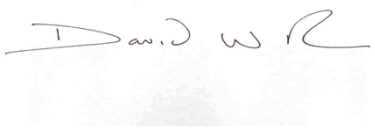
Public Document Pack

Health and Wellbeing Board

Wednesday, 16 September 2015 2.00 p.m.
The Halton Suite - Select Security Stadium, Widnes



Chief Executive

COMMITTEE MEMBERSHIP

Please contact Ann Jones on 0151 511 8276 or e-mail ann.jones@halton.gov.uk for further information.
The next meeting of the Committee is on Wednesday, 4 November 2015

ITEMS TO BE DEALT WITH
IN THE PRESENCE OF THE PRESS AND PUBLIC

Part I

HEALTH AND WELLBEING BOARD

At a meeting of the Health and Wellbeing Board on Wednesday, 8 July 2015 at Karalius Suite, Stobart Stadium, Widnes

Present: Councillors Polhill (Chairman), Philbin, Woolfall and Wright and S. Banks, P. Cooke, L. Crane, M. Creed, L. Derbyshire, A. Marr, E. O'Meara, D. Parr, N. Rowe, C. Scales, M. Shaw, R. Strachan, T. Tierney, A. Waller, J Williams, S. Wallace-Bonner and S. Wright

Apologies for Absence: A. McIntyre and S. Yeoman

Absence declared on Council business: None

ITEM DEALT WITH UNDER DUTIES EXERCISABLE BY THE BOARD

Action

HWB1 MINUTES OF LAST MEETING

The Minutes of the meeting held on 13 May 2015 having been circulated were signed as a correct record subject to A. Scales in the attendance list being recorded as C. Scales.

HWB2 HEALTHY LIVING PHARMACIES

The Board considered a report of the Director of Public Health, which provided Members with a briefing on the Healthy Living Pharmacies (HLP) proposal including health benefits for the local population and opportunities for joint working between pharmacies and other health and wellbeing organisations.

The Board was advised that the Healthy Living Pharmacy was a nationally agreed accreditation or 'kite mark' for community pharmacies which delivered proactive health and wellbeing advice as part of their day to day role. It was a tiered commissioning framework aimed at achieving consistent delivery of a broad range of high quality services through community pharmacies to meet local need, improving the health and wellbeing of the local population and helping to reduce health inequalities.

The Board was further advised that in 2011/2012 the HLP programme had been rolled out across a number of other areas as part of an HLP pathfinder programme supported by the Department of Health. The Board noted the key findings from the evaluation of the HLP pathfinder sites in April 2013.

It was reported that many community pharmacies within Halton provided additional services commissioned by NHS Halton CCG or by Halton Local Authority Public Health as follows:-

- Care at the Chemist Minor Ailments Service (CATC);
- On Demand Access to Palliative Care Drugs;
- Smoking Cessation;
- Substance Misuse; and
- Sexual Health.

The Board noted the benefits of HLP in Halton, the current commissioning arrangements and the opportunities for future commissioning as follows:-

- Chlamydia screening;
- Blood pressure checks;
- Dementia screening;
- Healthy weight advice;
- Alcohol harm reduction advice;
- Support for people with long term conditions;
- Support for clients with respiratory conditions; and
- Minor ailment clinics.

The Board discussed the benefits of the proposal and agreed that is was an excellent initiative. It was also agreed that an extensive communication strategy be established; with an early launch of the initiative to members of the public to ensure that they were aware of the new facilities available at Healthy Living Pharmacies in the Borough.

RESOLVED: That

(1) Healthy Living Pharmacies (HLP) be introduced throughout the Borough via a phased roll out;

(2) the introduction of HLP will be a partnership approach led by Halton Council and NHS Halton Clinical Commissioning Group (CCG), supported and facilitated by the Local Pharmaceutical Committee (LPC); and

(3) the accountability for HLP will be through Halton Council's Senior Public Health Team and NHS Halton CCG Medicines Management Working Group, which will report jointly by exception to this Board.

HWB3 JOINT STRATEGIC NEEDS ASSESSMENT SUMMARY UPDATE

The Board considered a report of the Director of Public Health, which provided Members with an update on the Joint Strategic Needs Assessment (JSNA).

The Board was advised that the JSNA continued to be hosted on the Halton Borough Council website. The JSNA had been developed as a series of chapters, on a rolling programme, with an annual dataset, annual summary and local health profiles, keeping the data updated.

The Board was further advised that the JSNA summary document outlined the data across five key life stages as follows:-

- Pregnancy and infancy (under 1 year);
- Children (1-15);
- Young adulthood (16- 24);
- Healthy adulthood (25-64); and
- Older People (65 and over).

In addition, it also included a set of data on wider determinants of health in respect of economic; community safety; housing; transport and social care and vulnerable people. The summary document was attached as Appendix 1 to the report.

The Board noted the in depth assessments that had taken place during 2014/15 and the key changes that had taken place since the last report. The Board also noted the information relating to the findings for the JSNA long term conditions chapters and the developments for the JSNA during 2015.

It was reported that a lot of work was also being undertaken to address hypertension in the Borough. Halton were the regional lead in this matter for Cheshire and Merseyside and had put forward an interest to be part of the national pilot for addressing hypertension.

The Board discussed the way a brief snapshot of JSNA

issues across the life course (Halton In Pictures) had been portrayed and it was agreed that they be produced in poster format and be distributed in public locations throughout the Borough.

The Board also noted that Bridgewater NHS Foundation Trust had established a Health Bus and it was reported that discussions could take place to make the Bus available to Halton to undertake targeted health care work in the Borough during some weekends.

RESOLVED: That the report be noted.

HWB4 HEALTH AND WELLBEING STRATEGY ACTION PLAN UPDATE 2015

The Board considered a report of the Director of Public Health, which provided Members with an update on progress with the Health and Wellbeing Strategy action plans.

The Board was advised that Halton's Health and Wellbeing Strategy had been in place for just over two years. The strategy was accompanied by a set of action plans for each of the five priorities which were linked to relevant targets and outcomes.

It was reported that Appendix 1 to the report provided an update for each of the action plans including RAG ratings. During 2015/16 a review of action plans would also take place to ensure they were still fit for purpose.

Furthermore, it was reported that overall the action plans highlighted that Halton were achieving very good results.

The Board acknowledged the excellent work that had been undertaken to address alcohol issues in the Borough. Members had a discussion on whether young people were changing their choice of alcohol to more accessible substances, including legal highs, that may be cheaper to purchase. It was agreed that work would be undertaken on this matter and that this be monitored to ensure that young people in the Borough remained safe.

RESOLVED: That the report be noted.

HWB5 WINTERBOURNE REVIEW - UPDATE

The Board considered a report of the Strategic

Director, Communities, which highlighted to Members Winterbourne View Two Years On, Transforming Care: Next Steps January 2015 and Winterbourne View – Time for Change report, November 2014.

The Board was advised that Winterbourne View – Time for Change (November 2014), was a report detailing 11 recommendations to act as a driver for change to make a reality of the Winterbourne pledge which was set out in Appendix 1 to the report.

The Board was further advised that the Winterbourne View Two Years On set out a collective account from partners across the health and care system of the progress to date. Transforming Care: Next Steps set out the plans for the next stage of this work. All partners involved in Transforming Care had agreed the need for a single programme with a single plan, building on the recommendations of Winterbourne View – A Time for Change. From the original Action Plan and Concordat, any outstanding actions would be carried forward into the Transforming Care new programme.

It was reported that The Winterbourne View Strategic Group co-ordinated Halton Council and Halton's CCG's response to the Winterbourne View concordant action plan, ensuring submissions were completed. The Strategic group also monitored the Learning Disability Inpatient Bed usage and Out of Borough placements in order to repatriate as many individuals back into Halton.

The Board noted the information in the report relating to impatient usage learning disability and secure impatient usage. The Board also noted that work was continuing to identify service users to repatriate to Halton, ensuring a multi-agency approach to each case, linking into commissioning and development of new services to provide bespoke packages of support.

RESOLVED: That the report be noted.

HWB6 HALTON CHILD AND MATERNAL HEALTH PROFILE 2015

The Board considered a report of the Director of Public Health, which informed Members that The Child and Maternal Health Profile (CHIMAT) was released every year by Public Health England and provided a summary of the health and wellbeing of children and young people in Halton. The data that was included was available at a national level and enabled Halton to benchmark its health

outcomes against England average values.

