MANCHESTER JOINT STRATEGIC NEEDS ASSESSMENT
ADULTS AND OLDER PEOPLE

CHAPTER: Physical Health
TOPIC: Long Term Conditions - Respiratory diseases

WHY IS THIS TOPIC IMPORTANT?

Overview of Respiratory Illness

Respiratory disease is a medical term that encompasses pathological conditions affecting the organs and tissues that make gas exchange possible in higher organisms. The term includes conditions of the upper respiratory tract, trachea, bronchi, bronchioles, alveoli, pleura and pleural cavity and the nerves and muscles of breathing. Respiratory diseases range from mild and self-limiting, such as the common cold, to life-threatening entities like bacterial pneumonia, pulmonary embolism, acute asthma and lung cancer.

Chronic respiratory diseases (CRDs) are diseases of the airways and other structures of the lung, the most common of which are asthma and chronic obstructive pulmonary disease. CRDs are not curable, however, various forms of treatment that help dilate major air passages and improve shortness of breath can help control symptoms and increase the quality of life for people with the disease.

The British Lung Foundation's report "Battle for Breath; the Impact of lung disease in the UK 2016" identifies lung disease as being one of the top three causes of death in the UK. Surveys of the general population suggest that approximately 12.7 million people in the UK (approximately 1 in 5) have a history of asthma, Chronic Obstructive Pulmonary Disease (COPD) or another longstanding respiratory illness. Half of these (about 6.5 million people) report taking prescribed medication for respiratory illness in the last year.

Table 1: Numbers of people with respiratory illness

The table below shows the estimated numbers of people alive in the UK on 1 January 2013 with a diagnosis of respiratory illness at any time in the past.

	Total	Male	Female
Asthma	8,028,741	3,873,724	4,155,017
Bronchiectasis	211,598	88,993	122,606
COPD	1,201,685	627,019	574,666
Interstitial Pulmonary Fibrosis (IPF)	32,479	19,450	13,028
Lung Cancer	85,796	45,329	40,467
Mesothelioma	5,419	4,255	1,164
OSA	201,411	152,074	49,337
Sarcoidosis	107,824	52,514	55,310

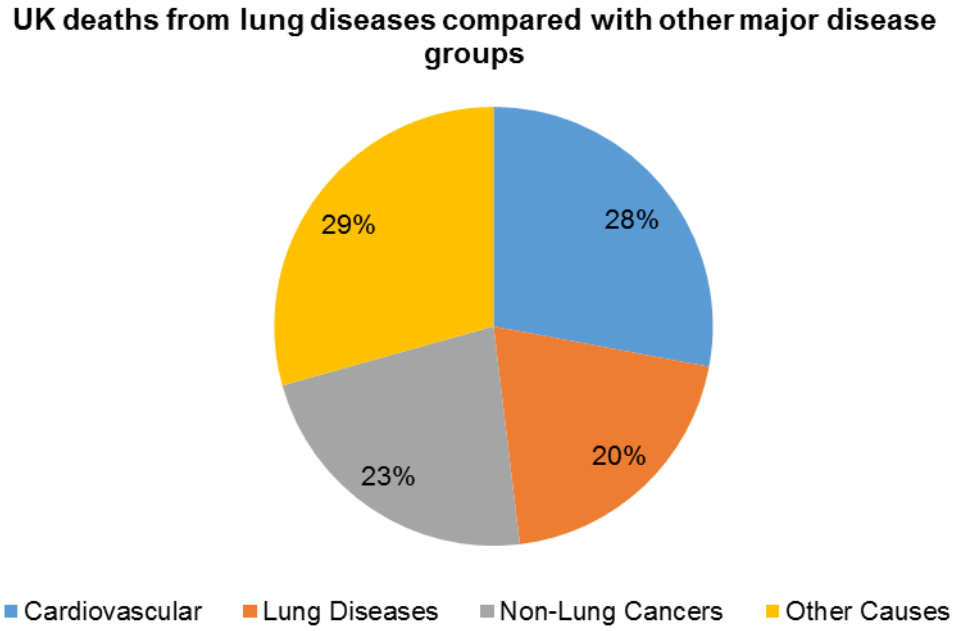
Source: British Lung Foundation (https://www.blf.org.uk)

Across the UK, the prevalence of lung disease is around 2.5 times greater - and incidence 2.2 times higher – in the most deprived fifth of the population than the least deprived fifth. Prevalence, incidence and mortality rates are highest in Scotland and northern England. This largely reflects higher rates of smoking among deprived groups.

Estimates based on general practice records suggest that 8 million people have been diagnosed with asthma, 1.2 million with COPD, and over 150,000 with interstitial

respiratory illnesses (pulmonary fibrosis or sarcoidosis), with numbers generally similar for males and females. GP records also show that there are an estimated 86,000 people in the UK who have been diagnosed with lung cancer at some point in their life and over 5,000 (mainly men) have been diagnosed with mesothelioma. Around 80% of people with COPD have at least one comorbidity - most commonly cardiovascular disease and diabetes. Less than 1% of people who have COPD are under 40, with over 80% of diagnoses in people over 60.

Respiratory illnesses are one of the leading causes of death in the UK. During 2008-12, respiratory illnesses were responsible for 20% of all deaths in the UK each year. In 2012, 6.2% of all UK deaths were due to lung cancer, 5.3% to COPD and 5.1% to pneumonia. Over half of the deaths from respiratory illness in the UK are due to lung cancer and COPD. Both conditions are strongly linked to tobacco smoking, which is also a risk factor for pneumonia, another leading cause of death.



In 2012, there were 114,225 deaths from respiratory illnesses compared to 158,383 from cardiovascular diseases. However, over the 5-year period 2008–12, the proportion of deaths from cardiovascular diseases declined, whereas the proportion due to respiratory illnesses remained constant.

The World Health Organisation (WHO) identifies the primary risk factors for respiratory illness as being tobacco smoke and other factors, including air pollution, occupational chemicals and dusts, and frequent lower respiratory infections during childhood. Within the UK, 25% of Disability Adjusted Life Years (DALYs) – a measure of the number of lost years of “healthy life” - are attributable to risk factors common to respiratory disease.

The British Lung Foundation (BLF) briefing on respiratory illness risk factors outlines the main environmental drivers of respiratory illness - smoking, outdoor and indoor air pollution and occupational hazards - and explains how socio-economic status affects exposure and outcomes. COPD is predominantly, but not exclusively, caused by smoking.

Other risk factors include occupational risks, second-hand smoke and low birthweight. Alpha-1 antitrypsin deficiency is a causative factor in 1%-5% of people with COPD. COPD

is progressive and severity increases with age. Analysis shows the most ‘at risk’ group were children between the ages of 3 and 11, with over 76% of hospital admissions falling within this age group.

There is also a link between respiratory diseases and fuel poverty. Patients who struggle to heat their home are potentially more at risk of an exacerbation of their respiratory disease or developing pneumonia. More information about the health impacts associated with not being able to maintain an adequately heated home is contained in the Fuel Poverty topic paper of the Adults and Older People’s JSNA.

The primary focus of this chapter is on long term conditions, specifically patients with Asthma and Chronic Obstructive Pulmonary Disease (COPD).

Chronic Obstructive Pulmonary Disease (COPD)

In 2008, premature mortality from COPD in the UK was almost twice as high as the European average. Overall, COPD kills about 25,000 people a year in England and Wales. Recent figures show that COPD accounted for 4.8% of all deaths in England between 2007 and 2007.

835,000 people are currently diagnosed with COPD in the UK and there are an estimated 2.2 million people with COPD who remain undiagnosed (equivalent to 13% of the population of England aged 35 and over). Late diagnosis of COPD has a substantial impact on symptom control, quality of life, clinical outcome and cost. Undiagnosed people receive inadequate or inappropriate treatment and evidence shows that early intervention for those with COPD reduces mortality and morbidity. Around 40% of people with COPD also have heart disease and significant numbers have depression and/or an anxiety disorder.

COPD accounts for a large proportion of the gap in life expectancy between areas with the worst health and deprivation and the average - around 8% of the gap for men and 12% of the gap for women. Men aged 60-64 who are employed in unskilled manual occupations in England and Wales are around fourteen times more likely to die from COPD than men employed in professional roles.

COPD also has a dramatic impact on the quality of life of sufferers. Approximately 90% of people with severe COPD are unable to participate in socially important activities such as gardening, two-thirds were unable to take a holiday because of their disease and one-third had disabling breathlessness.

