Living Well: Respiratory disease

Why is this important to Bradford District?

Respiratory diseases are diseases that affect the air passages, including the nasal passages, the bronchi and the lungs. They range from acute infections, such as pneumonia and bronchitis, to chronic conditions such as asthma and chronic obstructive pulmonary disease (COPD). Respiratory disease is influenced by **lifestyle factors such as smoking**, as well as **environmental factors such as air quality**. With some of the greatest ill health locally associated with asthma and COPD; these respiratory conditions contribute to health inequalities, ill health and premature death.

A key ambition of the Bradford District Plan is better health, better lives to ensure everyone is able to enjoy the best health they can and have a good quality of life whatever age they are and wherever they live. Reducing health inequalities and improving health and wellbeing in Bradford District is also a shared ambition within the Joint Health and Wellbeing Strategy for the District.

Recognising this, partners across the District, including the local authority and NHS have prioritised respiratory health, with the aim of improving health outcomes; including reducing associated morbidity and mortality, for people in the District. In Bradford District this work is being driven by the Bradford Breathing Better Programme, and in Airedale, Wharfedale and Craven (AWC) through the AWC Respiratory Action Plan Group.

Strategic context

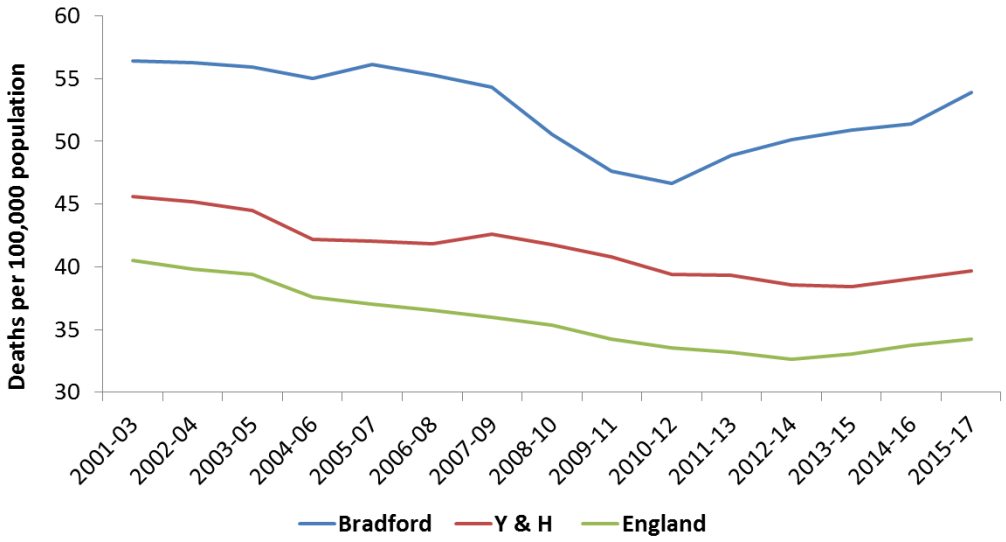
- An Outcomes Strategy for Chronic Obstructive Pulmonary Disease and Asthma Department of Health (2011)
- Atlas of Variation in Healthcare for People with Respiratory Disease NHS Right Care (2012)
- Tobacco Needs Assessment Bradford Metropolitan District Council (2015)
- Bradford Low Emission Zone Feasibility Study Bradford Metropolitan District Council (2014)
- Bradford Breathing Better - Bradford City and Districts CCG programme to improve the pathway of care and management of respiratory diseases

What do we know?

Each year more than **500 people die from respiratory disease** in the District; an estimated 25% of these deaths are preventable. With rates of early death (before the age of 75) from respiratory disease in Bradford District amongst the highest in England and the second highest in Yorkshire and Humber, respiratory disease is a leading cause of dying early in Bradford District. On average there are **180 deaths** per year due to respiratory disease in the under 75s with the main causes of death **COPD and pneumonia.**

Although mortality rates have generally been falling, from 2011-13 onwards **rates have been rising** in the District, going against the continued downward trend for England. In 2012-14, the age standardised mortality rate for respiratory disease in the under 75s was 50.1 deaths per 100,000 population compared to 32.6 per 100,000 population for England and 38.6 per 100,000 population for Yorkshire and the Humber (**Figure 1**).