The Board was advised that health outcomes were very closely related to levels of deprivation; the more deprivation in an area resulted in expected poorer health outcomes. Overall the health and wellbeing of children in Halton was generally worse than the England average, as were the levels of child poverty. Halton was the 27th most deprived Borough in England (out of 326 Boroughs) and as such would be expected to have lower than average health outcomes. The infant and child mortality rates had both improved and were now similar to the England average.

The Board was further advised that Halton had been successful in improving rates in the following areas:-

- Infant and child mortality rates;
- Immunisations;
- Child development at the end of reception;
- The number of children and young people who are Not in Education, Employment or Training (NEET);
- First time entrants to the youth justice system;
- The percentage of children living in poverty;
- Statutory family homelessness;
- Children killed or seriously injured in road traffic accidents;
- The number of low birth weight babies;
- The percentage of obese children in Year 6 (age 10-11);
- The teenage conception rate; and
- A reduction in the rate and number of 0-18 year olds being admitted to hospital for alcohol specific conditions.

The Board noted that the new Urgent Care Centre's (UCCs) would help to address some of the challenges in relation to hospital admissions.

RESOLVED: That the contents of the 2015 Child Health Profile, the progress that has been made against a challenging baseline and programmes established to address areas of concern, be noted.

HWB7 HALTON HEALTH PROFILE 2015

The Board considered a report of the Director of Public Health, which provided information relating to Halton's Health Profile 2015 and an analysis regarding the findings from a local perspective.

The Board was advised that the data for Halton showed that if a comparison was made between the 2015 profile and the 2014 profile very good progress had been made in the Health and Wellbeing Board priority areas connected to reducing harmful levels of drinking; child development; cancer and mental health. This had been reflected in the drop in alcohol specific stays (under 18s), obese children (Year 6), under 18 conceptions, infant mortality, smoking prevalence and long term unemployment.

The Board was further advised that Halton continued to be challenged in a range of areas. This year's profile indicated that Halton were lagging behind the national average in the breastfeeding initiation, adult obesity, adult alcohol related harm and hospital stays for self-harm and falls. The Board noted that these challenges were being addressed in a comprehensive manner.

The Board discussed Halton's data in comparison to England's average data and it was noted that further information could be obtained from the Director of Public Health or from the link at the bottom of Appendix 1 to the report.

RESOLVED: That the progress in health outcomes and programmes established to address areas of concern be noted.

HWB8 REDUCTION IN PUBLIC HEALTH FUNDING

The Board considered a report of the Director of Public Health, which provided Members with information regarding the proposed cuts to Public Health funding and requested that the Board advocate against these cuts in year to the ring fenced budget.

The Board was advised that Halton Borough Council had successfully set a balanced budget for 2015/16, including full allocation of the public health grant, based on the information provided by the Government in the local government finance settlements, and reiterated by the Chancellor in March's Budget.

The Board was further advised that on 5 June 2015, the Government announced new cuts for this financial year which included the reduction of the ring fenced public health grants to local authorities by £200 million – equivalent to approximately £630,000 for Halton.

It was reported that the cuts would particularly impact

on the health of people in deprived areas, such as Halton, that disproportionately suffered from lower life expectancy, long term conditions, cancer and heart disease. It was therefore a potential disaster for the NHS, whose future depended on the preventative approach as outlined by the Chief Executive of NHS England in the Five Year Forward Plan.

Furthermore, it was reported that the public health grant commissioned a wide range of services from the NHS, including sexual health services such as STD clinics, HIV services and family planning, infection control and children's public health nursing including health visitors and school nurses. The grant also commissioned services from a wide range of providers including alcohol and drug services, weight management, mental health services, older people's health promotion and falls prevention, healthy schools, early years services and infant feeding.

The Board noted the significant impact the proposed budget cuts could have on Halton residents in the future.

RESOLVED: That the Board

(1) recognises the importance of Public Health interventions to deliver on key priorities and improve the overall health and wellbeing of the Halton population;

(2) advocates that the Government honour its previous commitments to public health funding as set out in the Local Government Finance Settlement in March 2015; and

(3) asks that if the Public Health grant cuts proceed, they are assessed based on local need and levels of deprivation.

HWB9 CCG QUALITY PREMIUM - MEASURES FOR INCLUSION IN 2015/16

The Board considered a report of the Chief Officer, NHS Halton CCG, which provided Members with the 2015/16 CCG Quality Premium measure selection.

The Board was advised that the 2015/16 CCG Quality premium selection had been split into five sections by NHS England and that where the CCG had an element of choice, this had been done via consultation with commissioners, clinicians and individuals from the Local Authority and Public

Health with CCG approval done via the Executive Management Team.

The Board noted Table 1 in the report which showed the indicator; the amount of quality premium award attached to the success target and Table 2 which showed the NHS template with accompanying rationale for measures and target selection.

The Board noted that two RTT's set out in the report, would no longer be measured and that the CCG were awaiting for further guidance from NHS England on this matter.

RESOLVED: That the Board note the measures selected and approve the list for 2015.

HWB10 BETTER CARE FUND - CHANGE IN NON-ELECTIVE ACTIVITY TARGET FOR 2015

The Board considered a report of the Chief Officer, NHS Halton CCG, which informed Members of a necessary change to the original targeted reduction in 2015 Non-elective activity as submitted in the Halton Better Care Fund (BCF) Plan.

The Board noted the changes to the 2015 Better Care Fund Non-Elective Activity planned reduction.

RESOLVED: That the Board note the required changes and approve the amended Non Elective activity target in the BCF.

HWB11 CCG FORWARD VIEW AND 2015/16 OPERATIONAL PLAN

The Board considered a report of the Chief Officer, NHS Halton CCG, which informed Members of the NHS Halton CCG forward view and 2015/16 operational plan.

The Board noted the NHS Halton CCG Forward View and 2015/16 Operational Plan summary set out in the report.

RESOLVED: That the Forward View and 2015/16 Operational Plan be approved as demonstrating the strategic direction of the CCG in relation to the wider health economy in Halton.

Meeting ended at 3.30 p.m.

REPORT TO: Health and Wellbeing Board

DATE: 16 September 2015

REPORTING OFFICER: Director of Public Health

PORTFOLIO: Health and Wellbeing

SUBJECT: Report on Air Quality in Halton 2015

WARDS: Borough Wide

1.0 PURPOSE OF THE REPORT

1.1 The report presents an overview of air quality in Halton. It presents a summary of national and local air quality monitoring, progress against national and European Air Quality legislation and provides a response to a petition for Air Monitors received by Halton Borough Council in March 2015.

2.0 RECOMMENDATION: That the report be noted.

3.0 SUPPORTING INFORMATION

3.1 The report was presented at the Environment and Urban Renewal Policy and Performance Board on 24th June 2015. The contents of the report were noted and the recommendations were recommended for approval by the Executive Committee. The report is being presented for approval at the Executive Committee on 3rd September.

3.2 Overview

3.2.1 Halton Borough Council monitors air quality within the borough and complies with all Air Quality Objectives with the exception of Nitrogen Dioxide (for which the Council have declared 2 Air Quality Management Areas in two Widnes town centre locations where Nitrogen Dioxide, NO_2, objectives exceed air quality directive standards as a result of road traffic)

3.2.2 Air quality in Halton has improved significantly in recent decades. The proportion of deaths attributable to air pollution is similar to the national average, and considerably lower than many other areas of the country.

3.2.3 The Council are committed to improving air quality in Halton and will continue to do so through the development of a strategy and action plan.

3.2 Background

3.2.1 Halton Borough Council received a petition entitled "Request for the Council to Monitor the Air Quality for PM2.5 and other toxins" on 6th March 2015 with 5632 signatories.

3.2.2 The petition stated:

"Halton is a highly polluted area and our local authority have allowed a massive waste incinerator to be built. We have had a number of leaks already at the plant.

We want to protect the health of our children from these highly toxic contaminants, this can only be done by Monitoring the Air Quality for PM 2.5 and other toxins.

Our council to date has refused even though we are in an area that the British Government is being sued by the European Courts for failing comply with the European Directive on Air Quality"

3.2.3 This report provides a response to this petition and identifies the facts around air quality and air quality monitoring in Halton within the national and international frameworks and identifies recommendations going forward.