Asthma

Asthma is a common lung condition that causes occasional breathing difficulties. People with asthma have very sensitive airways that become inflamed and tighten when they breathe in anything that irritates them. This can cause chest tightness and wheezing and make it harder to breathe. Asthma affects about five million people in the UK. It affects people of all ages and often starts in childhood, although it can also appear for the first time in adults. There's currently no cure for asthma. Some people, particularly children, may eventually grow out of asthma but, for others, it's a lifelong condition.

Asthma UK states that severe asthma is much less common than other types of asthma, affecting around five per cent of people with asthma. Someone who is diagnosed with 'severe asthma' has the type of asthma where symptoms do not get better even when they take the usual medicines regularly and correctly, and where other causes and triggers for the symptoms have been ruled out as much as possible. It's a specific 'type' of asthma that needs specialist assessment and very different support and treatments. About 250,000 adults and children in the UK are diagnosed with it.

Costs of respiratory illness in the UK

The British Lung Foundation report "Estimating the economic burden of respiratory illness in the UK" provides an estimate of the total costs to the UK of respiratory disease in 2014 and reveals the financial cost of lung disease to the NHS, patients and the economy. The report details both the direct costs to the healthcare system and the indirect costs that fall on society, including lost productivity and the intangible human cost of excess morbidity and mortality.

The report estimates that the total costs of all respiratory illness is in the region of £165 billion, including intangible costs. Excluding intangible costs provides an estimated total cost to the UK of £11.1 billion – around 0.6% of UK GDP in 2014.

The findings of the report show that respiratory illness represents a significant economic burden to the individual, to the health service and to society. This burden is stated as a consequence of disability, premature mortality, direct medical resource (including drug costs) and indirect costs. In 2013, the total cost of respiratory illness in the EU was estimated to be €380 billion annually.

THE MANCHESTER PICTURE

THE MANCHESTER PICTURE: DATA

Recorded prevalence

The Quality and Outcomes Framework (QOF) was introduced as part of the new General Medical Services (GMS) contract on 1st April 2004. The objective of the QOF is to improve the quality of care patients are given by rewarding practices for the quality of care they provide to their patients.

It should be noted that the published QOF data is not adjusted to take account of the age structure of the population and the fact that the recorded prevalence rates for asthma across GP practices within Manchester appear to be lower than the national averages and other similarly deprived areas is, in part, a reflection of the unusually young age structure of the registered population in Manchester.

QOF registers are constructed to underpin indicators on quality of care and they do not necessarily equate to prevalence as may be defined by epidemiologist. For this reason, prevalence figures based on QOF registers may differ from prevalence figures from other sources because of coding or definitional issues.

Asthma

As part of the QOF, GP's are required to establish and maintain a registers of patients with asthma, excluding patients with asthma who have prescribed no asthma-related drugs in the preceding 12 months. The latest data for financial year 2015/16 shows that

there were 34,900 asthma patients recorded on the disease register of Manchester GP practices. This is equivalent to 5.73% of the registered population (609,075). This is lower than the recorded prevalence of 5.91% for GP practices across England as a whole. The recorded prevalence across Manchester CCG is broadly similar to the average for other similarly deprived CCGs in England (5.70%).

QOF data can also be used to illustrate variations in the recorded prevalence of asthma between localities and GP practices in Manchester. Within the city, the recorded prevalence rate of asthma ranged from 6.54% in South Manchester to 5.50% in North Manchester and 5.33% in Central Manchester. There are also large variations between GP practices within each Locality, as summarised in the tables below.

Table 2: Recorded prevalence of asthma (QOF) by Locality, 2015/16

Locality	Average prevalence	Range of GP practices	
		High	Low
North Manchester	5.50%	8.09%	3.58%
Central Manchester	5.33%	7.57%	2.38%
South Manchester	6.54%	9.56%	4.21%

These variations reflect differences in the age structure of patients registered with GP practices in Manchester and the prevalence of key risk factors for asthma, such as ethnicity, deprivation and obesity in the practice population as well as differences in diagnostic and coding practices within individual GP practices.

Published data shows that the recorded prevalence of asthma among patients registered within GP practices in Manchester has decreased by 0.07 percentage points between 2014/15 and 2015/16. This compares with a decrease of 0.08 percentage points across England as a whole. Despite this decrease there was an increase of around 845 more patients on a GP practice asthma register in Manchester.

Table 3: Trends in recorded prevalence of asthma (QOF), 2012/13 – 2015/16

Locality	Year			
	2012/13	2013/14	2014/15	2015/16
North Manchester	5.41%	5.37%	5.49%	5.50%
Central Manchester	5.43%	5.36%	5.37%	5.33%
South Manchester	6.58%	6.45%	6.74%	6.54%
Manchester	5.76%	5.69%	5.80%	5.73%
England	6.00%	5.93%	5.99%	5.91%

Between 2014/15 and 2015/16 the recorded prevalence rates of asthma increased in North Manchester (by 0.01 percentage points), but decreased in both Central and South Manchester (by 0.05 and 0.20 percentage points respectively). However, in all three areas the number of patients on a GP practice asthma register has increased.

It is difficult to interpret year-on-year changes in the size of QOF registers. For example, a gradual rise in QOF prevalence could be due partly to epidemiological factors (such as an ageing population) or to increased case finding and recording.

COPD

As part of the QOF, GP's are required to establish and maintain a registers of patients with Chronic Obstructive Pulmonary Disease (COPD). The latest data for financial year 2015/16 shows that there were 11,766 COPD patients recorded on the disease register of GP practices. This is equivalent to 1.93% of the registered population (609,637). This is higher than the recorded prevalence of 1.85% for GP practices across England as a whole. The recorded prevalence across Manchester is also lower than the average for other similarly deprived CCGs in England (2.09%).

QOF data can also be used to illustrate variations in the recorded prevalence of COPD between localities and GP practices in Manchester. At Locality level, the recorded prevalence rate of COPD ranged from 2.34% in North Manchester to 2.17% in South Manchester and 1.38% in Central Manchester. There are also large variations between GP practices within each Locality, as summarised in the tables below.

Table 4: Recorded prevalence of COPD (QOF) by Locality, 2015/16

Locality	Average prevalence	Range of GP practices	
		High	Low
North Manchester	2.34%	3.54%	0.15%
Central Manchester	1.38%	3.66%	0.57%
South Manchester	2.17%	4.17%	0.85%

These variations reflect differences in the age structure of patients registered with GP practices in Manchester and the prevalence of key risk factors for COPD, such as ethnicity, deprivation and obesity in the practice population as well as differences in diagnostic and coding practices within individual GP practices.

Published data shows that the recorded prevalence of COPD among patients registered within GP practices in Manchester has decreased by 0.02 percentage points between 2014/15 and 2015/16. This compares with an increase of 0.03 percentage points across England as a whole.

Table 5: Trends in recorded prevalence of COPD (QOF), 2012/13 – 2015/16

Locality	Year			
	2012/13	2013/14	2014/15	2015/16
North Manchester	2.29%	2.31%	2.37%	2.34%
Central Manchester	1.33%	1.39%	1.38%	1.38%
South Manchester	2.10%	2.10%	2.22%	2.17%
Manchester	1.88%	1.91%	1.95%	1.93%
England	1.74%	1.79%	1.82%	1.85%

Between 2014/15 and 2015/16 the recorded prevalence rates of COPD increased in Central Manchester (by 0.01 percentage points), but decreased in both North and South Manchester (by 0.02 and 0.05 percentage points respectively). However, in all three Manchester localities the number of patients on a GP practice COPD register has increased.

It is difficult to interpret year-on-year changes in the size of QOF registers. For example, a gradual rise in QOF prevalence could be due partly to epidemiological factors (such as an ageing population) or to increased case finding and recording.

Estimated (modelled) prevalence of COPD

Public Health England (PHE) have commissioned Imperial College London to produce set of modelled estimates of the prevalence of COPD for local authorities and GP practices. The new modelled estimates update previously published estimates which are now several years out of date and are based largely on the primary care data held within the Clinical Practice Research Datalink (CPRD). In simple terms, the estimates are based on doctor diagnosed COPD, adjusted for age, gender, smoking status and deprivation. A more detailed technical document describing how the latest modelled estimates were generated is available from PHE.

The modelled estimates suggest that around 2.3% of the population in Manchester (all ages) are likely to have COPD. Based on the ONS Mid-2015 Population Estimates, this equates to just under 12,400 people. The estimated prevalence rate in Manchester is lower than the average foe England as a whole (3.0%). This is largely due to the fact that Manchester has a relatively young population.

