Together for Health
Respiratory Annual Report 2015
1.0 Introduction

In Wales, we want to ensure people of all ages value good lung health, and are aware of the dangers of smoking. We want everyone to take personal responsibility for their lifestyle choices and reduce the risk of acquiring a respiratory condition. Where treatment is required we will ensure they have timely access to high-quality care irrespective of where they live and how these services are delivered and that they can maximise the benefits of any treatment they may require.

It is estimated that 13%\(^1\) of adults in Wales are being treated for a respiratory condition and respiratory diseases cause one in seven\(^2\) (15%) of all deaths in Wales. The Welsh Health Survey 2014, which includes information on lifestyle, reveals a smoking prevalence in Wales of 20% and a prevalence of overweight and obese adults of 58%. Both smoking and obesity are major contributory factors to the levels of respiratory disease. Improving the respiratory health of the population in Wales is a major challenge for health care providers. If done well it is an opportunity to improve the lives of patients and their families.

Asthma UK estimates there are around 59,000 children with asthma in Wales\(^3\), 9.5% of children. Approximately one in 25 people carry the faulty cystic fibrosis gene.

“Together for Health: A Respiratory Health Delivery Plan” published in April 2014, sets out our vision for respiratory services in Wales. Our aim is for Wales to have low incidence for lung disease and improved health care outcomes. We are using the following indicators to measure success:

- a reduction in prevalence of smoking as per the tobacco control action plan for Wales
- a reduction in the incidence of chronic obstructive pulmonary disease (COPD)
- a reduction in unscheduled hospital admissions for both asthma and COPD
- a reduction in respiratory disease mortality rates per 100,000 population.

The respiratory health delivery plan provides a framework for action by health boards and their partners. It sets out the Welsh Government’s expectations for the planning and delivery of person-centred care and focuses on meeting population need, tackling variation in access to services and reducing inequalities across a number of themes:

- preventing poor respiratory health
- detecting respiratory disease quickly
- delivering fast, effective treatment and care
- supporting people living with lung disease
- improving Information
- targeting research.

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\(^1\) Welsh Health Survey 2014
\(^2\) Together for Health – Respiratory Health Delivery Plan
\(^3\) Asthma UK
This is the first annual report about respiratory conditions in Wales, as required by the delivery plan. It provides a national overview, complementing the individual reports, which have already been produced by health boards. Taken together, the reports demonstrate our commitment in Wales to improving the care for those with respiratory conditions and reporting on progress.

The publication of this first all-Wales annual report for respiratory health brings together for the first time simple and clear information about how services for people with respiratory conditions are performing. It highlights the progress we have made in this area and identifies areas for future improvement. It demonstrates how health boards are taking local ownership, through their own delivery plans, to improve services for people and drive up standards of patient care in their communities.

- over 227,000 people are being treated for asthma and 69,385 adults being treated for chronic obstructive pulmonary disease
- people living in areas of high deprivation are more likely to be receiving treatment for respiratory conditions than elsewhere in Wales
- 15% of all deaths are due to respiratory disease.

We have developed a number of outcome and assurance measures, which together will demonstrate how services for people with a respiratory health condition are improving in Wales. Some progress against these measures has been made; giving us reassurance that respiratory health care in Wales is developing in line with our vision:

- there has been a decline of 10% in the overall rate\(^4\) of people dying from respiratory health conditions between 2013 and 2014
- there has been a reduction of 8% in the overall rate of deaths related to pneumonia between 2013 and 2014
- emergency admissions related to respiratory conditions have fallen by 11.1% between 2013-14 and 2014-15
- smoking prevalence has fallen over the last 10 years, from 28% in 2004-05 to 20% in 2014
- the amount of time an individual spends in hospital related to respiratory conditions has fallen gradually from 6.2 days in 2010-11 to 5.5 days in 2014-15. A similar reduction has been seen for emergency admissions from 6.5 days to 5.5 days
- the number of readmissions for respiratory conditions has fallen by 13% between 2010-11 and 2014-15
- recruitment to clinical respiratory studies increased in 2014-15 by 166 compared to the previous year.

We need to continue to make improvements in these areas as well as ensuring that progress is made where performance has not been as good as anticipated:

- no health board has managed to treat 5% of its smoking population in line with national targets, with the support of NHS smoking cessation services

\(^4\) Based on the European Age Standardised Rate per 100,000 population (using the 2013 European standard population) for persons
- uptake of the flu vaccination amongst individuals aged under 65 and at risk is around 50% each year, considerably below the target of 75%
- a total of 16,676 thoracic patients were treated in Wales during 2014-15. Of those patients, 89.3% were seen and treated within 26 weeks, and 98.2% treated within 36 weeks
- the average length of stay for individuals with pneumonia and/or influenza was 11.2 days in 2014-15, considerably longer than other respiratory conditions. However, this has fallen from 12.9 days in 2013-14
- 63% of patients are not assessed for pulmonary rehabilitation prior to discharge.