3.2.4 The report looks at:

- Air Quality legislation
- National and local trends in air quality
- Monitoring results within Halton
- Health in Halton

3.3 Summary and conclusions of the report

3.3.1 Air quality in Halton is assessed and monitored regularly in order to comply with UK and EU Air Quality legislation and protect health. Air Quality objectives have been achieved in Halton for all currently legislated pollutants with the exceptions of Nitrogen Dioxide.

3.3.2 Halton has declared two Air Quality Management Areas, both of them in Widnes, where levels of NO_2 exceed the objective levels on more occasions than is permissible as part of the objective standards. The levels of NO_2 are higher in these two areas as a result of traffic activity through Town Centre roads. As a result of the declaration of Air Quality Management Areas, these areas are subject to additional measures and Halton Borough Council is working hard to ensure that the levels of NO_2 in these areas fall to within permitted levels as soon as possible. These activities include traffic flow alterations, alternative signage and promotion of active, none vehicular transport etc.

3.3.3 National and European Air Quality Objectives are determined at levels to protect health. As Halton meets all these criteria (except in designated AQMAs), the air quality cannot be considered to be at levels poor enough to affect health.

3.3.4 Halton experiences poorer levels of health than many other areas in the country. This however can be explained in the most part by lifestyle factors and the higher rates of less healthy lifestyles activities undertaken within Halton. The Council and local partners are continuing to address the factors which impact greatly on health including encouraging people to stop smoking, improving access to, and awareness of, healthy diets, access to weight management programmes, appropriate alcohol use, improvements in local amenities and encouraging more active lifestyles. The Council have a set of key Health and Wellbeing Priorities to improve the health of the population, and is actively engaged in improving life chances and making it easier for everyone to make healthier lifestyle choices by ensuring we work across all agencies to improve education, enhance employment opportunities, and provide healthy safe and thriving homes and communities.

3.3.5 Over 4600 people who live in Halton have signed a petition believing that he Council does not monitor air quality and that air quality in Halton is poor enough to affect health despite evidence being available that both of these assertions are incorrect.

3.4 Key recommendations made in the report

3.4.1 In order to address the issues raised in this report and ensure that air quality in Halton remains good and ultimately to improve health and wellbeing in Halton, the Council has identified a number of recommendations for future action:

i. Undertake a series of public engagement events to build a greater understanding of the concerns local people have regarding air quality in Halton and identify opportunities to build improved transparent relationships to ensure a clear way forward in all concerns.

ii. Develop an active multi agency Air Quality Forum (including lay representation) to enable issues and concerns can be raised and discussed in an open, engaged forum and facilitate agreement on actions and outcomes.

iii. Investigate further opportunities to limit emissions and reduce NO_2 in areas of potential high traffic activity around built up areas and achieve compliance with NO_2 Air Quality Objectives.

iv. Develop a full Air Quality Strategy, based on available local and national data and evidence to ensure that Halton is able to sustain recent improvements in Air Quality across the borough and proactively seek to remove the declaration of Air Quality Management Areas within the borough.

4.0 POLICY IMPLICATIONS

4.1 The council is required to assess Air Quality under UK Air Quality Directives.

4.2 The Council will develop an Air Quality Strategy if recommendations in this report are agreed.

5.0 FINANCIAL IMPLICATIONS

5.1 There may be financial implications in undertaking the recommendations of these reports but these are not predicted to be significant.

5.2 The issue of air quality and monitoring is one of public interest.

6.0 IMPLICATIONS FOR THE COUNCIL'S PRIORITIES

6.1 Children and Young People in Halton

None

6.2 Employment, Learning and Skills in Halton

None

6.3 A Healthy Halton

Ensuring the health and wellbeing of the population is key priority. Protecting the health of Halton's population is a statutory responsible for Public Health and the Council.

6.4 A Safer Halton

None

6.5 Halton's Urban Renewal

Protecting the health of Halton's population is a statutory responsible for Public Health and the Council. Ensuring good air quality is a key factor in assuring and protecting health.

7.0 RISK ANALYSIS

None considered

8.0 EQUALITY AND DIVERSITY ISSUES

None considered

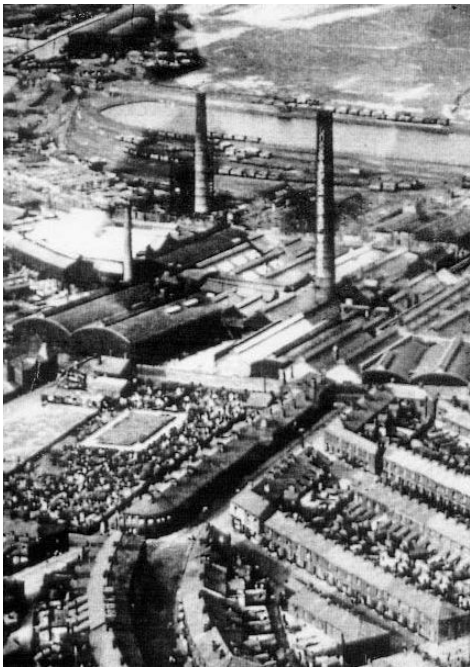
9.0 LIST OF BACKGROUND PAPERS UNDER SECTION 100D OF THE LOCAL GOVERNMENT ACT 1972

None under the meaning of the Act.

Report on Air Quality

in Halton

2015



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Contributors

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Produced

May 2015

Contents

Introduction

Halton Borough Council received a petition entitled "Request for the Council to Monitor the Air Quality for $PM_{2.5}$ and other toxins" on 6th March 2015 with 5632 signatories.

The petition stated:

"Halton is a highly polluted area and our local authority have allowed a massive waste incinerator to be built. We have had a number of leaks already at the plant.

We want to protect the health of our children from these highly toxic contaminants, this can only be done by Monitoring the Air Quality for PM 2.5 and other toxins.

Our council to date has refused even though we are in an area that the British Government is being sued by the European Courts for failing comply with the European Directive on Air Quality"

This report represents a response to this petition and identifies the facts around air quality and air quality monitoring in Halton within the national and international frameworks and identifies recommendations going forward.

The report will look at:

- Air Quality legislation
- National and local trends in air quality
- Monitoring results within Halton
- Health in Halton

Background

There has been a perception from some members of the community for a number of years that Air Quality in Halton is poor and that this affects the health and wellbeing of people who live and work in Halton.

Poor air quality and pollutants in air can affect health and ensuring that the air we breathe is clean and does not cause harm to health is of local, national and international concern. There are a range of International, European and National Standards for air quality and requirements for monitoring of air quality to ensure compliance against these standards.

What is air pollution?

Air pollution is defined as a mixture of gases and particles that have been emitted into the atmosphere by man-made processes. Air pollution is a local, regional and international problem caused by the emission of pollutants, which either directly or through chemical reactions in the atmosphere lead to negative impacts on human health and ecosystems. There are many sources of air pollution, including power stations, traffic, household heating, agriculture and industrial processes.

Health and air pollution

Generally if you are in a good state of health, moderate air pollution levels are unlikely to have any lasting effects.. People with existing lung or heart disease are generally more susceptible to the effects of air pollution and are likely to see effects at lower concentrations. However, higher levels or long term exposure to air pollution can lead to more serious symptoms and conditions, mainly

affecting the respiratory and inflammatory systems, but also more serious conditions such as heart disease and cancer.

Specifically, chronic exposure to Particulate Matter (PM) contributes to the risk of developing cardiovascular diseases and lung cancer[1]. Health effects of PM are caused after their inhalation and penetration into the lungs. The smaller the particles, the deeper they penetrate into the lungs. PM's mortality effects are therefore strongly associated with the smaller $PM_{2.5}$ fraction, even though the coarser 2.5-10µm fraction known as PM_{10} also has clear health and mortality impacts.

The Committee on the Medical Effects of Air Pollution (COMEAP) produced a report on the mortality effects of long term air pollution in 2010[2]. The report estimated the number of deaths that may occur as a result of air pollution and concluded that based on 2008 levels of air pollution, 29,000 deaths in the UK per year may be attributed to air pollution equating to just over 5% of all deaths. A recent Public Health England report estimated that long term exposure to anthropogenic (man-made) fine particulate ($PM_{2.5}$) air pollution may contribute to 5.6% of deaths across England.[3]

Additional studies suggest that air pollution is estimated to reduce life expectancy of people in the UK by 6 months on average, which may cost the UK around £16 billion per year.