Comparing the estimated number of people with COPD with the number of patients on the COPD QOF registers of GP practices in Manchester provides a proxy measure of the extent to which GPs are identifying and diagnosing COPD within their patient population. This is referred as the diagnosis rate.

Table 6: Estimated prevalence of COPD (2015) and recorded prevalence of COPD (QOF 2015/16)

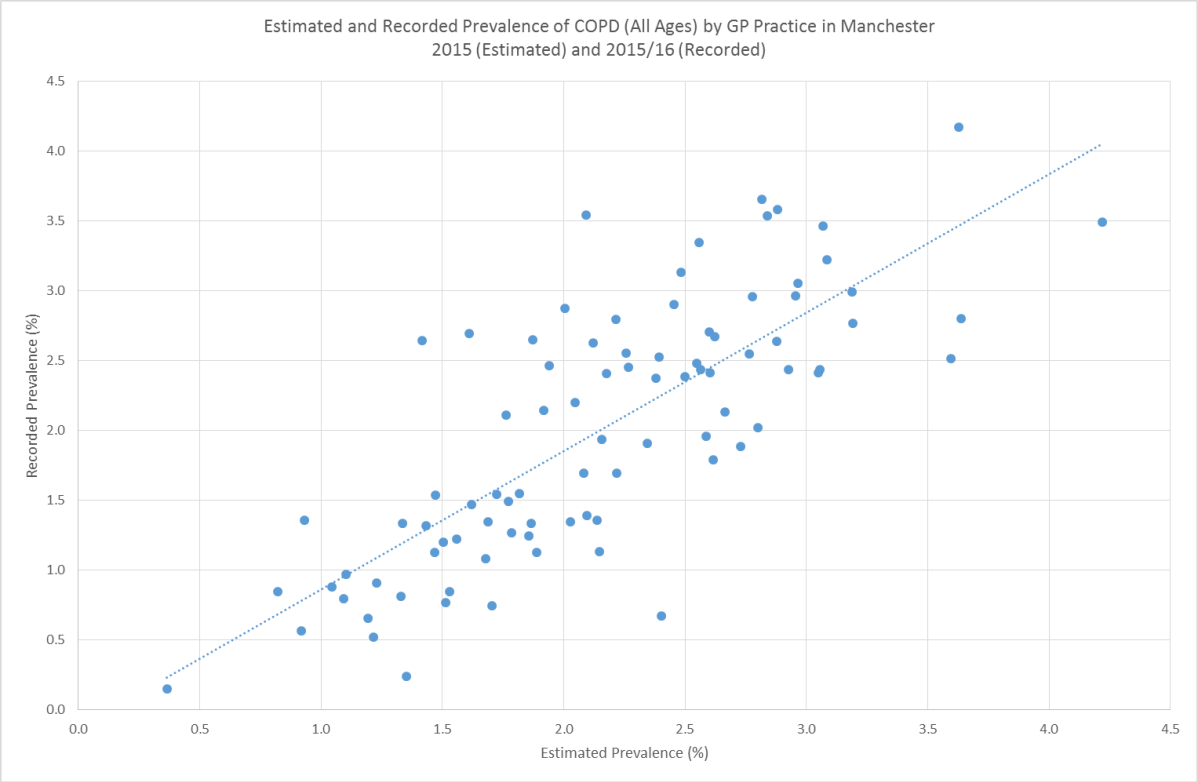
Locality	Estimated Prevalence (2015)		Recorded Prevalence (QOF 2015/16)*		Diagnosis Rate (%)
	No. of patients	Prevalence (%)	No. of patients	Prevalence (%)	
North Manchester	4,520	2.27%	4,830	2.34%	106.8%
Central Manchester	3,599	1.69%	3,174	1.38%	86.2%
South Manchester	3,888	2.35%	3,762	2.17%	96.8%
Manchester LA	12,368	2.33%	11,766	1.93%	94.6%
England	1,649,876	3.01%	1,066,471	1.85%	64.6%

* The data in the above table excludes two relatively new GP practices (Hawthorn Medical Centre and New Bank Health Centre) for whom there is no data held within the CPRD. In order to ensure a like for like comparison, the QOF data for each locality has been recalculated to exclude these two practices.

The latest data suggests that around 95% of people estimated to have a diagnosis of COPD are currently on a COPD QOF register within one of the GPs practices in Manchester. The data also points towards some variations in the diagnosis rate in different parts of Manchester, from 96.8% in South Manchester to 86.2% in Central Manchester. The data also appears to suggest that the number of patients on the COPD QOF registers of GP practices in North Manchester exceeds (i.e. is greater than) the estimated number of patients with COPD in the population. This could represent either a failure of the new COPD model to accurately reflect the nature of the population in North Manchester or a tendency among GPs to over diagnose patients with COPD, resulting in patients being added to the QOF register who do not need to be there.

It should be noted that the modelled estimates have only been produced at local authority and GP practice levels. Estimates for the former North, Central and South Manchester CCG areas have been produced by summing up the data for individual GP practices within each area. This may produce a slightly different set of figures than that which would have been produced if the modelled estimates have been generated directly for the former CCG areas in Manchester.

The chart below illustrates the relationship between the estimated prevalence of COPD (on the bottom axis) and the recorded prevalence (on the side axis) for individual GP practices in Manchester.



In broad terms, the relationship between the two figures is quite strong suggesting that the modelled estimates are quite a good indicator of the 'true' levels of COPD across the city and also that most GPs are appropriately identifying patients with COPD and recording them on their QOF register.

Smoking

Smoking is the primary cause of preventable morbidity and premature death, accounting for over 250,000 deaths in England in between 2013 and 2015, and kills about half of all lifetime users.

- Around 21.7% of adults in Manchester currently smoke compared to an England average of 15.5%. This rises to 27.6% among adults in routine and manual occupations.
- On average, there are approximately 820 deaths which can be attributed to smoking in Manchester each year (based on the period 2013-15). The rate of smoking attributable deaths in Manchester is the highest in England.
- In 2015/16 there were over 5,000 hospital admissions attributable to smoking in people aged 35 and over in Manchester – a rate of 2,898 per 100,000 people compared with the England average of 1,726 per 100,000

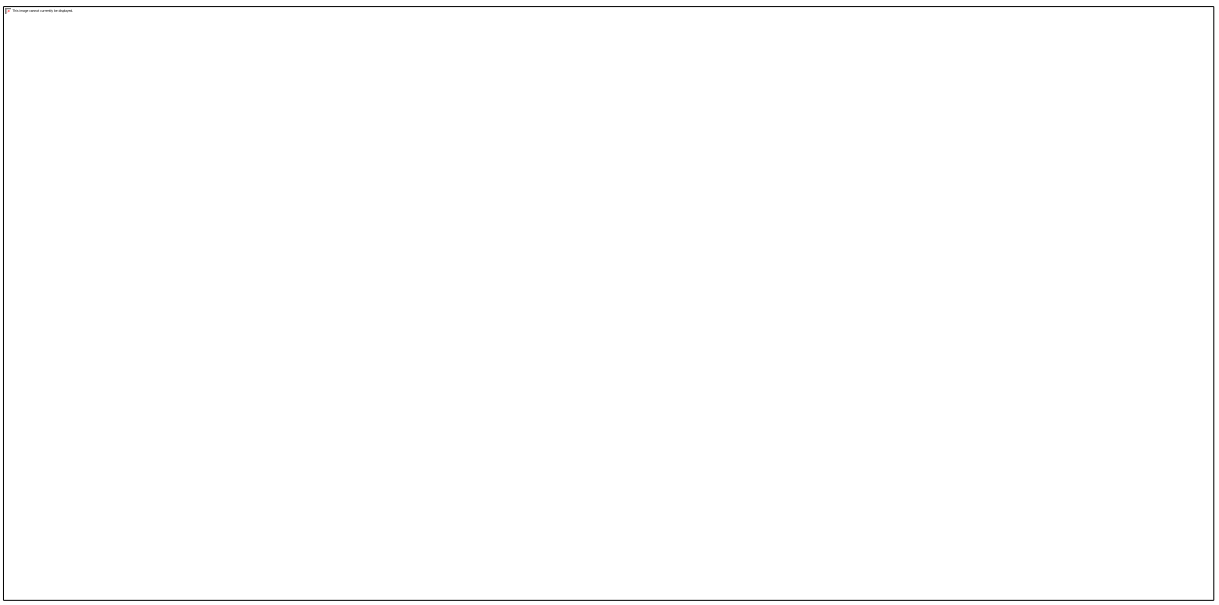
- Around 11.6% of mothers are still smoking at the time they deliver their baby compared with 10.6% of mothers across England as a whole.