It is important to recognise the valuable work undertaken by the third sector in supporting and caring for people with respiratory conditions and their families. This support is an essential element of the delivery plan, without which the NHS would struggle to deliver such excellent service.

Through this and future annual reports, the Welsh Government aims to give a clear account of respiratory health conditions activity to the public, and indicate to the NHS where it is doing well and where it needs to improve care. Information like this is the best way to support continuous improvement in services.

Andrew Goodall
Chief Executive, NHS Wales

Fiona Jenkins
Chair, Respiratory Health Implementation Group
2.0 What are respiratory diseases?

The respiratory system plays a vital role in delivering oxygen to the body — fuel for all the body's functions. It also removes carbon dioxide waste, eliminates toxic waste, regulates temperature, and stabilizes blood acid-alkaline balance.

The lungs are the largest part of the respiratory system and have both "respiratory" and "non-respiratory" functions. The respiratory function involves gas exchange — the transfer of oxygen from the air into the blood and the removal of carbon dioxide from the blood. Non-respiratory lung functions are mechanical, biochemical, and physiological. The lungs provide a defense against bacterial, viral and other infectious agents; remove various metabolic waste products; control the flow of water, ions, and large proteins across its cellular structures; and manufacture a variety of essential hormones and chemical agents that have important biological roles.

There are many types of respiratory conditions including:

- **Asthma**, a chronic inflammatory disorder of the airways. People with asthma experience episodes of wheezing, breathlessness and chest tightness due to widespread narrowing of the airways.
- **COPD (chronic obstructive pulmonary disease)** limits airflow in the lungs, which can lead to mild or severe shortness of breath that is not fully reversible even with treatment.
- '**Hay fever**' is a term commonly used to describe allergic rhinitis when it is caused by seasonal exposure to pollen.
- **Bronchiectasis** refers to an abnormal and irreversible widening of air passages in the lungs.
- **Chronic sinusitis** is the inflammation of the lining of one or more sinuses (large air cavities inside the face bones). It occurs when normal draining of the sinuses is obstructed by swelling, excessive mucus, or an abnormality in the structure of the sinuses.
- **Cystic fibrosis (CF)** is a hereditary disease in which mucus from glands is thicker and stickier than normal, affecting the lungs and other organs. Difficulty in clearing mucus from the airway leads to chest infections and airflow obstruction.
- **Occupational lung diseases** result from breathing in harmful dusts or fumes, such as silica, asbestos and coal dust. This exposure typically occurs in the workplace.
- **Sleep apnoea** is a condition that affects breathing while asleep. It reduces airflow which causes intermittent dips in the amount of oxygen in the blood and disturbs sleep.
- **Pneumonia** is an infection of the alveoli, usually by bacteria.
- **Tuberculosis**, a slowly progressive pneumonia caused by the bacteria Mycobacterium tuberculosis.
- **Emphysema** results from damage to the fragile connections between alveoli. Smoking is the usual cause. (Emphysema also limits airflow, affecting the airways as well.)
• **Lung cancer** has many forms, and may develop in any part of the lungs. Most often this is in the main part of the lung, in or near the air sacs. The type, location, and spread of lung cancer determines the treatment options.

• **Interstitial lung disease** relates to a broad collection of lung conditions affecting the interstitium such as sarcoidosis, idiopathic pulmonary fibrosis, and autoimmune disease.
3.0 How well are we doing in caring for those with respiratory health conditions in Wales?

3.1 Overview

An analysis of how many people smoke in Wales; how many people are living with a respiratory health condition; how many people die from a respiratory condition and the number of times people with respiratory conditions have an unplanned hospital admission all provide an important insight into the effectiveness of our work to prevent, detect and treat respiratory conditions and to support those living with a long-term respiratory health condition.

This analysis shows incidence rates are increasing slowly over time, death rates have not really altered and that unplanned emergency admissions are falling.

3.2 How many people suffer from respiratory conditions?

Data from the Welsh Health Survey 2014 suggests that 13% of adults, approximately 330,000 people, report being treated for any respiratory illness.