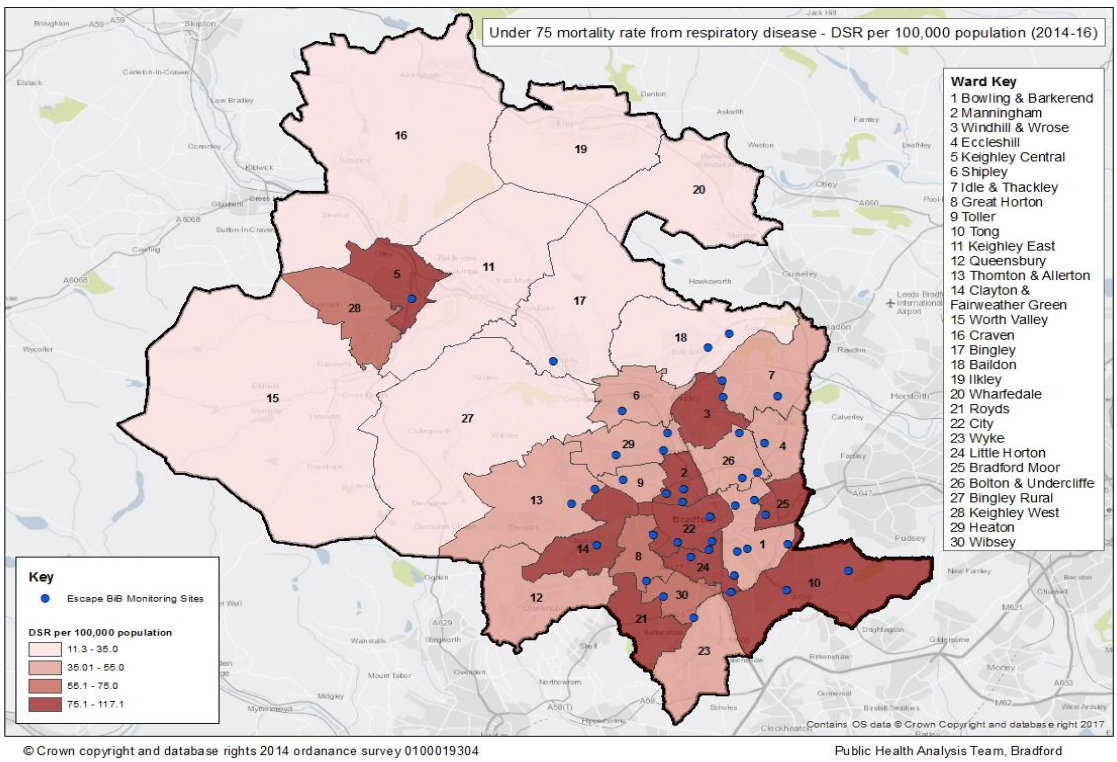
Figure 1: Under 75 mortality rate from respiratory disease, 2001-03 to 2015-17



Source: Public Health England

Mortality rates due to respiratory disease vary throughout the District (**Figure 2**), with higher than average directly age standardised mortality rates seen in wards including Manningham, Tong, Bradford Moor and City. Wards which have below District average rates include Ilkley, Bingley Rural, Wharfedale and Worth Valley. There is **a strong association with deprivation**, with the most deprived parts of the District having the highest premature mortality rates.