Source: Public Health England Local Tobacco Profiles 2017

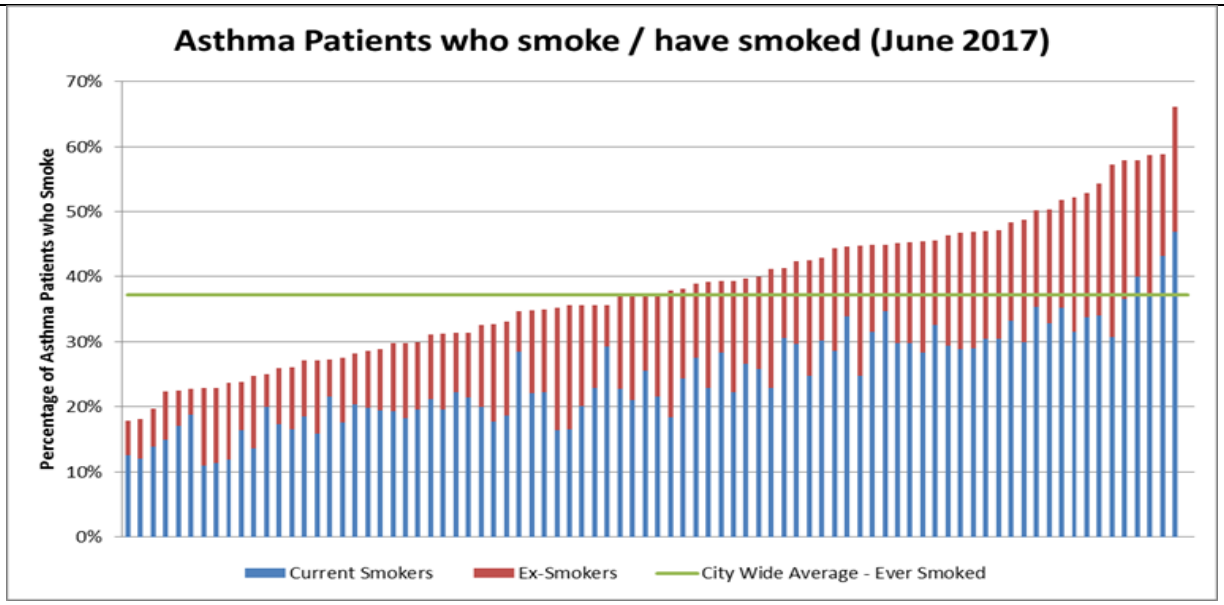
Smoking can have a significant impact on respiratory illness and it is the major preventable risk factor for COPD, asthma and other respiratory conditions. Nationally, around 17% of COPD patients have a recorded smoking status. However, data from GP practices summarised in the table below shows that 49% of patients with COPD in Manchester are recorded as smokers.

Respiratory Condition	Current Smokers (%)	Ex-Smokers (%)	Combination – Ever Smoked (%)
COPD	49%	33%	82%
Asthma	24%	14%	37%

The chart below shows how the percentage of COPD patients who smoke, or who have ever smoked, varies between GP practices across the city.



Data from GP practices shows that 24% of patients with asthma in Manchester are recorded as smokers. The below chart shows how the percentage of patients with asthma who are smokers, or who have ever smoked, varies between GP practices across the city. The practices with the highest prevalence of smoking among patients with asthma are in the north of the city.



People from some Black and Minority Ethnic (BME) groups may have an increased risk of respiratory diseases due to a higher prevalence of smoking. For example, evidence suggests that smoking prevalence is significantly higher in Bangladeshi men compared with the general population. This may be linked to consistently reported high prevalence of pan (or pan and betel) use and shisha smoking. There is also evidence of high rates of smoking among the East European community and other groups. More information is available in the JSNA chapter on the health of Black and Minority Ethnic communities.

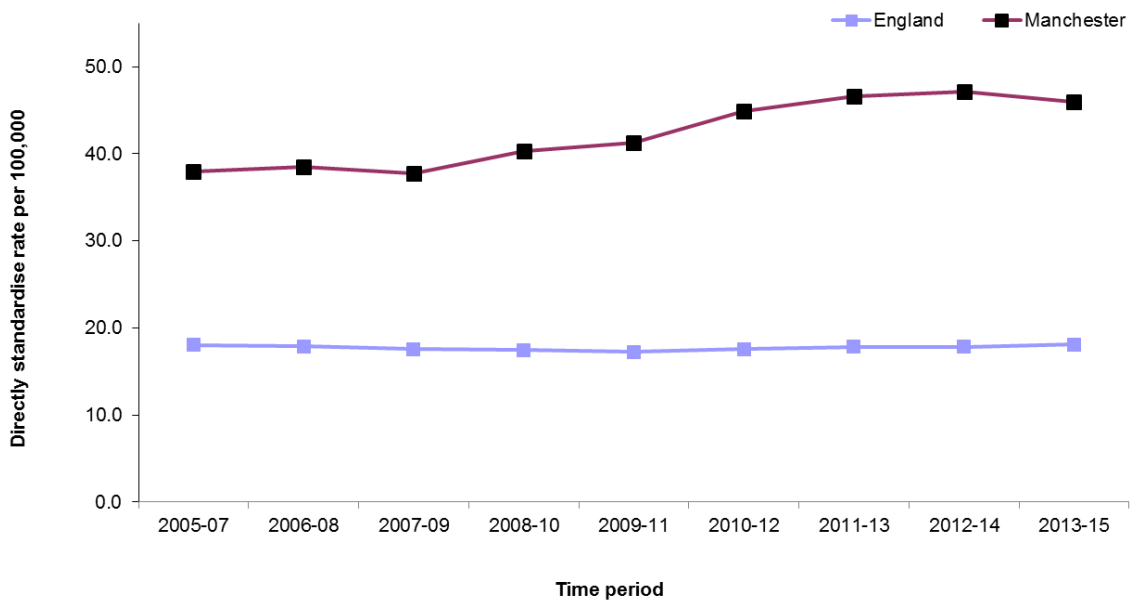
Mortality

In 2015, there were a total of 568 deaths from diseases of the respiratory system registered to people living in Manchester. This is equivalent to around 16% of all deaths to Manchester residents.

ICD-10 description	Number of deaths	% of all deaths
Pneumonia	177	4.9%
Bronchitis, emphysema and other chronic obstructive pulmonary diseases	288	8.0%
Asthma	10	-
All diseases of the respiratory system	568	15.7%

Just over half of all deaths from respiratory diseases (288 out of 568) were from bronchitis, emphysema and other chronic obstructive pulmonary diseases.

The chart below shows the trends in the directly standardised mortality rate from respiratory diseases considered preventable in people aged under 75 years. Preventable deaths are those that are considered to be potentially avoidable through public health interventions in the broadest sense.



The chart shows that the rate of preventable premature mortality from respiratory diseases has gradually risen from 38.0 per 100,000 in 2005-07 to 45.9 per 100,000 in 2013-15 (the latest published data). The overall rate of premature deaths (preventable and not-preventable) from respiratory diseases in Manchester is the highest of any local authority in England. Manchester is also the highest ranked local authority for overall premature deaths from respiratory diseases when compared with other similarly deprived areas, suggesting that deprivation alone is not the key factor in the high rates of premature deaths in the city. Smoking and air pollution are both common causes of respiratory disease.

Costs of respiratory illness in Manchester

The costs for respiratory illnesses across the Manchester health system are substantial, within both the Acute and Community settings across North, South and Central Manchester. The recorded costs for the past three financial years are as follows:

	2014/15	2015/16	2016/17
Acute Non Elective			
Obstructive Airways Disease	£3,590,216	£3,186,910	£3,277,577
Asthma	£1,138,253	£1,075,548	£1,153,149
Other problems of the respiratory system	£14,861,143	£14,372,138	£14,961,686
Acute Elective			
Obstructive Airways Disease	£48,319	£151,810	£63,826
Asthma	£80,679	£78,669	£97,951
Other problems of the respiratory system	£2,676,267	£3,100,980	£2,478,122
	£22,394,878	**£21,966,055**	**£22,032,311**

In 2016/17, the cost of providing respiratory disease services within the community across all three providers (Pennine Acute, University Hospitals South Manchester and Central Manchester Foundation Trust) was approximately £806,200.