![Figure 1: Number of Welsh residents registered with their GP with ...](image)

Source: Quality and outcome framework statistics for Wales 2014-15

Figure one highlights in 2014-15, over 227,000 adults were being treated for asthma and 69,385 were being treated for COPD. There has been a slight increase in the numbers being treated for these conditions in recent years. Figure two highlights a higher percentage of patients in Wales being treated for asthma or COPD than in other parts of the UK.
A COPD local enhanced service (LES) has been introduced for general practice in Betsi Cadwaladr University Health Board. The aims are to:

- support and improve COPD clinical leadership and learning in practices
- identify patients with undiagnosed COPD
- improve identification and assessment of depression associated with COPD
- ensure the referral of patients to appropriate support services
- improve management of people with very severe COPD
- improve the review and management of people post hospital admission and improve the accuracy of hospital coding of COPD.

Figure three highlights a difference of five percentage points in the incidence rate of people being treated for respiratory conditions between those living in areas of deprivation than elsewhere in Wales.
3.3 How many people die from respiratory health conditions each year?

Source: Public Health Wales based upon Office for National Statistics (ONS) mid-year estimates.
Respiratory disease is a major cause of mortality in Wales, causing 15\% of all deaths.

In 2014, 4,444 people died from respiratory health conditions. Of these 1,614 died from COPD and 1,867 from pneumonia. As well as considering the actual number of deaths, it is possible to calculate an age-standardised mortality rate. When rates are age-standardised, the differences in the rates over time or between geographical areas do not simply reflect variations or changes in the age structure of the populations. This gives a better indication about the changes in respiratory related deaths over time.

Figure four shows there has been a decline in the overall rate\(^5\) of people dying from respiratory health conditions over the last ten years. This is particularly notable for deaths related to pneumonia where there has been a reduction of just under 25\% in the overall rate of deaths indicating that the outcomes from respiratory health care in Wales are resulting in improvements in survival across Wales.

3.4 How many unplanned hospital admissions are there for respiratory health conditions?

Ongoing consultant care is critical to support individuals diagnosed with a respiratory health condition. This will result in planned admissions as appropriate. We want to minimise the number of unplanned (emergency) admissions associated with poor respiratory health. This measure tells us how many people are admitted to emergency departments with respiratory health conditions. If we are successful, we would expect to see a continued fall in the number of emergency admissions over time.

Figure five highlights in 2014-15 there were just over 49,000 admissions to hospital for respiratory conditions. Of these 49,000, 83\%, were emergency admissions. Between 2013-14 and 2014-15 there was a fall of 5,061 emergency admissions – 11.1\%.

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\(^5\) Together for Health – A Respiratory Health Delivery Plan

\(^6\) Based on the European Age Standardised Rate per 100,000 population (using the 2013 European standard population) for persons
Figure 5: Number of hospital for respiratory conditions in Wales

Source: Patient Episode Data Wales, NWIS
4.0 What is happening across Wales to help improve respiratory care?

Respiratory conditions in Wales are overseen by a committee called the Respiratory Health Implementation Group. This Group includes representation from all health boards, the British Lung Foundation, Asthma UK and Welsh Government. The Group identifies the national priorities for respiratory health conditions each year. In 2015 it identified the need to:

- support self-management by developing better patient information and care plans
- promote lung health by delivering a Love Your Lungs campaign in the community
- develop specialist services and improving standards and pathways
- improve diagnosis by rolling out wider ARTP spirometry accreditation
- reduce prescribing variation by raising awareness and producing guidance.

£1 million has been allocated annually to the delivery of the priorities identified by the Respiratory Health Implementation Group and in 2015-16 a significant proportion will be targeted at proposals that will effective utilisation of spirometry in primary and secondary care. All health boards have been challenged to improve their services for respiratory patients aligned to the priorities in the Respiratory Health Delivery Plan.

The Respiratory Health Implementation Group ensures that health boards participate in clinical audit and monitors performance of health boards.

Clinical audit and outcome review is critical to continuous service improvement. All health boards participate in all relevant national clinical audits and clinical outcome reviews as set out in the Welsh Government's national annual audit programme. They are then expected to act upon the outcomes.

According to experts, second-hand smoke contains more than 4,000 chemicals, many of which are harmful. Exposure has been linked to chest infections, asthma, ear problems and cot death in children.

