Skill mix appropriately<br>In reach/ Out reach staff<br>Face to face discussion is vital<br>Develop plans for community hubs<br>Lung cancer screening to help identify COPD patients | Increase skill mix to allow for enough staff to deliver and interpret spirometry/ FeNO in community hub<br>Fluid workforce enabling 2° prevention<br>ICT results available across ICS<br>Agree estate requirements | Continuous education and training and maintaining competency<br>Review location and workforce<br>Review estate and workforce<br>Reassess vs. guidelines | • Skilled workforce providing a consistent, accurate, timely diagnosis accessible locally<br>• Initial and ongoing training provided by the right people in the right place<br>• Reviewed appropriately and available to clinicians |
| • Variation in multidisciplinary working across the pathway<br>• Clinical variation in the management of comorbidities and frailty | **Acute Treatment Management**<br>Map out to understand current position – Identify requirement of MDT and joined up working with other services (e.g. LTP drive for Respiratory to work with CVD)<br>Review and optimise medicines – technique and adherence<br>Exacerbation follow-up – meet NICE standards | More flexibility, re. referral criteria (LTP - CVD/ Respiratory working closer MDTs to support comorbidities) – perhaps through the use of joint outpatient clinics<br>More equitable access across areas | Ongoing services for those that have completed the course of PR<br>More availability out of hours for those at work | • Equality of access of a high standard of primary and secondary care that can work in collaboration<br>• Improved and consistent education about self-management<br>• Effective MDT partnership working to manage comorbidities and follow up of every acute event<br>• Easy access to medical records for EMAS<br>• Appropriate care closer to home to avoid acute admissions |
| • Inappropriate inhaler techniques and follow up reviews<br>• Variable offer and take up of pulmonary rehab across the region<br>• Inappropriate pharmacotherapy plans<br>• Variation in optimised treatments for comorbidities | **Chronic Disease Management**<br>Better information sharing between GP/ pharmacy<br>Standardise issue of inhalers to include technique/ adherence<br>Improve knowledge of staff to encourage promotion of PR<br>Better identify those needing PR<br>Consistent reviews including comorbidities<br>Improve pulmonary rehab/ CBT/ IAPT and anxiety management | Standardise pharmacy provision<br>Confident workforce<br>Flexible approach for those with additional needs<br>Improved uptake of PR for those needing it<br>Social prescribing, MH and social care support and true partnership working with voluntary sector groups (Breathe Easy) | Developed relationships to allow more informed MDT working<br>Integration between medical plans (at a consultant level) but also across into community<br>Clear and consistent signposting to voluntary sector groups to assist with post PR exercise | • All staff to offer inhaler techniques and same everywhere, every contact<br>• Appropriate inhaler prescribing<br>• A role for digital technology<br>• All staff skilled in promoting PR, ensuring PR is accessible, adhering to quality assured, include education<br>• Self referral to PR<br>• Maintenance classes available to all for free (e.g. Breathe Easy and other voluntary groups)<br>• LTC patients to remain on Specialist nurse caseload |

Shift from Acute to Chronic Disease Management

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# 10. Conclusions and Next Steps