Manchester has the highest acute non-elective spend for asthma in the country. The activity costs in Manchester acute services for children aged 18 and under, admitted for asthma or viral wheeze and with a 0 or 1 day length of stay totalled £269,420.

THE MANCHESTER PICTURE - LIVED EXPERIENCE

The British Lung Foundation website contains a number of stories describing the experiences of people living with lung disease.

Susan's story

Marion's story:

Chris's story (told via video)

The BLF website also contains information about the experiences of particular groups of people, such as homeless people and people caring for family members with COPD as well as those using particular types of services such as pulmonary rehabilitation.

Information about the impact of air pollution on people with lung disease is contained in the air quality and health JSNA chapter (in development).

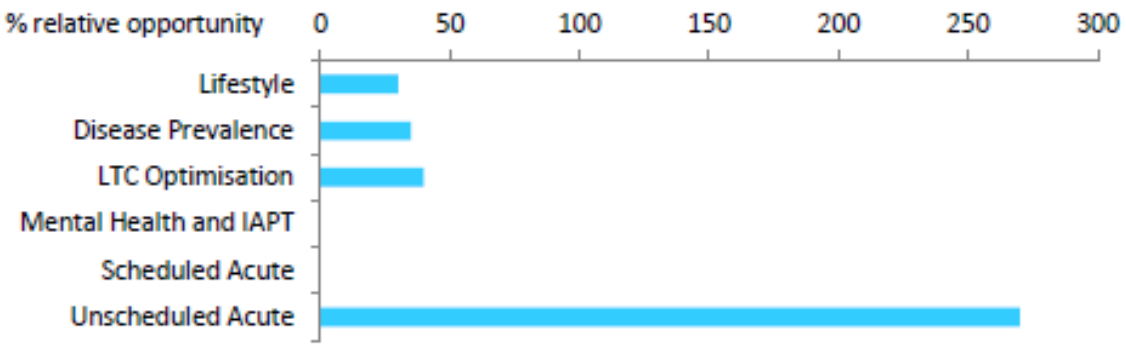
Asthma UK has produced a series of videos describing people's experiences of living with severe asthma and the effects this has on their day-to-day lives.

WHAT WOULD WE LIKE TO ACHIEVE?

A key objective for Manchester is to reduce cost and spend on respiratory in line with its peers, as set out in the NHS RightCare analysis. NHS RightCare is a national tool which benchmarks each CCG against a cohort of 10 similar CCGs, based on various indicators (e.g. deprivation/population demographic profile).

The data suggests that making improvements in respiratory diseases (e.g. asthma and COPD) offers the biggest opportunity for the city to make financial savings and improve health outcomes by saving lives. If the city performed as well as the 5 best-performing similar CCGs, there is the potential to make savings of £10.1m and to save 41 lives by making improvements in the way that care for people with respiratory diseases is delivered. This is equivalent to 22% of the total savings opportunity and 14% of the outcomes opportunity. Nearly two-thirds (63%) of these potential savings could be realised through reductions in non-elective (i.e. unplanned) hospital admissions and a further 28% through reducing the levels of prescribing in primary care.

Further analysis of patient pathways for asthma and COPD (see chart below) suggests that, relative to similar CCGs, the biggest improvements in respiratory diseases could be made through changes to unscheduled care within the acute hospital sector, notably by addressing the relatively high levels of emergency admissions for children with asthma in the city, particularly in Central Manchester. Evidence shows that prompt and accurate diagnosis, shared decision making regarding treatment and on-going support / enablement reduces the need for unscheduled health care and risk of death. Addressing lifestyle factors, such as smoking, have a lesser but nonetheless important role to play.



The Greater Manchester Population Health Plan sets out an ambition to close the projected gap in population health outcomes between Greater Manchester and England over the 5 year period 2017-2021. It has been calculated that this will result in 580 fewer preventable premature deaths from respiratory diseases across Greater Manchester by 2021. If Manchester achieves its proposed share of this target it could potentially result in 168 fewer early deaths from respiratory diseases within the city over this period.

Manchester is also committed to working towards the ambitions and targets set out in the new Tobacco Control Plan for England ("Towards a smoke-free generation") and the Greater Manchester Health Tobacco Control Plan ("Making Smoking History: A Tobacco Free Greater Manchester"). Both plans use the term "Smokefree", which is defined as a population smoking prevalence of 5% or less, and set different, but ambitious, targets for reductions in smoking prevalence by the end of 2022. Nationally, the Tobacco Control Plan sets interim targets to reduce the prevalence of 15 year olds who smoke from 8% to 3% or less and to reduce adult smoking prevalence from 15.5 % to 12% or less. The plan also seeks to reduce the prevalence of smoking in pregnancy from 10.7% to 6% or less by the end of 2022.

At Greater Manchester level, the aim is to reduce adult smoking prevalence from the current rate of 18.4% to 13% by 2020. In order to achieve this, is it calculated that the number of adult smokers across Greater Manchester must fall by 115,000. Manchester has the second highest smoking prevalence rate in Greater Manchester. The starting point is more difficult than other areas in terms of achieving these targets because the complex interaction of bio-psycho-social causes of tobacco addiction mean that giving up smoking will generally be harder for Manchester residents. Therefore, in Manchester, has set local targets to reduce adult smoking prevalence to 15% or less by 2022 and to reduce the rate of smoking in pregnancy from 11.6% to 6.0%

WHAT DO WE NEED TO DO TO ACHIEVE THIS?

Structured care has been shown to produce benefits for patients with COPD and asthma. The Quality and Outcomes Framework (QOF) sets out the optimum standards of care that GPs should be providing for patients with respiratory diseases. For asthma, this includes ensuring that patients receive an asthma review on a regular basis which includes an assessment of asthma control using the 3RCP questions. For COPD, this includes ensuring that patients have a regular review, undertaken by a healthcare

professional, which includes an assessment of breathlessness using the Medical Research Council (MRC) dyspnoea scale.

Through the QOF process, GP practices are judged on the extent to they are delivering care for their patients in line with these standards. The latest data for 2025/16 illustrates the variations in the extent to which the QOF standards are being met in Manchester and show that:

- The percentage of patients having an asthma review ranged from 75.6% in North Manchester to 74.8% in Central Manchester and 72.4% in South Manchester.
- The percentage of patients having a COPD review ranged from 89.4% in North Manchester to 88.2% in Central Manchester and 86.3% in South Manchester.

There are also large variations between individual GP practices in different parts of the city. These variations reflect differences in the management of asthma and COPD patients at GP practices within Manchester, as well as differences in diagnostic and coding practices within GP practices.

Manchester Health and Care Commissioning is also implementing a set of Respiratory Standards for Manchester GPs for 2017/18. These have been clinically developed by primary care clinicians and will focus on:

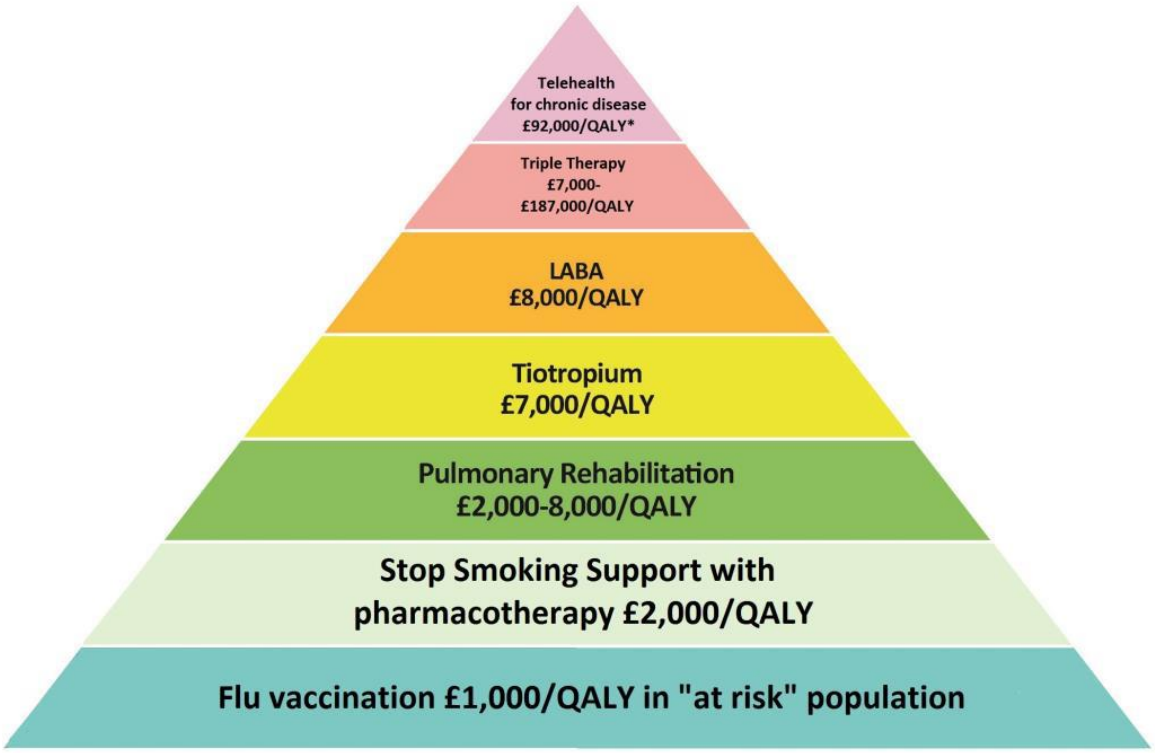
- Increasing the number of flu vaccinations carried out to high risk groups within 6 weeks of release of the flu vaccine.
- Increasing pneumonia vaccinations
- A standardised approach to COPD reviews
- A standardised approach to asthma reviews