A ban on smoking in cars carrying children under the age of 18 came into force in Wales on 1 October 2015. The new law means it is now illegal to smoke in any private vehicle when someone under the age of 18 is present. It is also against the law if the driver does not stop someone else from smoking in the vehicle if there is someone under 18 present.
5.0 Preventing poor respiratory health disease

People in Wales need to be aware of, and take action to minimise their risk of, premature respiratory disease through healthy lifestyle choices. Reducing smoking will have the greatest impact. In addition, people need to ensure that they have the appropriate vaccination programs (e.g. influenza) and this needs to be further encouraged amongst target populations.

However respiratory diseases can arise from a number of causes, including inhalation of toxic agents, accidents, and harmful lifestyles, such as smoking. Infections, genetic factors, and anything else that affects lung development, either directly or indirectly, can cause respiratory symptoms.

The Respiratory Health Implementation Group has agreed to develop and fund an awareness campaign “Love your Lungs” to raise awareness of the signs and symptoms of COPD and increase early diagnosis through community lung function screening and GP referral. The campaign will run in the spring of 2016. Many people are unaware they have COPD and one of the aims of this campaign is to find the ‘missing millions’ and to encourage early diagnosis within targeted at risk groups proposed by health boards.

A key feature of the campaign will be the promotion of the importance of smoking cessation as a treatment for lung disease, providing smoking cessation information and publications for members of the public as well as introducing them to local smoking cessation services at a time when they are receptive to discussing their lung health.

5.1 Smoking prevalence in Wales

The main cause of COPD is smoking. Some cases of COPD are caused by fumes, dust, air pollution and genetic disorders, but these are more rare. The likelihood of developing COPD increases the more you smoke and the longer you’ve been smoking. This is because smoking irritates and inflames the lungs, which results in scarring.

Over many years, the inflammation leads to permanent changes in the lung. The walls of the airways thicken and more mucus is produced. Damage to the delicate walls of the air sacs in the lungs causes emphysema and the lungs lose their normal elasticity. The smaller airways also become scarred and narrowed. These changes cause the symptoms of breathlessness, cough and phlegm associated with COPD.

Figure six shows too many people in Wales still smoke despite recent reductions in the prevalence rate.
Wales is on track to meet the outcome within the respiratory delivery plan to reduce the prevalence of adult smoking to 20% by 2016 and 16% by 2020. A target for smoking cessation was introduced in April 2013. This requires 5% of smokers to be treated with the support of NHS smoking cessation services, with at least a 40% co-validated quit rate at 4 week follow-up.

Performance so far has been disappointing with no health board yet treating 5% of their smoking population and less than half achieving the 40% co-validated quit rate in 2014-15, as highlighted in figure seven. However there have been some improvements in performance most notably at Betsi Cadwaladr University Health Board with 3.6% of the population being treated with the support of NHS smoking cessation services.

Source: Welsh Health Survey 2014
All health boards have recently introduced community pharmacy smoking cessation services. The majority also have a hospital based smoking cessation service and all are considering introducing specialist services for pregnant women in the near future.

5.2 Uptake of flu vaccinations

Some people may be more likely to develop potentially serious complications of flu, such as bronchitis and pneumonia. The following are classed as “at risk” and therefore should have an annual flu jab:

- aged 65 or over
- pregnant
- have certain medical conditions
- are very overweight
- are living in a long-stay residential care home or other long-stay care facility
- receive a carer’s allowance, or are the main carer for an elderly or disabled person whose welfare may be at risk if you fall ill
- are a front-line health and social care worker.

Figure eight highlights the improvements which have been made amongst many of the at risk group. However there is still a lot to do to ensure those individuals aged under 65 and at risk actually have the flu vaccination. The uptake amongst this group is around 50% each year, considerably below the target of 75%.
GPs are the main provider of flu vaccinations. Community pharmacies support those individuals who are less than 65 years of age in at risk groups and those who do not routinely get vaccinated. Health boards are identifying and building on examples of good practice, where GP practices and their community pharmacy partners have worked collaboratively, to develop a coordinated approach that strengthens local arrangements and improves coverage. Community pharmacies have discretion to immunise individuals aged 65 years or over if they consider they are unlikely to visit their GP for vaccination.

Source: Public Health Wales Health Protection Division
6.0 Detecting respiratory disease quickly

It is important that any respiratory disease is diagnosed as early as possible. This will enable prompt treatment to be started that will try to slow down the deterioration of the lungs. Many respiratory conditions are often diagnosed after a consultation with a doctor, which may be followed by breathing tests.

6.1 Spirometry testing

Spirometry is a breathing test that can help to diagnose and monitor lung conditions such as asthma and COPD. The test is carried out using a machine called a spirometer which measures how well your lungs work. Spirometry testing post bronchodilator means the test is carried out after the patient has had a bronchodilator inhaler or nebuliser, to open their airways.