The National picture

DEFRA (Department for Environment, Food and Rural Affairs) are the responsible government body for ensuring the UK national and local obligations around air quality are met, a programme of air quality science and research to help develop and implement policies to improve air quality and to help assess the risks to people's health and to the environment, the concentrations of key pollutants are measured via a national network of monitoring sites, the Automatic Urban and Rural Network (AURN), which continuously captures ambient concentrations of selected pollutants throughout the UK.

Legislative frameworks

In the UK, actions taken to improve air quality are driven by the objectives set out in the 2007 Air Quality Strategy[4] and by EU standards for air quality which are set into English law through the Air Quality Standards Regulations (England) 2010[5] which transpose in to English Law the requirements of EU Directives on ambient air quality.

Other national policy directives include:

- Part IV of the Environment Act 1995 setting provisions for protecting air quality in the UK and for local air quality management[6].
- Air Quality (England) Regulations 2000 setting national objectives for local authorities in England[7].

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[1] http://www.eea.europa.eu/publications/air-quality-in-europe-2013

[2] Committee on the Medical Effects of Air Pollution (COMEAP) 2010. Effects of Long-Term Exposure to Particulate Air Pollution in the United Kingdom. https://www.gov.uk/government/publications/comeap-mortality-effects-of-long-term-exposure-to-particulate-air-pollution-in-the-uk

[3] Public Health England (PHE) 2015. Estimating Local Mortality Burdens Associated with Particulate Air Pollution. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/332854/PHE_CRCE_010.pdf

[4] https://www.gov.uk/government/publications/the-air-quality-strategy-for-england-scotland-wales-and-northern-ireland-volume-1

[5] http://www.legislation.gov.uk/uksi/2010/1001/contents/made

[6] http://www.legislation.gov.uk/ukpga/1995/25/part/IV

- The National Emission Ceilings Regulations 2002[8] transpose into UK legislation the requirements of the EU Emissions Directives.

The European Union Directives include:

- the Ambient Air Quality Directive (2008/50/EC)[9] and Directive 2004/107/EC,[10] which set limits for concentrations of pollutants in outdoor air
- the EU National Emissions Ceilings Directive (2001/81/EC)[11], which sets limits on total annual emissions of important air pollutants for all member states to help reduce 'trans-boundary air pollution' (pollution that is generated in one country but has an effect in others)

Air Quality Objectives

The air quality objectives applicable to Local Air Quality Management (LAQM) **in England** are set out in the Air Quality (England) Regulations 2000 (SI 928), The Air Quality (England) (Amendment) Regulations 2002 (SI 3043), and are shown in Figure 1. This table shows the objectives in units of micrograms per cubic metre ($\mu g/m^3$) or milligrams per cubic metre, (mg/m^3) for carbon monoxide with the maximum number of permitted times, where applicable, this can be exceeded in each year (exceedences).

Figure **1 Air Quality Objectives included in Regulations for the purpose of LAQM in England**

Pollutant	Air Quality Objective		Date to be achieved by
	Concentration	Measured as	
Benzene	16.25 $\mu g/m^3$	Running annual mean	31.12.2003
	5.00 $\mu g/m^3$	Running annual mean	31.12.2010
1,3-Butadiene	2.25 $\mu g/m^3$	Running annual mean	31.12.2003
Carbon monoxide	10.0 mg/m^3	Running 8-hour mean	31.12.2003
Lead	0.5 $\mu g/m^3$	Annual mean	31.12.2004
	0.25 $\mu g/m^3$	Annual mean	31.12.2008
Nitrogen dioxide	200 $\mu g/m^3$ not to be exceeded more than 18 times a year	1-hour mean	31.12.2005
	40 $\mu g/m^3$	Annual mean	31.12.2005
Particles (PM_{10}) (gravimetric)	50 $\mu g/m^3$, not to be exceeded more than 35 times a year	24-hour mean	31.12.2004
	40 $\mu g/m^3$	Annual mean	31.12.2004

[7] http://www.legislation.gov.uk/uksi/2000/928/contents/made
[8] http://www.legislation.gov.uk/uksi/2002/3118/contents/made
[9] http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32008L0050
[10] http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32004L0107
[11] http://ec.europa.eu/environment/air/pollutants/ceilings.htm

Sulphur dioxide	350 µg/m^3, not to be exceeded more than 24 times a year	1-hour mean	31.12.2004
	125 µg/m^3, not to be exceeded more than 3 times a year	24-hour mean	31.12.2004
	266 µg/m^3, not to be exceeded more than 35 times a year	15-minute mean	31.12.2005

Integrated Pollution Prevention and Control (IPPC)

IPPC was introduced by an EC directive. It is about minimising pollution from various point sources throughout the European Union. In England and Wales the Directive is implemented by the Pollution Prevention and Control Act and the Environmental Permitting (England and Wales) Regulations.

Certain Industrial Processes which have the potential to emit significant amounts of Pollution are required to have a Permit. The Permit sets conditions which will keep pollution emissions to a minimum. Permits are issued under the Pollution Prevention and Control Act 1999.

The Environmental Permitting Regulations gives details of the Installations that require Permits and explains the rules governing these Permits. The requirement to have a Permit depends on the type of industry and the amount of processing or the quantity of certain chemicals that are used. Permits are issued by:

- Part A1 Installations: The Environment Agency

  A1 processes are the larger processes generally those activities which have greatest potential to cause pollution. The permit covers emissions to air, land and water (including sewers) as well as waste minimisation, efficient use of raw materials, energy usage and noise.

- Part A2 and Part B Installations: Local Authority

  A2 and B Processes are generally processes which have less significant polluting capacity and covers only emissions to air.

Following the planning application process for an industrial site development where emissions may be produced, or in order to vary the type of processes that an existing industry can undertake, the site operator applies for a Permit detailing how polluting activities will be controlled. The permit will be considered by the Environment Agency for large scale installations and significant processes, such as the Energy from Waste Process operated by Viridor. If approved a permit will be issued with conditions, including emission limits and it is the responsibility of the regulator (the Environment Agency for A1 processes) to regularly inspect sites and review monitoring data to ensure compliance, and take action where operations are found not to comply.

As part of the IPPC requirements, the emissions from industrial processes are managed and assessed by both the operator and regulator to ensure that emissions that are released are within permitted limits. All IPPC permitted industrial operations in Halton are monitored, assessed and regulated as per the legislation.

National trends in Air Quality

There have been significant reductions in recent decades of emissions of air pollutants. There is however a very complex relationship between the amount of emissions of pollutants and ambient local air quality. Air quality is strongly affected by weather and atmospheric conditions; for example, the gas ozone (O3) is an air pollutant but is not emitted directly as a result of manmade processes in significant quantities, but is created in the air through chemical reactions between other pollutants in sunlight, with more being created on hot, still, sunny days.

DEFRA released the most recent National Statistics Release: Air quality statistics in the UK, 1987 to 2014 on 23rd April 2015.[12] This statistical release covers annual average concentrations in the UK of two pollutants thought to have the greatest health impacts stated as:

- Chronic exposure to particulate matter contributes to the risk of developing cardiovascular and respiratory diseases, and there is increasing evidence suggesting that long-term exposure to even low levels of Particulate matter may have a significant effect on health. The annual average concentrations for Particulate matter are considered a useful measure of overall exposure to Particulate matter at all concentrations.
- The gas ozone (O3) can affect people's health and can damage, for example, wild plants, crops and forests. Higher levels of ground level ozone can cause breathing problems, trigger symptoms of asthma, reduce lung function and cause lung diseases. Several European studies have reported that current ozone concentrations in Europe have health effects, especially in the summer, and that daily mortality rises with increases in ozone exposure. The ozone concentration reported in this release is the annual average of the maximum daily eight-hour running mean.