Figure 2: Under 75 mortality rate from respiratory disease across Bradford District, 2014-16



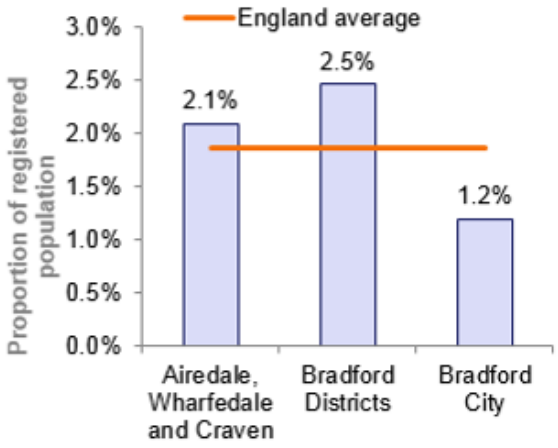
Source: Primary Care Mortality Database

Respiratory diseases such as COPD and asthma have a **significant impact on the quality of life** of those who are affected. Exacerbations can result in attendance at A&E or admission to hospital. On average, **30%** of people with COPD **attend A&E on at least one occasion each year**, with one in five admitted to hospital each year.

COPD: 13,154 people across the three CCGs in Bradford District have been **diagnosed with COPD**. Disease rates are lowest in City CCG however, this is, in part, a reflection of the younger age structure of the City population. As the number of older people increases, the number of people with COPD is expected to increase across the District.

One of the main challenges in managing COPD is that many people are unaware that they have the condition and aren't diagnosed until the disease is at an advanced stage. **Late diagnosis** has a substantial impact on symptom control, quality of life, outcomes, and cost.

Figure 3: Recorded disease prevalence of COPD across the 3 Bradford District CCGs, 2016/17



Source: Quality Outcomes Framework

Whilst 13,154 people in the District have been diagnosed with COPD, it is estimated that the actual number of people with COPD is closer to 19,300; with an estimated 6,150 people undiagnosed (equivalent to 32% of those estimated to have COPD).

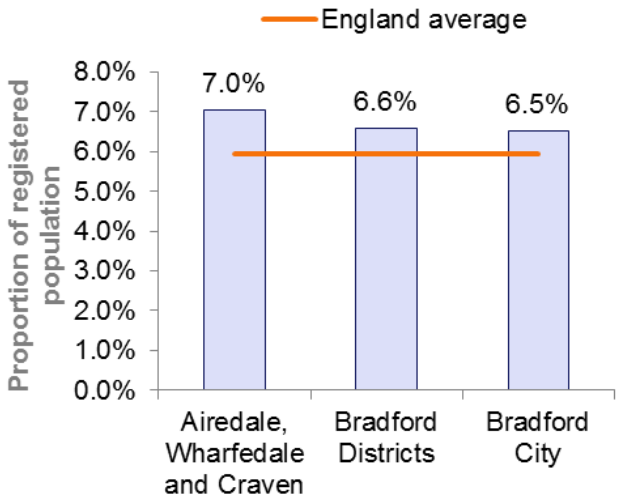
Asthma: **41,858** people across the three CCGs in Bradford District have been **diagnosed with asthma**. Disease rates are similar across all three CCGs, but higher than the England average. This number is likely to be an underestimate of the actual number, as with COPD, some people with asthma will not have been formally diagnosed. Getting a diagnosis and starting appropriate treatment early can lead to better long term outcomes, improved quality of life, symptom control, and fewer exacerbations.

Emergency hospital admissions for asthma per 100,000 0-18 years population are greater in Bradford District than both Yorkshire & Humber and England. The rate for this measure within Bradford District for 2016/17 was 268.1 compared to just 202.1 admissions per 100,000 for the country.

In 2011/12 the rates for Bradford District and England for this measure were almost the same. However, the difference between the two is now 65.3 admissions per 100,000. Although the national rate has also increased since 2011/12, **Bradford District's rate has increased by a**