The test helps to diagnose or monitor a person’s lung condition so that they can be given the right treatment. The diagnosis of asthma or COPD is confirmed by demonstrating the presence of variable airflow obstruction. Accurate measurement of lung function is also necessary to assess and manage asthma. Spirometry is very safe to perform. Most adults and children seven years of age and over can have a spirometry test.

![Figure 9: Percentage of patients in Wales with COPD in whom the diagnosis has been confirmed by post bronchodilator](chart.png)

Source: Quality and outcome framework statistics for Wales 2014-15

Figure nine demonstrates a high proportion of patients with COPD have had their diagnosis confirmed by post bronchodilator. There is concern though that there is a high proportion of people who are unaware they have a lung condition, and more needs to be done to ensure effective detection of the condition so it can be managed effectively without the need for emergency intervention. There are around 69,000
people (figure one) on a GP COPD register. Evidence suggests that about 20% of these may be misdiagnosed.\textsuperscript{7} There is also evidence of under diagnosis, with an estimated population prevalence of between 2 and 4% in the population but only 1.5% on GP registers.\textsuperscript{8} Particularly vulnerable to under diagnosis are people with mental health problems and those with cardiovascular disease whose early symptoms may not be recognised.

The Respiratory Health Implementation Group has agreed that one of its priorities is to support earlier detection. To support this priority it is funding a national project that will detect respiratory disease quickly through effective utilisation of spirometry in primary and secondary care. The scheme will achieve improvements in the following areas:

- consistent and quality assured standards for spirometry across Wales in secondary and primary care diagnostics
- accuracy of diagnosis and severity assessment in people with COPD
- increase the number of people accurately diagnosed
- reduce the number of patients wrongly diagnosed with COPD
- Identify COPD earlier leading to earlier intervention
- Reduce the time taken to diagnose and treat breathlessness in non–emergency patients where the cause is not easily identifiable
- reduce the need for medication by establishing a more accurate diagnosis;
- improve the uptake of smoking cessation at an early stage to slow disease progress
- enhance the quality of life for people with COPD
- effective communication between health professionals
- ensuring patients are only referred where clinically appropriate.

\textsuperscript{7} Misdiagnosis among frequent exacerbators of clinically diagnosed asthma and COPD in absence of confirmation of airflow obstruction 
\url{http://www.ncbi.nlm.nih.gov/pubmed/25921015}

\textsuperscript{8} Healthcare Commission: \textit{Clearing the Air: a national study of Chronic Obstructive Pulmonary Disease} Healthcare Commission 2006
6.2 Referral to a consultant

There will be occasions when a GP is unable to diagnose a respiratory condition and will need to refer the patient to hospital for further testing and diagnosis.

Figure 10 demonstrates the cyclical pattern in GP referrals noted between April 2014 and March 2015. On average there were around 1,300 GP referrals a month last year ranging from 1,116 to 1,521.

Source: Stats Wales
7.0 Delivering fast, effective treatment and care

Waiting for a diagnosis can cause distress and anxiety for individuals and their families and carers. Timely diagnosis can reduce this anxiety and will result in earlier treatment and effective management of the condition. Once a diagnosis has been given, people will need to attend hospital for all or part of their treatment. We would expect at least 95% of patients should start their treatment, if required, within 26 weeks from the referral. No patients should wait longer than 36 weeks.

![Figure 11: Percentage of thoracic patients resident in Wales waiting to be treated by Welsh providers](image)

Source: StatsWales

A total of 16,676 thoracic patients were treated in Wales during 2014-15. Of those patients, 89.3% were seen and treated within 26 weeks, and 98.2% treated within 36 weeks, as shown in figure 11.

Cardiff and Vale University Health Board has a number of processes in place to ensure effective, timely treatment:

- patients with suspected sleep disordered breathing are referred directly for a sleep study, standard assessment and then discussion at a multi disciplinary team. This significantly improves the service efficiency so the referral to treatment times are within 8 weeks for most patients
- patients with pleural disease can be seen in the pleural clinic on a weekly basis
- patients with suspected tuberculosis (TB) are referred directly to the TB nurses who coordinate with a dedicated TB clinic jointly run by respiratory and Infectious disease clinicians
Effective diagnosis supported by timely planned treatment is the best form of treatment. However, as already highlighted, many people are unaware that they may have a respiratory health condition until they need urgent help.