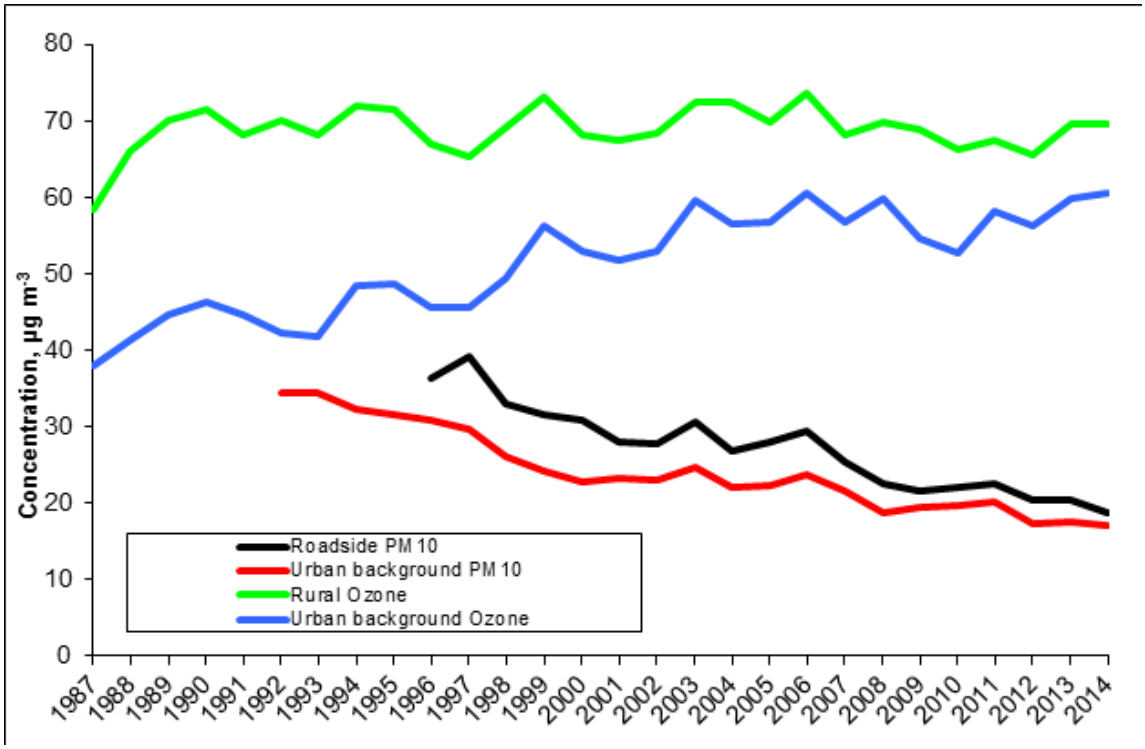
Data from the statistical release (**Figure 2**) shows that the average roadside and urban background levels of particulate matter have shown long-term improvement with small decreases in concentration shown from 2013 to 2014. Urban background ozone pollution has remained fairly stable nationally between 2003 and 2014, although concentrations have shown a long-term increase since monitoring began. Rural background ozone pollution has shown no clear long-term trend and stayed level at 66 µg/m^3 in 2014.

The statistical release also covers the number of days when air pollution was assessed as being moderate or higher. The indicator is intended to provide a summary measure of air pollutants that affect health. The five pollutants included in the indicator from the 1st January 2012 are as follows:

- Particulate matter ($PM_{2.5}$)
- Nitrogen dioxide (NO_2)
- Ozone (O_3)
- Particulate matter (PM_{10})
- Sulphur dioxide (SO_2)

[12] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/423353/National_Statistic_on_Air_Quality_2014.pdf

Figure 2 - Annual *levels of PM_{10} and Ozone in the UK, 1987 to 2014*



These five pollutants included in the indicator have known harmful effects on human health and the environment, (identified by the COMEAP - Committee on Medical Effects of Air Pollutants)[13]. These pollutants are principally the products of combustion from household and industrial heating, power generation or from motor vehicle traffic. Fine particles ($PM_{2.5}$) can be carried deep into the lungs where they can cause inflammation and a worsening of heart and lung diseases. The gases irritate the airways of the lungs, increasing the symptoms of those suffering from lung diseases.

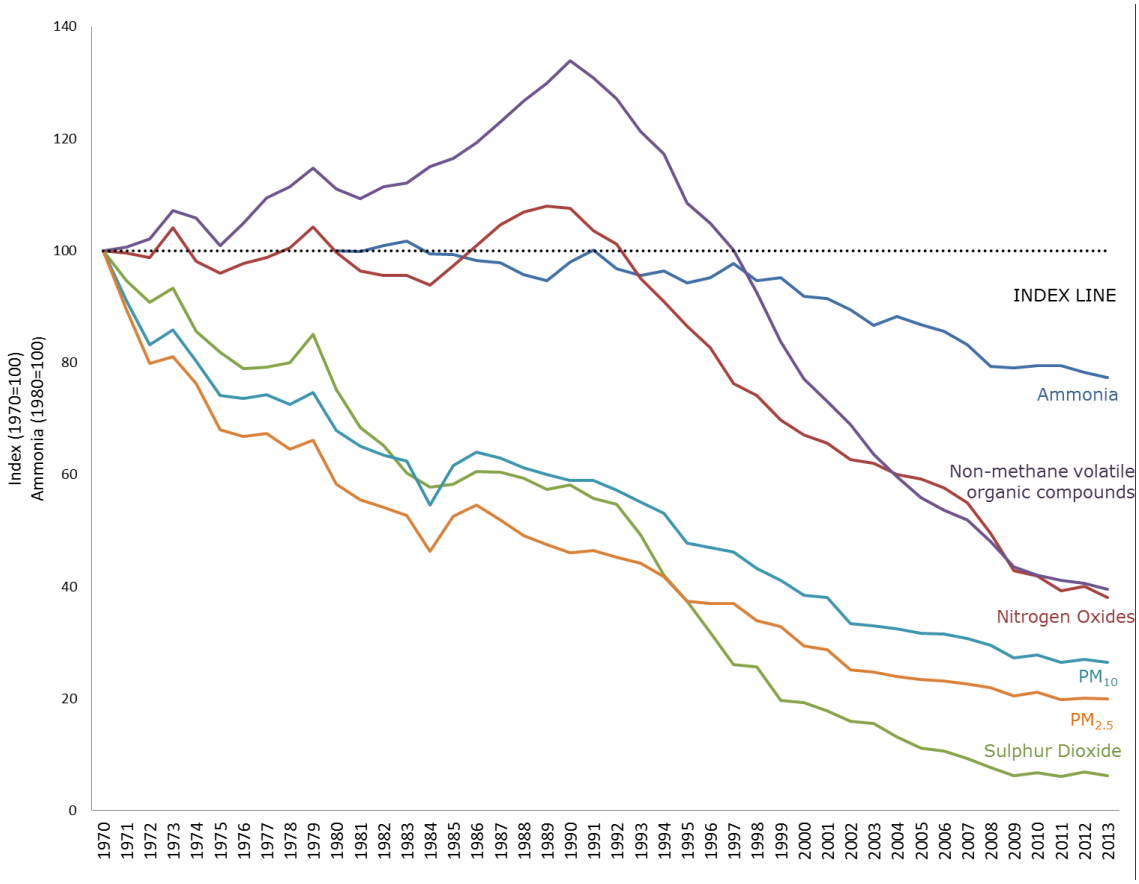
National data shows that the average number of days per year in which the concentrations of each of these pollutants is classed as moderate or higher in urban areas has decreased annually, showing a steady improvement in overall air quality nationwide.

National Emissions

Defra Statistical Release: 18 December 2014, Emissions of Air Pollutants in the UK, 1970 to 2013 states that there has been a long term decrease in the emissions of the pollutants: ammonia; nitrogen oxides; non-methane volatile organic compounds; particulate matter (PM_{10}, $PM_{2.5}$) and sulphur dioxide) as shown down the downward trend on the graph in **Figure 3**.

[13] https://www.gov.uk/government/groups/committee-on-the-medical-effects-of-air-pollutants-comeap

Figure 3: Downwards trends in UK sulphur dioxide, nitrogen oxides, non-methane volatile organic compounds, ammonia and particulate matter (PM_{10}, $PM_{2.5}$) emissions 1970 – 2013



History of Air Quality in Halton

Halton has been home to the chemical industry since the 18th century. Coal from Lancashire and Salt from Cheshire coupled with good transport links (canals, railway) gave prime position for industrial growth. Many of the processes used coal to fire the boilers and there were historically little, if any, control on the emissions to atmosphere.

Both industrial emissions and domestic coal burning (from the homes of workers) had a significant impact on the air quality in Halton. In the winter the burning often led to “smog” - a lethal mixture of acidic smoke-particles and fog.