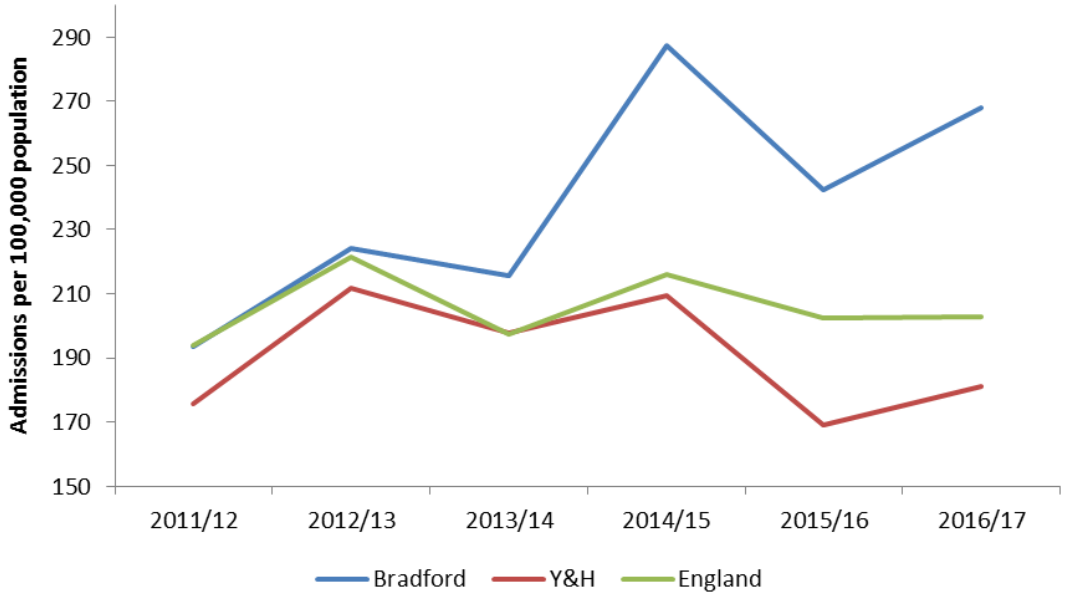
much larger amount creating the wide gap between the local authority and the average of the country.

Figure 4: Recorded disease prevalence of asthma across the 3 Bradford District CCGs, 2016/17



Source: Quality Outcomes Framework

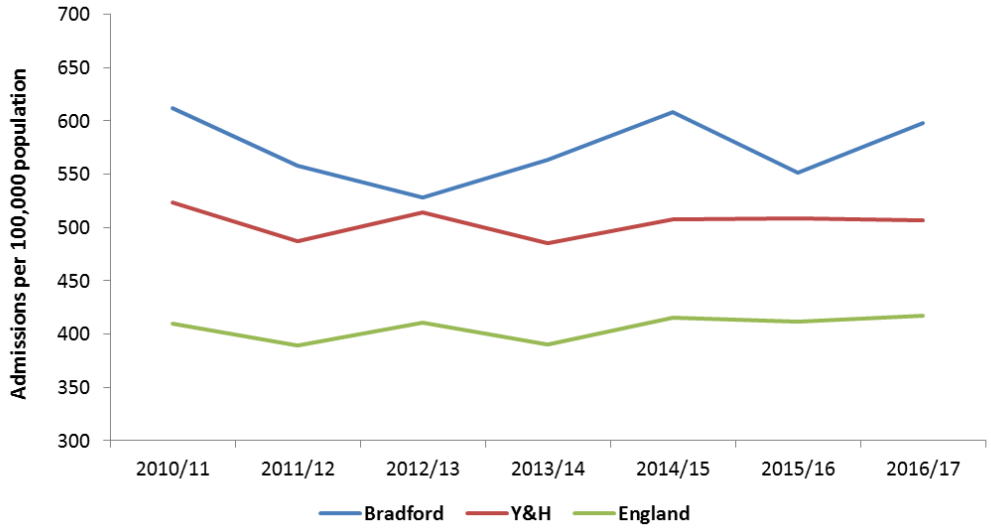
Figure 5 – Emergency Hospital admissions for asthma (under 19 years), 2011/12 – 2016/17



Source: Public Health England

In 2016/17 within Bradford District, the COPD emergency hospital admission rate was 597.7 per 100,000 population. This is an increase from 2015/16 and is 180.5 admissions per 100,000 higher in Bradford District than for England.

Figure 6 – Emergency Hospital admissions for COPD, 2011/12 – 2016/17



Source: Public Health England

Lung Cancer: Lung cancer is the **most common cancer** in West Yorkshire; in contrast data for England shows it to be the third most common behind breast and prostate cancer. Variation has been identified in route to diagnosis, stage at diagnosis and one year survival across the region.