Effective care and treatment should, over time, reduce the average length of time a person needs to spend in hospital. Figure 12 indicates that the amount of time an individual spends in hospital has fallen from 6.9 days in 2010-11 to 5.5 days in 2014-15. A similar reduction has been seen for emergency admissions from 6.2 days to 5.5 days. Due to the very small numbers of planned care admissions for respiratory conditions the average length of stay varies.

![Figure 12: Average length of stay, all respiratory conditions, all Wales](image)

Source: Patient Episode Database for Wales, NWIS

The length of stay for patients diagnosed with COPD and associated readmission rates at Aneurin Bevan University Health Board are the lowest in Wales. The health board has dedicated respiratory wards with a minimum of four ward rounds each week. Those patients that are not able to be admitted directly on to the respiratory ward are also seen daily until they are able to be moved. The inpatient service is supported by the COPD homecare and oxygen service who support early discharge to patients when back in their place of residence.

Figure 13 shows the average length of stay for individuals with pneumonia and/or influenza at 11.2 days in 2014-15, considerably above the other conditions. However this has fallen from 12.9 days in 2013-14.
Appropriate care needs to given in line with a patient’s clinical need. The national COPD audit for 2014 indicates that during the admission:

- 59% of cases in Wales were seen by a respiratory consultant, this is higher than in England (57%)
- 47% of cases in Wales were seen by a respiratory nurse/member of the COPD/respiratory team, lower than in England
- 90% of cases overall in Wales were seen by either a respiratory consultant or any other consultant physician at some point during the admission
The COPD audit suggests that patients received better evidence-based care when seen by the respiratory team:

- more patients had their breathlessness score recorded (the dataset revealing a strong relationship between the breathlessness score, when it was recorded, and length of stay and inpatient mortality)
- more patients had their oxygen therapy prescribed
- more patients had their spirometry recorded
- more patients had their BMI recorded
- more patients received smoking cessation advice
- more patients were referred to early/supported discharge services
- more patients were assessed and referred for pulmonary rehabilitation.

### 7.2 Readmissions

Ideally once discharged, patients should be able to manage their condition in the community, with appropriate support from their GP. It is important that patients are only discharged when they are fit and well.

Figure 15 highlights that the number of readmissions for respiratory conditions is falling. There was a 13% reduction in readmissions between 2010-11 and 2014-15, suggesting improvements in ward based care.
‘Enhanced Care’ has been available in the Conwy East and West area of Betsi Cadwaladr University Health Board since September 2014. It provides an intensive two week ‘step up’ intervention period of enhanced community based care and treatment for patients who are experiencing a deterioration in their chronic/medical condition, acting as an alternative to hospital admission. Enhanced care and case managers also link with secondary care respiratory services to effectively manage patients in the community, with a focus on avoiding hospital admissions where possible. There is also access to ‘step down’ support to enable timely early discharge from hospital by providing enhanced medical, nursing, therapy, third sector and social care services to support the management of people safely in their own homes. There is access to GP and consultant support, with weekly virtual ward rounds to review patient progress with the nurse practitioners/case managers.

Source: Patient Episode Data Wales, NWIS
8.0 Supporting people living with lung disease

To achieve the best possible outcomes for patients with a respiratory condition each individual needs to be fully involved in their care. Education is key to improving awareness of respiratory disorders and associated symptoms, helping achieve an earlier diagnosis and improved self-management. Having confident and informed respiratory patients at the centre of the decision-making processes will allow them to take ownership of their conditions leading to fewer unplanned primary care consultations, reductions in visits to outpatient departments, reduced hospital admissions and reduced length of stays in hospital.

Individuals with chronic lung disease will benefit from a multidisciplinary approach to care. They will gain the most benefit from this care if it is delivered in the community, closer to home. This will ensure that individuals have two key elements of care: physical and psychological support.

These are important, when living with such chronic disease, to help the individual cope with distressing symptoms such as breathlessness, as well as ensuring that respiratory infections are treated earlier to prevent worsening structural damage to the lungs. Professionals involved in supporting individuals with respiratory conditions should be trained in techniques which build self-sufficiency in their clients and address health related behaviours such as smoking and obesity.

To actively self-manage, individuals need confidence and skills to manage their health on a daily basis and particularly during inevitable exacerbations. They also need to be able to engage the effective support from the health professionals they work with who can act as a resource to them. People living with COPD and the health professionals they work with need to find ways to work in partnership to optimise self-management, shared decision making and care planning.