The Clean Air Act 1956 gave powers to local authorities to curb domestic coal combustion and cut industrial smoke and sulphur dioxide emissions from furnaces and boiler plants. After the 1960’s, exhaust emissions from the rising number of road vehicles also contributed to air pollution.

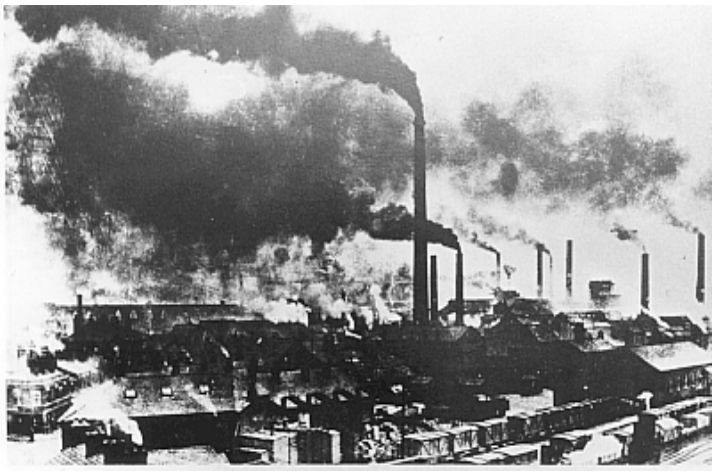
Halton’s first smoke control zone was declared in 1961 and by 1976 the majority of domestic property in Halton had converted to smokeless low-sulphur fuels such as North Sea gas. Industrial boilers were legally required to be smoke free and many were converted to burn oil and/or gas.

The results of monitoring in Halton during that period showed that the levels of sulphur dioxide and smoke decreased significantly.

Since that time additional controls have been applied to industry to further reduce industrial emissions and minimise the levels of pollution.

The image and quotation below (**Figure 4**) show the industrial pollution in Halton in the 19th century with an associated quote. The Clean Air Act and smoke control zones significantly improved this outlook.

Figure 4: Widnes in the late 19th Century-Photograph and Quotation taken from The Halton Legacy[14]



"Those coming into Widnes, even from very dark and gloomy skies, enter the town with a certain awe and horror, and wonder if life can be sustained"

Monitoring undertaken in Halton

Halton Borough Council assesses Air Quality in accordance with National and European legislative requirements and has done for many years. This is in addition to the monitoring of industrial processes by the Environment Agency as required under the IPPC regulations. As part of the assessment, The Council have monitored various pollutants in a number of locations over the years 2006-2014 are shown on the map in **figure 5**.

These locations are chosen for monitoring sites as modelling has indicated they are the locations where factors (such as traffic flows and wind directions etc.) are likely to result in the highest concentrations of pollutants. [15]

Figure 6 shows a map of the locations across Halton where premises and processes are regulated by the Environment Agency. The Environment Agency undertakes additional monitoring or assessment as part of the statutory regulatory process.

[14] The Halton Legacy, Edwards E, Stevens R, Halton Borough Council 1991. ISBN 0946678014, 9780946678013

[15] A review of air quality data from monitoring locations is produced in an annual report and has been available on the Council website since 2006. These can be accessed at http://www4.halton.gov.uk/Pages/planning/air-quality.aspx

Figure 5: Locations of Halton Borough Council monitoring sites 2006-2014

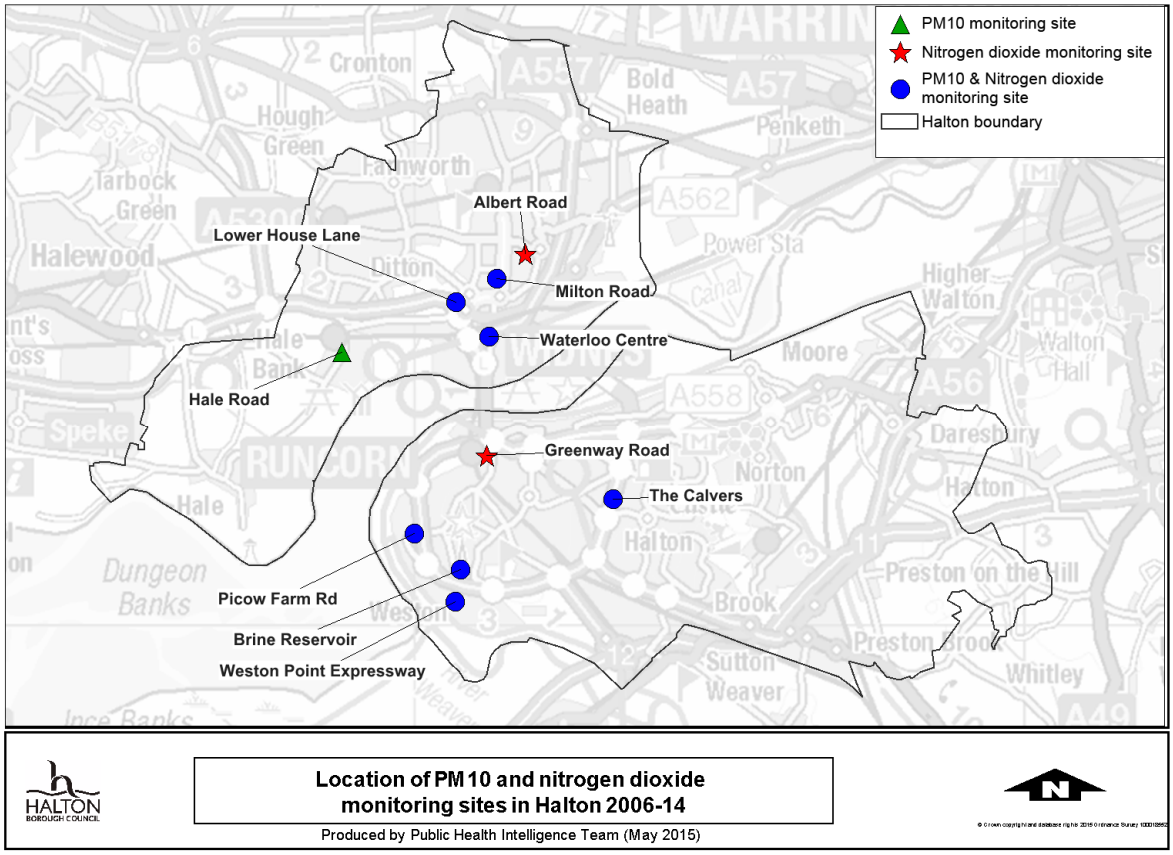
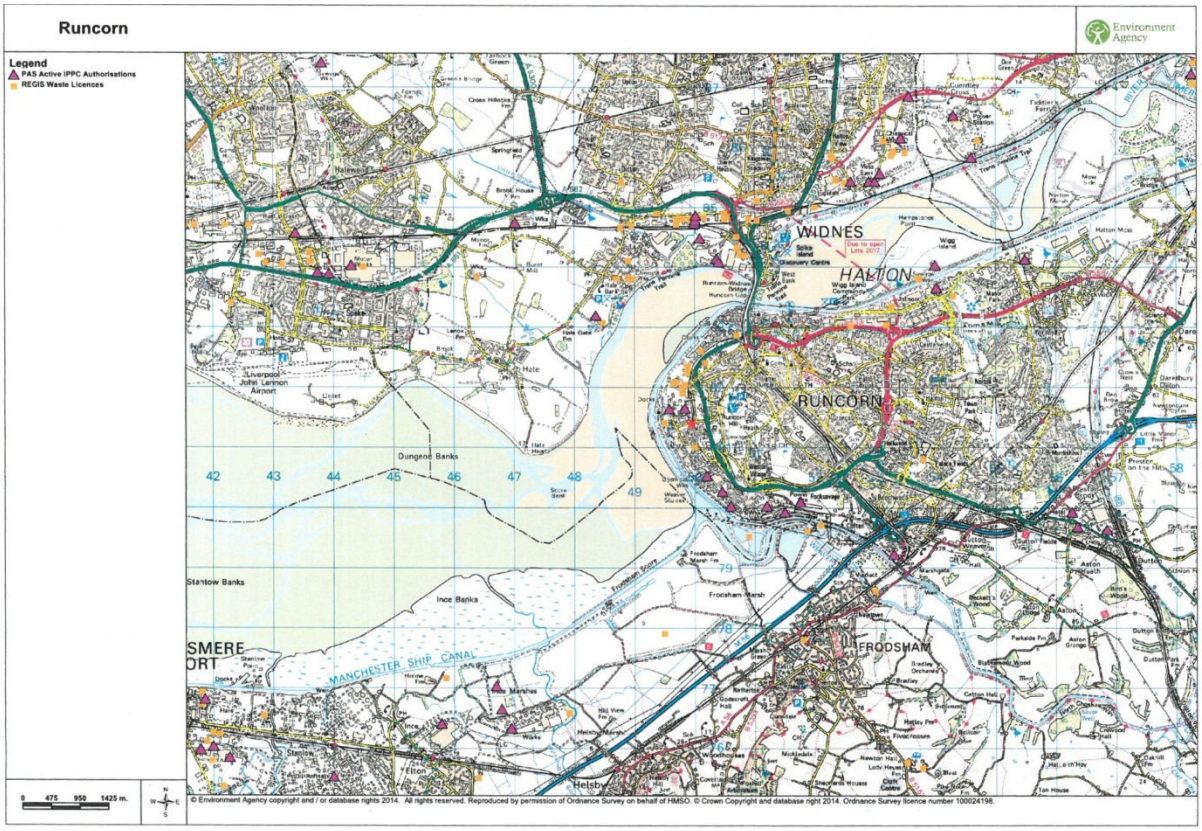