The expected impact of implementation of these standards will be to:

- Reduce variation of respiratory disease management in primary care
- Increase patient's understanding of respiratory disease via a clear management plan (including crisis management)
- Improved patient experience of care
- Enable patients to manage their disease more confidently, including what to do when in crisis
- Increase vaccination uptake (by promoting early vaccination)

The National Institute for Health and Care Excellence (NICE) provides national guidance and advice to improve health and social care, including specific guidance relating to respiratory conditions.

NHS England's London Respiratory Team have developed a COPD 'Value Pyramid', which outlines the cost effectiveness of different interventions for people with, or at risk of, COPD. The measure used is a quality adjusted life year (QALY) - a measurement of how many years of perfect health each intervention offers and for what cost. Pseudomonas aeruginosa



The 'Value Pyramid' demonstrates the cost benefits of population level, preventive interventions for people with, or at risk of, COPD, such as Flu vaccination and stop smoking support, compared with more specialist interventions such as telehealth for chronic disease and triple therapy.

It is important that people with COPD are given the necessary support to help them self-manage their condition. The British Lung Foundation website contains a number of resources that people newly diagnosed with COPD can use. The website also contains a link to the free First Steps to living with COPD resource and the COPD passport which lists the care that people with COPD are entitled to.

British Lung Foundation Breathe Easy self-help support groups provide people with peer support, providing people with the skills, confidence and knowledge to self-manage their condition better. An evaluation of Breathe Easy groups and Integrated Breathe Easy groups (groups which are fully integrated with the local care pathway) found that, of those who attended standard Breathe Easy groups:

- 90% have a better understanding of their lung condition
- 88% felt more confident in managing their lung condition
- 85% knew more about services for people with lung disease in their local area
- 61% do not feel the need to visit their healthcare professional as often as before

Achieving the ambitions and targets set out in the Tobacco Control Plan for England and the Greater Manchester Health Tobacco Control Plan will require a strong emphasis on reducing smoking inequalities, the use of evidence based interventions, further de-normalisation of smoking through an increase in the number and range of Smokefree spaces (e.g. hospital grounds, parks and prisons), combined with strong enforcement work to reflect a zero tolerance of smoking and tobacco use in Smokefree spaces.

The Greater Manchester Health Tobacco Control Plan has adopted the GMPOWER model as described in the box below.

GMPOWER model

Grow a social movement for a Tobacco Free Greater Manchester

Monitor tobacco use and prevention policies

Protect people from tobacco smoke

Offer help to quit

Warn about the dangers of tobacco

Enforce tobacco regulation

Raise the real price of tobacco

WHAT ARE WE CURRENTLY DOING?

Manchester has some of the poorest outcomes in England in relation to respiratory diseases. In order to address the long standing poor respiratory health outcomes across the city, respiratory disease has been selected as the priority long term condition that Manchester Health and Care Commissioning will focused on during 2017/18.

It is recognised that, in order to address respiratory diseases across the whole population and address inequalities, a system wide, cross sector, approach to change is needed. A partnership steering group has been put in place with stakeholders from primary, community and secondary care, public health, NHS RightCare, voluntary sector organisations and patient and carer representatives. The aim is to improve health outcomes and quality of life for patients, their families and carers, support self-management, personalisation and early intervention in the community and strengthen the quality of end of life care. The steering group will hold groups and organisations to account, and oversee the system wide change to the delivery and management of respiratory care as well as leading on a number of workstreams for implementation.

The programme is made up of a number of workstreams which aim to work holistically across the health and care system to increase life expectancy, improve the patient's experience of care, decrease the number of lung cancer related deaths, decrease the number of cancers diagnosed through A&E, enable people to understanding their symptoms and manage their disease more confidently and know what to do when in crisis, decrease the number of smokers in Manchester and reduce the high number of respiratory emergency admissions.

Existing areas of work (e.g. whole system tobacco control, smoking cessation and lung health checks) will be linked with this work programme and there will be collaborative working together across all sectors for the benefit of the Manchester population. This system wide change requires system wide leadership, engagement and delivery.

Manchester CCG's Commissioning Intentions for 2017/18 reflect the need to continue to develop community respiratory services across Manchester in order to meet the needs

of people with respiratory illness. Providers will be expected to continue the Future Hospital work and to further develop community services in order to shift activity and services out of the hospital setting and to work with primary care to improve respiratory services and outcomes. As part of this work, it is expected that a standardised approach to pulmonary rehabilitation (a programme of exercise and education for people with long-term lung conditions) will be integrated within community teams.

Primary Care Respiratory Standards

A set of out of hospital standards were developed and accepted by the Association of Greater Manchester CCGs. This led to a call to identify a set of standards that could support enhancing the quality of primary care across Greater Manchester. In 2017/18, a refreshed set of primary care standards were developed for GP practices, which now include respiratory diseases as a main area of focus. These standards have been drafted in consultation with clinical leads and aim to

- improve patient outcomes
- reduce the variation in the quality of care of respiratory patients
- reduce the number of respiratory unplanned admissions to hospital
- develop neighbourhood working across GP practices and community services

The key areas of focus within the respiratory standards are set out in the following table:

Area of focus	Standards
Immunisation	• Increase uptake of pneumococcal vaccines in eligible patients • Increase update of flu vaccines in select priority groups (by 10% per group) in a timely way i.e. prior to the usual peak in flu cases
COPD	• All eligible patients to have rescue packs offered, be provided with a patient information leaflet, be offered pulmonary rehabilitation, referral to the COPD community team • Patients to receive an annual review • Patient to receive a review of their use of rescue packs
Asthma	• Adult patients to receive an annual review which will include a documented self-management plan and a review of inhaler technique • A register of paediatric asthma patients to be developed and maintained • All children (aged 2-17) with asthma to have a personalised care plan
Neighbourhoods	• To work together as a neighbourhood to achieve an overall neighbourhood improvement in patient outcomes in adults and children

During 2017/18, these respiratory standards will be paramount in helping to address variances and opportunities in terms of health outcomes and financial spend.

Children

A review of children's community services has been undertaken and MHCC will be looking to act on the recommendations of this review through 2017/2018. A Paediatric Respiratory Steering Group has been set up to lead on the implementation of the workstreams identified within the review in order to improve outcomes for children with

respiratory illnesses in Manchester. The Steering Group will act as the formal body to hold groups and organisations to account to oversee the system wide change to the delivery and management of respiratory care.

Some of the initial areas of focus will be around:

- Improving where necessary the pathways and thresholds for management particularly for asthma and viral wheeze with a focus on the primary and secondary care interface.
- Education of parents and carers as well as clinical colleagues in primary and community care.
- Work with schools to improve the management of respiratory conditions

Adult Community Respiratory Services

The Manchester Integrated Respiratory Service (MIRS) is being developed in order to support primary, community and secondary care services to work together in a more integrated way. The service will aim to:

- Manage more patients in primary care and deliver care closer to home in settings within their local community
- Improve the experience of care for patients through a focus on person-centred, co-ordinated care
- Enable patients to manage their disease more confidently, including what to do when in crisis
- Upskill the primary and community care workforce in the care of respiratory disease

This will help to ensure that patients are managed and/or treated by the right person, in the right setting, at the right time, first time.