‘Self-management for Life’ (SM4L) enables the relationship between an informed and activated patient and an informed and prepared clinician to flourish. The SM4L intervention does not replace interventions such as the national exercise referral scheme or pulmonary rehabilitation, but is complementary to both. Betsi Cadwaladr University Health Board has a project to 12 tutors. This will equip individuals with the knowledge, skills and confidence to competently deliver the COPD SM4L programme and progress within an appropriate support and development framework. A number of learning outcomes will be achieved during the training. This programme aims to develop the service provision for patients with COPD/breathlessness in line with other specialist areas. Phase one of the project will be the set up and provision of COPD SM4L training with the first training delivery to take place in early February 2016.
8.1 Pulmonary rehabilitation

Pulmonary rehabilitation is a program of exercise, education, and support that supports a patient to breathe correctly and to function at the highest level possible.

Pulmonary rehabilitation should be available locally for all patients with chronic lung disease, with further support accessible through the national exercise referral scheme (NERS) respiratory disease pathway, designed to increase the long-term adherence in physical activity of patients.

Where appropriate, patients should be supported by rehabilitation at the point of discharge. 94% of units in Wales have their own pulmonary rehabilitation service compared to 5% in England. Data from the COPD audit 2014, as shown in figure 16 highlights that the majority of patients were not assessed for pulmonary rehabilitation prior to discharge. This is an area where the health boards will need to ensure effective processes are in place prior to discharge.

Source: COPD Audit – February 2015

During the year the British Lung Foundation and the Charted Society of Physiotherapy undertook a review of pulmonary rehabilitation services across Wales, examining best practice and identifying challenges within local services. They found that a significant number of pulmonary rehabilitation programmes were being delivered by one or two healthcare professionals, and were not truly multi-disciplinary. Sessions organised in hospitals could offer patients hospital transport, so increasing the possibility that those who needed greater support could get there, yet patients accessing services in leisure centres could not access this. The reviewed highlighted the challenges of referring patients on to the NERS. Long term changes in behaviour require a smooth transition from physiotherapy-led exercise into instructor-led exercise. Whilst the analysis showed that every team was referring
patients to the local NERS team, the links were inconsistent. A small number of teams worked with NERS instructors throughout the course of the programme, meaning that patients had built up a relationship and felt confident with the instructor. The report recommended that patients have contact with NERS instructors as early as possible.

8.2 Regular reviews

It is really important for patients who are registered with COPD and asthma to have regular reviews to check whether their condition is being effectively managed. Figure 17 highlights that over 90% of patients are having their regular COPD reviews and just over 75% are having an asthma review.

![Figure 17: The percentage of patients in Wales with COPD and asthma who have had a review in the preceding 15 months](image)

Source: Quality and outcome framework statistics for Wales 2014-15

The Respiratory Health Implementation Group has agreed to implement a project across Wales to achieve a significant increase in the numbers of people with a self-management plan. This will ensure that all people with asthma and COPD have a written self-management plan, allowing them to control their symptoms effectively, and self-manage when their symptoms get worse, with the aim of preventing unscheduled hospital or GP visits and improve their quality of life. It is expected that by making primary care contacts more efficient and effective, through the use of self-management plans, there will be a reduction in demand on urgent secondary care services and a subsequent increase in capacity to treat those patients in most need, reducing waiting times in urgent respiratory care settings and GP practices.

Many patients with a respiratory condition will have to take medication to support and control their condition. The All Wales Medicines Strategy Group published a report in February 2015 describing the variation in prescribing practice for respiratory medicines. The report highlighted the large costs involved in the primary care
prescribing for respiratory medicine. Between July 2013 and June 2014, 5,531,434 items were prescribed, costing £85,430,162. Inhaled corticosteroids accounted for 65% of the cost and 30% of total items; followed by bronchodilators, which make up 28% of total cost and 44% of items. The report showed the prevalence of smoking across Wales correlates significantly with the prescribing of high strength ICS and also a strong correlation between smoking and COPD prevalence within Wales. There appears to be no correlation between emergency admission rates and the use of high-strength ICS. For example, health boards with higher high strength ICS usage do not have lower rates of emergency respiratory admissions or other asthma- and COPD-related admissions. The Respiratory Health Implementation Group is developing all Wales guidelines to reduce variation in prescribing for asthma and COPD.

The British Lung Foundation has been working with Hywel Dda University Health Board to develop new Breathe Easy support groups and integrate the groups into the respiratory care pathway. The Health Board has entered into a formal partnership with the organisation to ensure that the respiratory nurses, physiotherapists and other professionals attend support groups meetings to help people self-manage. Pulmonary Rehabilitation, NERS courses and EPP are time-limited, so the development of sustainable patient groups is essential to enable patients to support each other.