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| **Conclusions** | The review of asthma and COPD services as part of the development of a Clinical and Community Services Strategy for Nottingham and Nottinghamshire ICS has been undertaken using a co-design model where patients, families, carers, key stakeholders and voluntary sector groups such as the British Lung Foundation and Breathe Easy, have collaboratively worked together to shape a vision for the future care system. The four key themes for improvement identified are:<br>• Prevention (with emphasis on smoking, air pollution and education to enable better self-management for upstream prevention)<br>• Early detection and accurate diagnosis (improved early assessments and knowing who the high risk patients are, ensuring appropriate FeNO or spirometry testing is accessible locally)<br>• Acute treatment management (ensuring the right treatment is available in the right place in a timely manner, whilst considering comorbidities, offering asthma and COPD discharge bundles consistently to help patients understand their condition and improve self-management)<br>• Chronic disease management (with stratification of patients for personalised approaches, including end of life where appropriate, ensuring patients with asthma and COPD have planned and regular reviews with education on inhaler techniques and importance of medicine adherence, ensuring patients are consistently offered pulmonary rehabilitation where this clearly benefits them)<br>The review describes a future care system in optimal care settings and with care provided at different levels of urgency and envisages 5 high priority, 2 medium priority and 1 low priority programmes to transform care:<br>• **High** - Early and accurate diagnosis to include appropriate FeNO, spirometry testing accessible locally<br>• **Med** - Respiratory education for citizens, healthcare professionals and respiratory patients across Nottinghamshire<br>• **High** - Smoking cessation intervention with universal offer for citizens across Notts<br>• **High** - Accessible and timely pulmonary rehab offer as rolling programme<br>• **High** - Universal offer for oxygen services with consistent approach in assessment and subsequent provision as required<br>• **Med** - Community response for urgent respiratory care<br>• **Low** - Increase the uptake of flu vaccinations offer for high risk groups available locally<br>• **High** - Development of MDT approach to support holistic care across the pathway<br>To achieve these there are a range of enabling requirements for the ICS across workforce, estate, technology, culture and financial systems. Collectively these initiatives can transform and provide long term health improvement and sustainability in the areas of asthma and COPD care in Nottingham and Nottinghamshire ICS. |
| **Next Steps** | This strategy sets the future direction of development for asthma and COPD Care in the ICS and it is proposed it will shape future work of the ICS in a number of ways:<br>• The identified priorities and programmes should be used to inform commissioning ICS, ICP and PCN activity<br>• The enabling activities require development and inclusion in the relevant ICS workstreams to inform their work programmes<br>• The estate and configuration changes proposed require inclusion in a programme of pre-consultation business case development alongside the service changes recommended from other reviews<br>• The aggregate impact of the collective suite of service reviews should be used to shape focus of future service provision in acute and community settings in the ICS |

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# 11. List of Abbreviations



| | | | |
|---|---|---|---|
| 1°, 2° Care | Primary, Secondary Care | LoS | Length of Stay |
| A&E | Accident and Emergency | LTC | Long Term Conditions |
| ACP | Advanced Care Practitioner | LTOT | Long Term Oxygen Therapy |
| ARTP | Association for Respitatory Technology and Physiology | LTP | Long Term Plan |
| BLF | British Lung Foundation | MDT | Multi-Disciplinary Team |
| BMJ | British Medical Journal | MH | Mental Healthcare |
| BTS | British Thoracic Society | NCGPA | Nottingham City General Practice Alliance |
| CBT | Cognitive Behaviour Therapy | NHS | National Health Service |
| CCG | Clinical Commissioning Group | NHSE | National Health Service England |
| CCSS | Clinical and Community Services Strategy | NHSI | National Health Service Improvement |
| COPD | Chronic Obstructive Pulmonary Disease | NICE | National Institute for Health and Care Excellence |
| CVD | Cardio Vascular Disease | Notts. | Nottinghamshire |
| CYP | Children and Young People | NRCP | National Register of Certified Professionals |
| ELBG | Ear Lobe Blood Gas | NRT | Nicotine Replacement Therapy |
| EMAS | East Midlands Ambulance Service | NUH | Nottingham University Hospitals |
| EoL | End of Life | $O_2$ | Oxygen |
| eSCR | Electronic Shared Care Record | PCN | Primary Care Network |
| FeNO | Frasntonal Exhaled Nitric Oxide | PH | Public Health |
| FT | Foundation Trust | PHE | Public Health England |
| GP | General Practitioner | PHM | Population Health Management |
| GPRCC | General Practice Repository for Clinical Care | PID | Project Initiation Document |
| GRASP-COPD | Guidance on Risk Assessment on Stroke Prevention for COPD | PR | Pulmonary Rehabilitation |
| HCP | Healthcare Professional | QALY | Quality Adjusted Life Years |
| HES | Hospital Episode Statistics | QIPP | Quality, Innovation, Productivity and Prevention |
| IAPT | Improving Access to Psychological Therapies | QMC | Queen's Medical Centre |
| ICP | Integrated Care Partnership | SFH | Sherwood Forest Hospitals |
| ICS | Integrated Care System | SIGN | Scottish Intercollegiate Guidelines Network |
| IT | Information Technology | WHO | World Health Organisation |

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# 12. Data Sources



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| **Data Sources** | NHS RightCare<br>Local Data from CCGs (from HES and GPRCC)<br>Public Health – fingertips<br>NHS Digital<br>Asthma.org.uk<br>NICE guidance<br>British Lung Foundation<br>NHS Long-term Plan<br>National Asthma and COPD Audit Programme<br>Office of National Statistics<br>Poppi – Projecting Older People Population Information System |



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