Figure 7 – Lung cancer cases, incidence and mortality, 2014-16

	No cases	Incidence per 100,000 population	No deaths	Mortality Rate per 100,000 population
England	37,436	78.4	28847	60.6
West Yorkshire and Harrogate STP	1,919	94.7	1435	72.3
AWC	93	57.3	93	55.3
Bradford City	46	135.3	32	99.1
Bradford District	232	93.7	168	70.1

More than 80% of lung cancer patients will survive for at least a year if diagnosed at the earliest stage compared to around 15% for people diagnosed with the most advanced stage of disease. With emergency presentation the most common route to diagnosing lung cancer, late diagnosis is the main reason why the outcomes for lung cancer patients are so poor.

Risk factors for Respiratory Disease

Smoking has long been recognised as one of the main causes of preventable illness and early death. It is particularly important in the context of asthma, lung cancer and COPD because it is one of the main causes of COPD and lung cancer, and is also an exacerbating factor for asthma. Tobacco use is also the most important preventable cause of lung cancer with the incidence of lung cancer directly related to smoking; responsible for more than 85% of all cases.

The latest data published by NHS Digital (July 2018) reported smoking rates among adults in the Bradford District, at **18.9%,** the lowest ever recorded. Progress has also been made in reducing smoking prevalence by gender with 22.5% of men smoking in 2017 compared to 25.9% in 2016, and for women the percentage smoking has reduced from 18.5% in 2016 to 15.3% in 2017. However, smoking rates remain higher than regional (17%) and England (14.9%) prevalence rates. There also remain considerable **inequalities in smoking prevalence** in the Bradford District with 31.8% smoking prevalence recorded for people in routine and manual jobs.

Exposure to second-hand smoke (also referred to as passive smoking) also causes significant harm. Among adults, passive smoking causes deaths from lung cancer, cardiovascular disease and COPD. Passive exposure of children increases the risk of lower respiratory infections, asthma and wheezing illness, meningitis and middle ear disease.

Please see JSNA section on tobacco control for more detailed information.

Air pollution is also associated with poor respiratory health; it has been established to be causative for asthma, and associated with exacerbations of both asthma and COPD. In Bradford District an estimated **4.2% of early deaths are attributable to particulate air pollution**.

Please see JSNA section on air quality for more detailed information.

Gaps / challenges / opportunities

The number of people dying before the age of 75 as a result of respiratory disease is increasing; the reasons for this need to be understood and addressed.

Whilst **smoking rates** for the District have reduced they are still **too high in certain groups and deprived communities,** therefore actions need to focus on addressing inequalities in smoking prevalence across the District. Opportunities across social care, primary care and secondary care to refer and support people to stop smoking services as part of routine care pathways needs to be optimised.

The evidence base around the impact of poor air quality on respiratory health is well established; accordingly, continued efforts are needed to **improve air quality** in parts of the District.

Too many people experience exacerbations of asthma and COPD; this highlights the importance of the CCG led programmes to improve the management of asthma and COPD, largely through working with **primary care**. Key to this is support to self-care and advanced care planning. Furthermore, too many people with COPD don't have a diagnosis, meaning that they are diagnosed at a later stage of the disease, and are more likely to experience poorer outcomes. Accordingly, a timely and quality diagnosis must be a priority.

Bradford District has high emergency admission rates for under 18's. Understanding these local trends will support service review and redesign in the future.

What are we doing about it and what does the information presented mean for commissioners?

Improving respiratory health and reducing health inequalities is a priority for the Department of Health and Wellbeing, wider local authority and NHS partners. Action to improve outcomes focuses on two main areas:

- **Primary prevention** - addressing the risk factors for respiratory conditions to reduce the number of people developing them in the first instance. The main preventable risk factors for COPD and lung cancer are smoking and exposure to air pollution.
- **Secondary prevention** - involves action to improve the management and care of people with respiratory conditions such as COPD to slow down progression of the disease, and for COPD and asthma to control the conditions to reduce the frequency of exacerbations and complications. It also involves early diagnosis of lung cancer.