8.3 Palliative end of life care

Patients with advanced disease need prompt access to effective palliative end of life care.

The respiratory services team at Aneurin Bevan University Health Board work collaboratively with palliative services to ensure appropriate support and advice is provided to patients and carers in a timely manner. Assessments are generally undertaken within 24 hours of referral and support via St David’s Hospice can be put into place also within 24 hours. The priority for next year is to address the timeliness of discussions with patients regarding interventions when their health deteriorates and appropriate ceilings of care. If this has been discussed with patients and carers prior to an emergency admission and is clearly documented and thought through it can significantly improve the experience at a very difficult time.
In Wales, 82% of sites have an on-site palliative care service available for COPD patients compared to 88% of sites in England.

Source: COPD Audit – February 2015
9.0 Targeting research

Research is critical to support effective care for people with a respiratory health condition. The NHS needs to respond to the latest research evidence in the planning and delivery of its services. Respiratory research in Wales is also vital in attracting investment and first class NHS staff. Wales already has an excellent reputation in this area.

The bronchiectasis team in University Hospital Llandough are co-applicants on BRONCH-UK which is a multicentre and multidisciplinary partnership grant funded by MRC (£700,000). The University Hospital Llandough Bronchiectasis Service will be the site representing the whole of Wales in BRONCH-UK. Cardiff and Vale University Health Board will be participating in EMBARC, which is a pan European Bronchiectasis Registry in collaboration with the European Respiratory Society. The health board is a co-applicant on a grant application aiming to answer the clinical and cost effectiveness of hypertonic saline versus isotonic saline over a year period in bronchiectasis patients. They have several commercial trials in bronchiectasis and cystic fibrosis and have a dedicated clinical research nurse. There are active research links with Cardiff University, University of Warwick, and Cardiff Metropolitan University.

Figure 19 shows that recruitment to clinical respiratory studies increased in 2014-15 by 166 compared to the previous year and, with the exception of 2013-14, there has been a steady increase in the number of patients participating in a clinical research study. However more needs to be done to improve participation in clinical trails. The Respiratory Implementation Group has agreed that supporting clinical research will be a priority for 2016 – 17.

Figure 19: Recruitment to respiratory Health and Care Research Wales clinical research studies

Source: Health and Care Research Wales
10.0 Conclusion and looking ahead to 2016

We have made progress in improving the care of people with a respiratory health condition in Wales over the last 12 months. This is a tribute to all those involved in the planning and delivery of this important area. This includes staff in the NHS and those in other parts of the public sector. We must also acknowledge the invaluable work of the community and voluntary sector. We have now established firm foundations for further positive development.

In several areas, we have performed well and now have a strong sense of strategic direction. We have, for the first time, produced some key performance indicators that will allow us to track our developments on our journey to achieve our vision.

The Respiratory Health Implementation Group has reviewed progress made over the last year and identified key areas where focus across Wales needs to be maintained over the forthcoming year. In order to maximise respiratory services and patient care, the priorities over the next year will be:

- supporting self-management by developing better patient information and care plans
- promoting lung health
- developing specialist services and improving standards and pathways
- improving diagnosis by rolling out wider ARTP spirometry accreditation
- reducing prescribing variation by raising awareness and producing guidance.

The Respiratory Health Implementation Group has just appointed a national clinical lead – Dr Simon Barry. Dr Barry will play a critical role in driving forward many of the priorities and supporting health boards to improve their respiratory services.

The challenges ahead are many and significant but we can look to the future with a sense of shared direction and confidence. NHS Wales can not do this on its own and we will continue to develop the co-production of services and will work closely with the third sector to ensure services are improved for everyone. We must keep this momentum going in order to deliver sustainable improvements.

In next year’s annual report we will review the investment made and look at how we have progressed during the year.
Annex 1: Performance Measures

Performance measure 1: Percentage of people who report that they smoke by health board

Figure 20 - Percentage of persons aged 16 and above, who reported smoking daily or occasionally - 2014

Source: Welsh Health Survey 2014
Performance measure 2: Incidence of COPD by health board

Source: Quality and outcomes framework 2015.
Performance measure 3: Emergency admission rates per health board

Figure 22 - Respiratory emergency admission rates (age-standardised) per 100,000 population

Source: NWIS
Performance measure 4: Age standardised death rates per health board

Source: Public Health based upon Office for National Statistics (ONS) mid-year estimates.

Performance Measure 5: Numbers of patients involved in clinical trials

Source: Health and Care Research Wales