COPD Virtual Clinics

COPD Virtual Clinics (VC) are a way of allowing clinicians and other professionals from primary and secondary care to work together face-to-face in order to ensure that patients with COPD receive optimal treatment and care and that the care of these patients is managed with in a more proactive manner. The overall aim of the Virtual Clinic is to improve clinical outcomes and optimise prescribing practices for patients with COPD. It is 'virtual' in the sense that patients are reviewed via their electronic records.

After the clinic, patients will be reviewed by a primary care physician to ensure that each patient has received high value care, as defined by:

- Accurate diagnosis with quality assured spirometry.
- Ensuring smoking cessation has been addressed.
- Referring appropriate patients to pulmonary rehabilitation.
- Responsible respiratory prescribing as per the Greater Manchester Medicines Management Group guidelines
- Appropriate treatment of exacerbations.
- Offering patients supported self-management.

Virtual Clinics also aim to improve the relationships between primary and secondary care, ensuring there is ongoing communication and mentorship from secondary care and thus upskill and educate primary care clinicians.

Tobacco control

Reducing the prevalence of smoking as a part of a broader approach to tobacco control is a priority for Manchester. A new multi-agency Manchester Tobacco Alliance has been established, chaired by the Director of Population Health and Wellbeing, which is working to develop a Tobacco Control Strategy with the aim of reducing smoking prevalence in Manchester to 15% or less by 2020/21 as part of a broader ambition for Manchester to become a "smoke free" city.

MHCC is also committed to tackling smoking prevalence and reducing the number of people who develop COPD by ensuring they are aware of the importance of good lung health and well-being, with risk factors understood, avoided or minimised.

Increasing the focus on the importance of smoke free spaces, smoke free homes and generally protecting children and others from the harmful effects of tobacco smoke is an important work stream for the Tobacco Programme in Manchester. We hope this will reduce the incidence of respiratory illness or death, in which tobacco smoke was a causative or contributory factor.

It is estimated that around 2% of people will stop smoking using a "Specialist Stop Smoking Service", i.e. a service which offers both pharmacotherapy *and* psychological support to help people to stop smoking. This means that public health and health care systems need to develop solutions which help people in the way that best suits them.

The availability of smoking cessation services across Manchester are variable but work is taking place at both a local authority and Greater Manchester level to develop a variety of services and support for smokers, irrespective of how they chose to quit. Currently, services across the city to support people in stopping smoking included:

- A new nurse led specialist stop smoking service in North Manchester, due to be implemented in November 2017.
- In Central Manchester, pharmacotherapy is available from the patient's GP and psychological support provided via Buzz (this avenue of support is also available to patients in North and South Manchester). We are exploring options to put specialist stop smoking support into Central Manchester.
- In South Manchester, GPs can refer patients to a Specialist Stop Smoking Service provided by the University Hospital of South Manchester (UHSM). Clinics are held at Wythenshawe Hospital and Withington Community Hospital. Patients and hospital staff can also self-refer.

From October 2017, Greater Manchester Health and Social Care Partnership will start to roll out a suite of stop smoking tools, starting with a digital platform offering advice and support. Telephone support to stop smoking will be available from early 2018. In addition, there are NHS apps available and a national NHS advice line to support quitting smoking.

Public Health England (PHE) has given clear advice about the use of e-cigarettes as a means to giving up smoking tobacco. Although not risk free, Public Health England say that "vaping" is 95% safer than smoking tobacco.

Going forward, the Manchester approach takes a steer from Public Health England, in that there will be a focus for Smoking Cessation work for vulnerable groups where smoking prevalence is particularly high or particularly risky, for example, pregnant

women, people with mental health problems (where prevalence is around 60%), people in 'routine and manual work', LGBT community and people with complex long term conditions such as COPD.

Smoking cessation work must be delivered within the context of a wider "Tobacco Control Framework", which addresses those factors which cause people to smoke or to be exposed to tobacco smoke. The Health Act 2006 prohibited smoking in certain premises, places and vehicles. Work to enforce this is a high priority for Manchester City Council teams, as is tackling the problem of illicit tobacco and Shisha.

Macmillan Cancer Improvement Partnership (MCIP) Lung Health Check

The MCIP Lung Early Diagnosis pilot sought to test an approach to:

- Increase the number of lung cancers diagnosed at an early stage
- Increase the proportion of patients diagnosed with lung cancer that can be offered curative treatment

The pilot also sought to test the feasibility of running a targeted screening pilot in the most deprived areas of Manchester and to identify what people would think of it and whether they would use it. This was the UK's first community-based low-dose CT lung cancer screening NHS one stop shop service.

It was conducted by a lung specialist nurse and included discussion about symptoms, a breathing test (spirometry) and calculation of a person's individual lung cancer risk. Anyone at high risk of lung cancer was invited to have an immediate low-dose CT scan in a mobile scanner at the same site (shopping area car park). The outcomes of the first round of the pilot show that:

- Over 2,500 patients attended a Lung Health Check
- 45 cancers found, this is around one cancer for every scanning day
- Almost 8 out of 10 cancers were early stage and only 1 in 10 had advanced lung cancer (stage 4)
- Potentially curative treatment was offered to 9 out every 10 people with lung cancer. This is a marked difference to lung cancer diagnosed outside of screening where half of patients have advanced disease and therefore do not have a curative treatment option at the time of diagnosis.
- The Lung Health Check also detected around 1 in 5 people with COPD who may not have not been previously diagnosed

Work is now underway to consider an expansion of the pilot across North Manchester as this has the highest rate of lung cancer in England. The potential roll out of lung health checks based on the MCIP model has been included in the first GM Population Health Plan. A full evaluation of the pilot is underway. An independent health economic evaluation of the he Lung Early Diagnosis Pilot looked at the costs and benefits of the pilot (in terms of quality adjusted life years gained through screening) over the initial screening round and 3 month follow up period (i.e. up to the middle of June 2017). It found that the projected benefits of lung early diagnosis are sufficiently strong to comply with NHS (NICE) thresholds of cost effectiveness, with a current incremental cost effectiveness ratio (ICER) of £10,069 per QALY.

OPPORTUNITIES FOR ACTION

NHS RightCare

NHS RightCare is a national NHS England supported programme committed to delivering the best care to patients, making the NHS's money go as far as possible and improving patient outcomes. The data benchmarks Clinical Commissioning Groups (CCG) against ten similar CCGs based on various indicators (e.g. deprivation/ population demographic profiles). This is a proven approach that delivers better patient outcomes and frees up funds for further innovation.

RightCare data shows that there would be 126 fewer premature deaths if each CCG improved to the level of the best five similar CCG's i.e. 500 fewer deaths from 2018 to 2021. For Manchester, this figure is 86 fewer premature deaths annually from respiratory diseases if improved to the level of the best 5 similar CCG's.

There is currently a variance of £10 million spend on respiratory diseases in Manchester compared to top 5 peers, with a high percentage being spent on emergency admissions. RightCare has identified that Manchester spends over £6m more on non-elective admissions and almost £3m more on prescribing than their RightCare peers.

There are also cross cutting areas being identified which link to other programmes, with vulnerable groups such as the elderly frail, or those with dementia, alcohol use and homelessness being at higher risk of urgent admission for respiratory disease.

Homelessness

This is a key priority for Manchester. Manchester Health and Care Commissioning are planning to ensure that homeless people receive the same level of care as any other Manchester resident. Due to the complex living circumstances it is recognised that health services 'need to be taken to the patient'.

Information Technology

As most patients rely on technology on a day to day basis, new innovative technologies available to support patients with respiratory conditions are to be considered. There are smartphone apps available to support patients in leading a healthy lifestyle such as tracking steps, counting calories and analysing sleep patterns.

Pulmonary Rehabilitation (PR) and Self Care

Pulmonary rehabilitation is a programme of exercise and education for people with long-term lung conditions. It combines physical exercise sessions with discussion and advice on lung health and is designed to help patients to manage the symptoms of their condition, including getting out of breath. Manchester Health and Care Commissioning will be supporting the healthcare system to ensure that access to, and waiting for pulmonary rehab, is equitable across the city.

Manchester Health and Care Commissioning will also look to engage with the British Lung Foundation in order to support the establishment of Breathe Easy groups across Manchester. Breathe Easy groups provide support, advice and guidance for people living with a long term lung condition. To educate people to manage their condition and improve their quality of life both mentally (reduces social isolation) and physically.