Tobacco control: Tobacco control measures are crucial in reducing smoking prevalence and the rates of smoking attributable disease. The Department of Health and Wellbeing commissions services to support people to stop smoking, and also activities to prevent people, particularly children and young people, from taking up smoking in the first instance.

A **multipronged approach to reduce the number of young people taking up smoking is essential**. Breathe 2025 is the vision for the Yorkshire and Humber promoted locally - to see the next generation of children born and raised in a place free from tobacco, where smoking is unusual.

The availability of illegal tobacco undermines a range of key measures including taxation, age restrictions on sales and point-of-sale display bans. Illegal tobacco is significantly cheaper than cigarettes from legal sources; lower prices undermine interventions by providing an accessible, lower-priced alternative source. Tackling the demand and supply of cheap illicit tobacco is a cross-cutting issue that requires engagement from a variety of stakeholders and partners. The **'Keep it Out**' illegal tobacco programme delivered by West Yorkshire trading Standards is jointly funded by Local Authorities across West Yorkshire, and aims to combat the damage illegal tobacco does to our communities.

West Yorkshire and Harrogate (WY&H) Cancer Alliance: WY&H Cancer alliance has identified tobacco control as a key element of its work to prevent cancer and cancer-related deaths. The tobacco control work stream aims to strengthen existing tobacco controls and smoking cessation services across WY&H, in line with reducing smoking prevalence to below 13% nationally by 2020. Outcomes are focused on:

- Reducing smoking related admissions and demand on services;
- Increasing referrals to specialist stop smoking services;
- Systematic implementation of NICE guidelines in acute and Mental Health services.

With funding from WY&H Cancer Alliance a programme of work to tackle lung cancer across the district has been implemented focusing on four specific work streams:

- ***Support people to stop smoking*** including those already receiving treatment in the NHS for smoking-related illnesses, by using every patient contact to offer help to quit.
- ***Raise awareness of early signs and symptoms*** so people seek information and advice earlier than is often the case, making more cancers curable.

- ***Develop a pilot 'lung health check' scheme*** to invite for screening those identified in the community or through their GP as most at risk of cancer, using low dose CT scanning in community venues, such as supermarket or community centre car parks.
- ***Improve the experience for those affected by lung cancer*** by ensuring care and treatment pathways are as speedy and efficient as possible.

This work creates the opportunity to establish a local health and care partnership between the local council, providers of NHS services (hospitals, mental health, GPs and community services) and commissioning organisations in order to drive the four-pronged programme.

Bradford City and Districts: Bradford Breathing Better: Bradford City and Districts CCGs are working collaboratively to deliver a programme of work (known as Bradford Breathing Better) to improve respiratory health outcomes for children, young people and adults in Bradford with COPD or asthma. The primary aim of Bradford Breathing Better is to promote early and appropriate diagnosis, and through effective and proactive care, support people to manage their conditions, reducing exacerbations and unplanned hospital admissions. The programme will provide people with respiratory disease the tools and techniques to feel confident in managing their condition. It will also provide people with rescue packs of medication to prevent people, where it is clinically safe to do so, from going to hospital when their condition worsens.

The planning and implementation of Bradford Breathing Better is underway, and will continue to be rolled out in 2018/19. The programme board has been established for over a year, and is a partnership involving primary care, secondary care, Public Health, the voluntary and community sector, and organisations such as The British Lung Foundation and Asthma UK. The programme has engagement and support from local GP practices and IT to support the collaborative and data driven approach to the programme.

Key work streams include: improved management (including self-care) of COPD and asthma, the development of a single clinical template, the development of an agreed prescribing formulary across primary and secondary care, clinical education, and the development of clear pathways between primary and secondary care. Working with Public Health colleagues, the work will focus on the clinical elements of smoking cessation, to increase the number of people stopping smoking, and provide workshops for people on how to reduce their own personal exposure to air pollution.