Figure 6: Location of Environment Agency regulated sites in Halton (1:50,000 scale map)



Nitrogen dioxide

Nitrogen dioxide (NO_2) and nitric oxide (NO), collectively known as nitrogen oxides (NO_x), are produced by all combustion processes. Over time the nitric oxide is then oxidised to nitrogen dioxide, largely by ozone present in the lower atmosphere.

Nitrogen dioxide has a variety of environmental and health impacts. It is a respiratory irritant, may exacerbate asthma and possibly increase susceptibility to infections. In the presence of sunlight, it reacts with hydrocarbons to produce photochemical pollutants such as ozone. Nitrogen oxides contribute to acid rain, depletion of the ozone layer and are greenhouse gases.

The principal source of nitrogen oxides emissions is road transport. Major roads carrying large volumes of high-speed traffic (such as motorways and other primary routes) are a predominant source, as are city centres with congested traffic. However the increasing proportion of petrol-engine vehicles fitted with exhaust catalysts is significantly reducing emissions of nitrogen oxides as new cars replace older models without catalysts.

Other significant sources of nitrogen oxides emissions include the electricity supply industry and other industrial and commercial sectors. Emissions from both sources have also declined dramatically, due to the fitting of low nitrogen oxide burners, and the increased use of natural gas plant. Industrial sources make only a very small contribution to annual mean nitrogen dioxide levels, although breaches of the hourly nitrogen dioxide objective may occur under rare, extreme meteorological conditions, due to emissions from these sources.

An analysis of monitoring data in the vicinity of roads throughout the UK was undertaken, and provided additional guidance to authorities on where exceedences might occur[16]. The report concluded that, outside of major conurbations, exceedences of the annual mean objective are only likely to occur within about 10 metres of the kerbside of single carriageway roads. This includes roads with relatively low traffic flows (10000 – 20000 vehicles/day) if they are within congested town centres. It therefore recommended that authorities focus upon those locations where they expect pollutant concentrations to be the highest (often referred to as 'hot spots'). If there are no exceedences of the objectives at the most polluted locations, then it can be reasonably concluded that there should be no exceedences elsewhere.

The UK as a whole has not achieved the objectives for NO_2 and a recent Supreme Court hearing April 2015, has ordered the UK Government to submit additional plans for the reduction NO_2 to the European Commission by the end of the year.[17] There are several areas involved in the infraction proceedings which include Greater London, the West Midlands, Greater Manchester, West Yorkshire, Teesside, the Potteries, Hull, Southampton, Glasgow, the East, the South East, the East Midlands, Merseyside, Yorkshire & Humberside, the West Midlands, and the North East. Halton Local Authority is not included within the Liverpool Urban Area for the purposes of national air quality assessments and so is not included in the proceedings.

Nitrogen dioxide has been monitored extensively in Halton for a number of years. An Opsis monitoring station provided real time data and was used to measure the background concentration of nitrogen dioxide in various locations around Halton. In recent years diffusion tube surveys have been used and moved locations to focus on potential areas of concern.

The results of monitoring show that the air quality objectives for NO_2 have been achieved except within the designated Air Quality Management Areas (AQMAs).

[16] *Compilation of new roadside monitoring data obtained by local authorities as part of the review and assessment process.* A report prepared by Air Quality Consultants Ltd and University of West England on behalf of Defra, April 2002.

[17] http://www.bbc.co.uk/news/science-environment-32512152

Data from the NO_2 monitoring is shown and described in below in **figures 7 to 7.4**).

Figure 7: Air quality objective standards for nitrogen dioxide as part of the Air Quality Directives

Concentration	Averaging period	Allowed excursions	Date standard to be achieved by
200 μg/m^3	1-hour mean	18 times per year	31.12.2005
40 μg/m^3	Annual mean	none	31.12.2005

Two air quality management areas have been declared in Widnes town centre where NO_2 levels frequently exceed the annual mean objective of 40 μg/m^3. These are main town centre road routes with potential higher volume, slow moving traffic (Albert Road/Deacon Road and Milton Road/Gerard Street). Real time analysers are used in the AQMAs to continually assess air quality.

The mobile air monitoring station was used to measure the background concentration of nitrogen dioxide in Halton. The station was situated at several locations in Runcorn and Widnes and the results obtained show that the levels were consistently below the objectives.

Monitoring of NO_2 and PM_{10} was undertaken at various points across the Borough (**Figure 7.1**) which shows levels well below the objective levels.

Figure 7.1: Results from Mobile NO_2 Air Monitoring Station

Averaging Period	2000	2001	2002	2003	2004	2005	2006
	Result μg/m^3	Result μg/m^3	Result μg/m^3	Result μg/m^3	Result μg/m^3	Result μg/m^3	Result μg/m^3
Annual Mean	24	26	27	24	25	26	28
1-hour mean	118	93	84	92	94	84	92

No exceedences recorded in any time period

West Bank School Widnes
All Saints Runcorn
Runcorn Town Hall
Lower House Lane Widnes

Halton Council has also undertaken background monitoring data of NO_2 collected as a result of the planning consent for the Mersey Gateway proposals. Monitoring will be continued during and after construction and the results will then be compared with the baseline figures (**Figure 7.2**)

Figure 7.2: Mersey Gateway Monitoring

Site	2013 Seasonally Adjusted Annual Mean (µg/m^3)	Number of Hourly Means > 200µg/m^3
The Calvers, Runcorn	26.1	0
Waterloo Centre, Widnes	26.7	0

Pre-construction NO_2 monitoring results for the Mersey Gateway development show that the levels are below the air quality objectives.

Pre-monitoring was undertaken in response to the planned development of the new energy from waste facility in Runcorn (**Figure 7.3**). In line with planning conditions, monitoring will be continued once the facility is operational and the results will then be compared with the baseline figures.

Figure 7.3: Energy from Waste site Monitoring

Site	2012 Seasonally Adjusted Annual Mean (µg/m^3)	Number of Hourly Means > 200µg/m^3
Picow Farm Road	21.0[a]	0
Runcorn Hill Brine Reservoir	18.8[b]	0
Weston Point Expressway	27.4[c]	0

a Monitoring Period was 1st November 2011 – 31st January 2012

b Monitoring Period was 1st March 2012 – 28th February 2013

c Monitoring Period was 19th April 2012 - 2nd October 2012

Pre-construction monitoring for the Energy from Waste development show that the air quality objectives for both nitrogen dioxide and PM_{10} are well below the objectives

Halton has two areas which show higher than objective levels of NO_2, these have been designated as Air Quality Management Area and are subject to additional measures to reduce the levels of NO_2. Results of monitoring for the AQMA is shown in **figure 7.4**.