End of Life Care

Manchester Health and Care Commissioning will aim to enhance the quality of life for people with COPD, across all social groups, with a positive, enabling, experience of care and support right through to the end of life.

A key aim is to reduce the under 75 mortality rate from respiratory diseases considered preventable from 47 per 100,000 in 2020-2022 (compared with an expected level of 50 per 100,000). Achievement will result in 168 fewer early deaths from respiratory disease considered preventable compared with the projected level.

People dying from a respiratory disease are less likely to die in their own home than the population as a whole. Overall, 69.5% of deaths from respiratory disease occurred in a hospital compared with just 19.1% in the deceased's own home. (In comparison, 26.4% of all deaths occurred in the deceased's own home). For more information, please see the Adult's and Older People's JSNA topic paper on End of Life Care.

Tobacco control

The ongoing development of the Manchester Tobacco Control Strategy which will align with the national and GM plans, but be tailored to our local situation. Within this strategy, there are specific opportunities for action with regard to:

- Developing Specialist Smoking Cessation Services for North, Central and South Manchester localities.
- Supporting and developing links with leading clinicians and analysts who are proposing innovative new programmes, such as the CURE (Ottawa) model of smoking cessation for secondary care.
- Working to reduce smoking in pregnancy as a vehicle for preventing infant mortality, helping mothers to give up smoking so that children grow up in Smokefree homes and, in turn, helping young people not to start smoking.
- Supporting the work of Manchester City Council Trading Standards, GMP and HMRC to address the issues associated with Shisha and combat the problem of illicit tobacco, which can undermine our efforts to combat tobacco use.
- Through the Manchester Tobacco Alliance, seeking a mandate to work towards Manchester becoming a "Smokefree city."

Ultimately, there is an opportunity to help Manchester become a "Smokefree city" in order to give further impetus to Tobacco Control work in the city. Having this policy position would not in itself reduce smoking prevalence but would be an important step in further de-normalising smoking, improving the air-quality of outdoor spaces and events and making health and care organisations in the city a positive role model for our local residents and the wider conurbation.

Air quality

Improving air quality and reducing harmful emissions are two of the most important challenges facing Greater Manchester. There's strong evidence that air pollution and greenhouse gases cause significant harm to the environment and to the health of communities, and can damage our economy.

Both short and long-term exposure to air pollutants can affect people's health, with poor air quality contributing to respiratory illness, heart disease and some cancers. The most serious air pollutants are nitrogen oxides and particulates. Greater Manchester road

transport accounts for 65% of nitrogen oxide and 79% of particulate emissions, along with 31% of carbon dioxide emissions.

On behalf of the GMCA, Transport for Greater Manchester (TfGM) has developed the Greater Manchester Low-Emission Strategy and Greater Manchester Air Quality Action Plan, concentrating on ways to tackle emissions from road transport to improve air quality and to help in reducing carbon dioxide emissions. These complement the Greater Manchester Climate Change and Low Emissions Implementation Plan, which focuses on making the most of the region's energy and resources through reducing its carbon footprint.
The Greater Manchester Low-Emission Strategy Greater Manchester Low-Emission Strategy takes a long-term approach to carbon emissions and air quality, aiming to reduce emissions from transport and encourage sustainable travel including public transport, cycling and walking. The Low-Emission Strategy gives a framework for policies and measures to:

- reduce air pollution as a contributor to ill-health in Greater Manchester;
- support the UK Government in meeting EU air quality thresholds;
- help reduce Greater Manchester's carbon footprint;
- encourage a low-emission culture.

The Greater Manchester Air Quality Action Plan sets out measures which will reduce air pollution while supporting the sustainable economic growth of the region.

For more information, please see the Adults' and Older People's JSNA topic paper on Air Quality.

Fuel poverty

The Fuel Poverty topic paper of the Adults' and Older People's JSNA contains a range of actions which, if implemented, will potentially have a positive impact on people with respiratory diseases such as COPD and asthma.

REFERENCES AND LINKS

Asthma UK
https://www.youtube.com/watch?v=aGcPM3gxfoA&list=PLE_gV15QAG_fnI06yZFXStS-fdxsc1eFz

British Lung Foundation
https://www.blf.org.uk

- Battle for Breath
  https://www.blf.org.uk/what-we-do/our-research/the-battle-for-breath-2016
- Briefing on respiratory illness risk factors
  https://www.blf.org.uk/sites/default/files/British%20Lung%20Foundation%20-%20Lung%20disease%20and%20health%20inequalities%20briefing.pdf
- Chris's Story
  https://www.blf.org.uk/your-stories/copd-affects-every-part-of-my-daily-living
- COPD Passport
  https://passport.blf.org.uk/
- Estimating the economic burden of respiratory illness in the UK
  https://www.blf.org.uk/what-we-do/our-research/economic-burden

- First steps to living with COPD
  https://cdn.shopify.com/s/files/1/0221/4446/files/BK31_First_steps_v2_2015_download.pdf?9351155647844290596
- Marion's Story
  https://www.blf.org.uk/your-stories/getting-out-of-breath-left-me-fighting-for-my-life
- Susan's Story
  https://www.blf.org.uk/your-stories/an-online-breath-test-changed-my-life
- Talking to homeless people
  https://www.blf.org.uk/your-stories/talking-to-homeless-people-about-their-breathing
- People caring for family members with COPD
  https://www.blf.org.uk/your-stories/caring-for-my-mum-was-difficult-but-rewarding
- People newly diagnosed with COPD
  https://www.blf.org.uk/support-for-you/copd/ive-just-been-diagnosed-with-copd
- Pulmonary rehabilitation
  https://www.blf.org.uk/your-stories/pulmonary-rehab-has-changed-my-life
- Statistics
  https://statistics.blf.org.uk/lung-disease-uk-big-picture

Gov.UK

- Towards a smoke–free generation: tobacco control
  https://www.gov.uk/government/publications/towards-a-smoke-free-generation-tobacco-control-plan-for-england
- Chronic smoking-related lung disease blights over 1 million lives in England – Press Release
  https://www.gov.uk/government/news/chronic-smoking-related-lung-disease-blights-over-1-million-lives-in-england

Greater Manchester Combined Authority
https://www.greatermanchester-ca.gov.uk/
Manchester City Council
http://www.manchester.gov.uk/
Transport for Greater Manchester
https://www.tfgm.com/

- Greater Manchester Air Quality Action Plan
  http://www.manchester.gov.uk/downloads/download/4166/air_quality_reports
- Greater Manchester Climate Change and Low Emissions Implementation Plan
  https://www.greatermanchester-ca.gov.uk/info/20005/low_carbon
- Greater Manchester Low-Emission Strategy
  https://www.greatermanchester-ca.gov.uk/airquality
- Making Smoking History: A Tobacco Free Greater Manchester
  http://www.gmhsc.org.uk/assets/Tobacco-Free-Greater-Manchester-Strategy.pdf
- Air Quality Information and Campaigns
  http://www.manchester.gov.uk/info/100006/environmental_problems/2942/air_quality_information_and_campaigns/4

Macmillan Cancer Improvement Partnership (MCIP) Lung Health Check
https://www.macmillan.org.uk/_images/lung-health-check-manchester-report_tcm9-309848.pdf

NHS RightCare
https://www.england.nhs.uk/rightcare/

NICE Guidance
https://www.nice.org.uk/guidance/conditions-and-diseases/respiratory-conditions/respiratory-conditions--general-and-other

Public Health England Local Tobacco Profiles
https://fingertips.phe.org.uk/profile/tobacco-control

Other useful links

- Respiratory Disease statistics
  http://ec.europa.eu/eurostat/statistics-explained/index.php/Respiratory_diseases_statistics#Main_statistical_findings
- Buzz – Manchester Health & Wellbeing Service
  https://buzzmanchester.co.uk/information/smoking

OTHER RELATED JSNA TOPICS

Manchester Joint Strategic Needs Assessment website
http://www.manchester.gov.uk/info/500230/joint_strategic_needs_assessment

includes related JSNA topics -

- Air Quality
- BAME Health
- End of Life Care
- Fuel Poverty
- Homelessness & Health

Date: November 2017

It is hoped that you have found this topic paper useful. If you have any comments, suggestions or have found the contents particularly helpful in your work, it would be great to hear from you.

Responses can be sent to jsna@manchester.gov.uk