Self-care is one of the priorities locally to support individuals to manage their condition, be it COPD or asthma, and to understand any triggers for exacerbations, so that exacerbations can be managed in a timely, safe and supportive way. People have told us that they feel vulnerable when they have a flare up of their condition, and often they have no alternative available, particularly out of hours, but to call emergency services. This often leads to an A&E attendance or an unplanned hospital admission. The aim of this work is to provide each person with a detailed, personalised care plan which outlines how to manage their condition, what to do if they start to feel unwell, and to prescribe rescue packs to those who are suitable for this option.

Primary care teams currently have a number of templates open for them to follow to support the management of people with COPD and asthma in primary care settings. This can be cumbersome and confusing. Therefore, as part of Bradford Breathing Better we will look to simplify the process by creating one overarching template. This will support appropriate prescribing, proactive care planning, and facilitate referral to other services such as smoking cessation services, and pulmonary rehabilitation.

Airedale, Wharfedale and Craven (AWC) Respiratory Action Plan: AWC have adopted the principles of the NHS Right Care Programme to improve respiratory health outcomes in Airedale,

Wharfedale and Craven. The Right Care Programme is based on the principle of unwarranted variation. Some variation between CCGs in terms of health outcomes, hospital activity, prescribing, and what CCGs spend on health care is expected; this is because CCG populations are different. However, some variation is unwarranted, and by using data and evidence to identify such variation, areas and programmes which offer the best chances of improving outcomes for people in the District, as well as making the best use of resources, can be identified.

Much of the respiratory work programme in AWC focuses on improving respiratory health outcomes for people with asthma and COPD. The focus is primarily on primary care because this is where most people with these conditions are routinely managed, but also includes some pathway development work between primary and secondary care, to ensure that when people do require management in acute settings, that their care is as joined up as possible.

The respiratory work programme is delivered by the Respiratory Action Plan Group.

The Group is focusing on:

- Promoting early and appropriate diagnosis.
- Improving care and management of people who are diagnosed with a respiratory condition through care planning and patient education.
- Encouraging people to attend their annual reviews, where their medication can be reviewed and people are supported and educated to administer their medication correctly. Their care plan can be discussed and rescue packs can be provided where suitable.
- Encouraging self-care, starting with ensuring people is using their inhalers correctly.
- A pilot has been set up at Townhead surgery for people to use the Gold-Line so they can call and talk to someone if they are feeling anxious or they have a flare up of their condition. In some cases this means that exacerbations can be managed in a timely, safe and supportive way with the person feeling supported. This would negate the need to call emergency services, which can lead to an A&E attendance or an unplanned hospital admission.
- A consistent approach between primary and secondary care, including the development of a paediatric pathway.
- The establishment of an AWC Respiratory Network, with practice nurse leads in every GP practice will improve the care and management of people.

Air pollution: Air pollution across Bradford District is monitored and the Council is implementing a programme of work with partners to improve air quality that includes:

- retrofitting buses to reduce emissions
- air quality mitigation required as part of planning decisions
- changes to the Council's fleet of vehicles
- low emission vehicle trials
- Strategies to increase the use of public transport, walking and cycling.

In addition, Bradford District has undertaken a low emission zone feasibility study which has quantified the health benefits that could be achieved by having cleaner vehicles, and reducing the overall number of vehicles in the City. This study demonstrated that significant health cost savings could be made.

Supporting resources

- Bradford Metropolitan District Council (2015) Tobacco Needs Assessment https://jsna.bradford.gov.uk/documents/Health%20Needs%20Assessments/Tobacco/Tobacco%20Health%20Needs%20Assessment%202014%20-%202015.pdf

- Department for Environment, Food and Rural Affairs, Public Health England (2017) Air Quality A Briefing for Directors of Public Health https://laqm.defra.gov.uk/assets/63091defraairqualityguide9web.pdf

- Department of Health and Social Care (2011) An outcomes strategy for people with chronic obstructive pulmonary disease (COPD) and asthma in England https://www.gov.uk/government/publications/an-outcomes-strategy-for-people-with-chronic-obstructive-pulmonary-disease-copd-and-asthma-in-england