Figure 7.4 :Results of Automatic Monitoring for NO_2: Comparison with Annual Mean Objective

Site	Annual Mean Concentration (µg/m^3)						
	2008	2009	2010	2011	2012	2013	2014
Milton Road, Widnes	40.0	34.1	39.6‡	36.9	**41.1***	**45.0***	40.0

* Data exceeds the annual mean Objective threshold

‡ The 1-hour mean objective was exceeded on 2 occasions in 2010, but on no other occasions.

Annual mean NO_2 levels exceed air quality objective levels in designated Air Quality Management Areas as a result of town centre traffic activity.

An action Plan has been developed for AQMAs which identifies improvements required to reduce NO_2 levels over time. Actions include:

- Traffic flow moderation and alternative signage
- Potential road widening
- Improved alternative parking
- Active transport plans, including cycling/walking schemes
- Green Bus plan (cleaner fuels, particulate traps, improved technologies)

Particular Matter

Particulate Matter (PM) is breathable particulate matter that are small enough to penetrate deep into the lungs and so potentially pose significant risks to health including increased risk of heart and lung disease. In addition, they may carry surface-absorbed carcinogenic compounds into the lungs. PM_{10} are particles that are less than 10 microns in diameter, $PM_{2.5}$ are particles that are less than 2.5 microns in diameter and can penetrate deeper in to the lungs and possibly further.

There are 3 main sources of particulates:

(i) Primary combustion particles

These are derived from road traffic exhaust, power generation and other industrial combustion processes.

(ii) Secondary particles

Gaseous pollutants in the atmosphere, such as sulphur dioxide and nitrogen oxides, are oxidised over time to form airborne particles of sulphates and nitrates.

(iii) "Coarse" and "other"

These include dust re-suspended by road traffic, emissions from construction and mineral working, windblown dust and even sea salt.

Progress has been made in reducing emissions of particles from both the transport and industrial sectors. Emissions from industry have been reduced as a result of stricter controls on sites through the implementation of emission limits and reduction of fugitive emissions. Emissions from road transport have been reduced as a result of the tightening of emissions controls (Euro standards) and by the reduction of the sulphur content of diesel fuel, which affects the emissions of particles from vehicles. Planning applications for new large scale developments must demonstrate how they will control dust during construction.

Figure 8 to 8.3 show the appropriate PM_{10} Air Quality objective and results of monitoring.

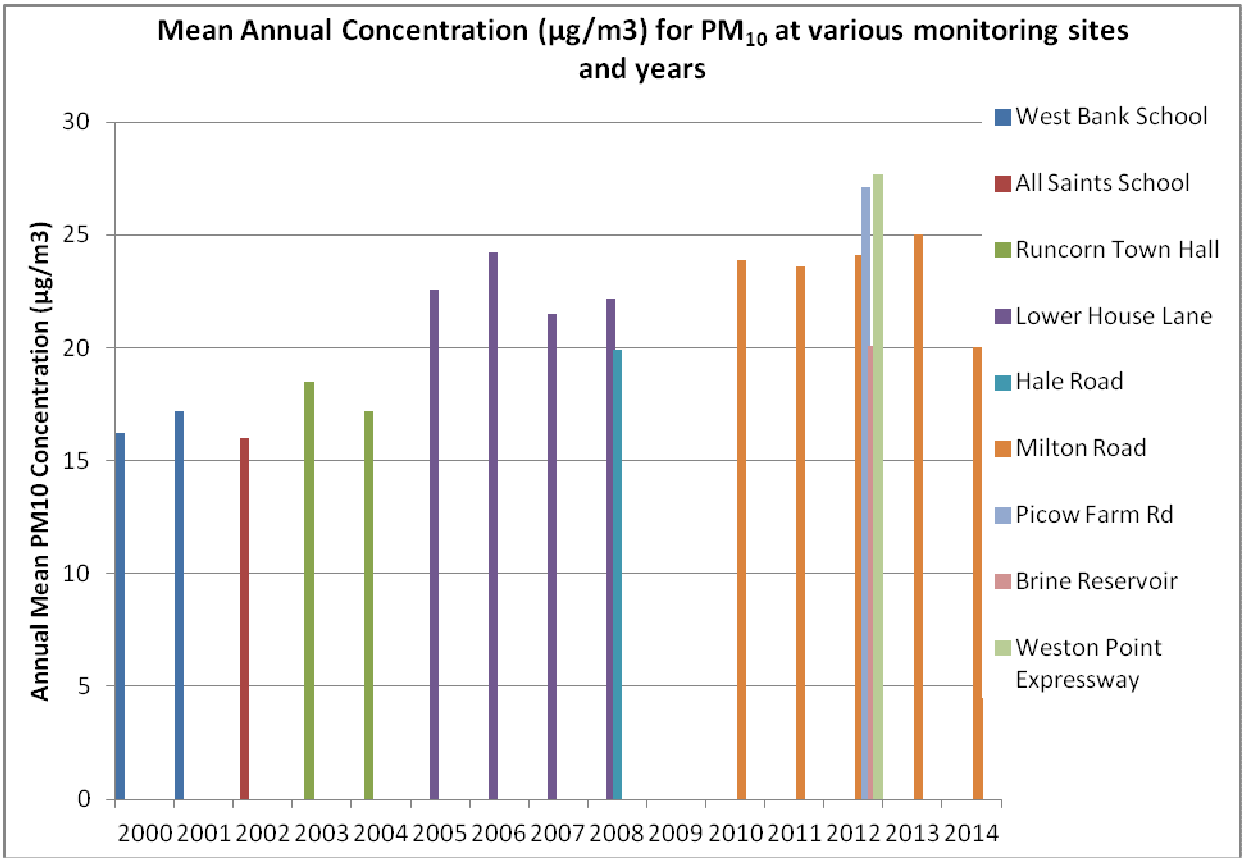
Figure 8: Air quality objective for PM_{10}

Concentration	Averaging Period	Allowed excursions	Date standard to be achieved by
50	24-hour mean	35 times per year	31.12.2004
40 $\mu g/m^3$	Annual mean	none	31.12.2004

In Halton, there have been no breaches of the objectives for PM_{10}

General monitoring sites are relocated regularly in order to identify whether different areas may become a problem and areas where mitigation may be required. **Figure 8.1** shows a graph of the locations and annual mean PM_{10} levels for each location (all of which are below objective levels). The monitors have not been in fixed locations and therefore it is not possible to identify any trend in change of levels over time.

Figure 8.1: shows the locations and results of most recent monitoring sites for PM_{10} over a number of years



The results of PM_{10} monitoring show that the air quality objectives for PM_{10} have been achieved across the borough.

In addition to the mobile monitoring sites, PM_{10} monitoring was undertaken prior to the development of the new Energy from Waste plant in Runcorn (**Figure 8.2**) and Mersey Gateway (**Figure 8.3**) shows that the levels in both these areas are below the objective levels.

Figure 8.2: PM_{10} monitoring for the Energy from Waste development

Site	2012 Seasonally Adjusted Annual Mean (µg/m^3)	Number of Hourly Means > 50µg/m^3 (35 exceedences permitted)
Picow Farm Road	27.1[a]	6
Runcorn Hill Brine Reservoir	20.1[b]	5
Weston Point Expressway	27.7[c]	0

a Monitoring Period was 1st November 2011 – 31st January 2012

b Monitoring Period was 1st March 2012 – 28th February 2013

c Monitoring Period was 19th April 2012 - 2nd October 2012

Pre-construction PM_{10} monitoring results for the Energy from Waste development show that the levels are below the air quality objectives

Figure 8.3: PM_{10} monitoring for the Mersey Gateway development

Site	2013 Seasonally Adjusted Annual Mean (µg/m^3)	Number of Hourly Means > 50µg/m^3
The Calvers, Runcorn	15.4	6
Waterloo Centre, Widnes	22.0	8

Pre-construction PM_{10} monitoring results for the Mersey Gateway development show that the levels are below the air quality objectives

There are currently no agreed and implemented UK objectives for $PM_{2.5}$ however the European Union have suggested a guideline annual average $PM_{2.5}$ level of 25µg/m^3. $PM_{2.5}$ has been monitored on Runcorn Hill in Halton and most recent data (2012) shows that the annual average concentration is 13.14ug/m^3 which is below the EU guideline levels. Additional modelling undertaken shows that $PM_{2.5}$ is expected to remain well below the EU guideline level.

Measurements of $PM_{2.5}$ in the Borough show that levels are below and predicted to remain below the EU objective level.

Sulphur Dioxide

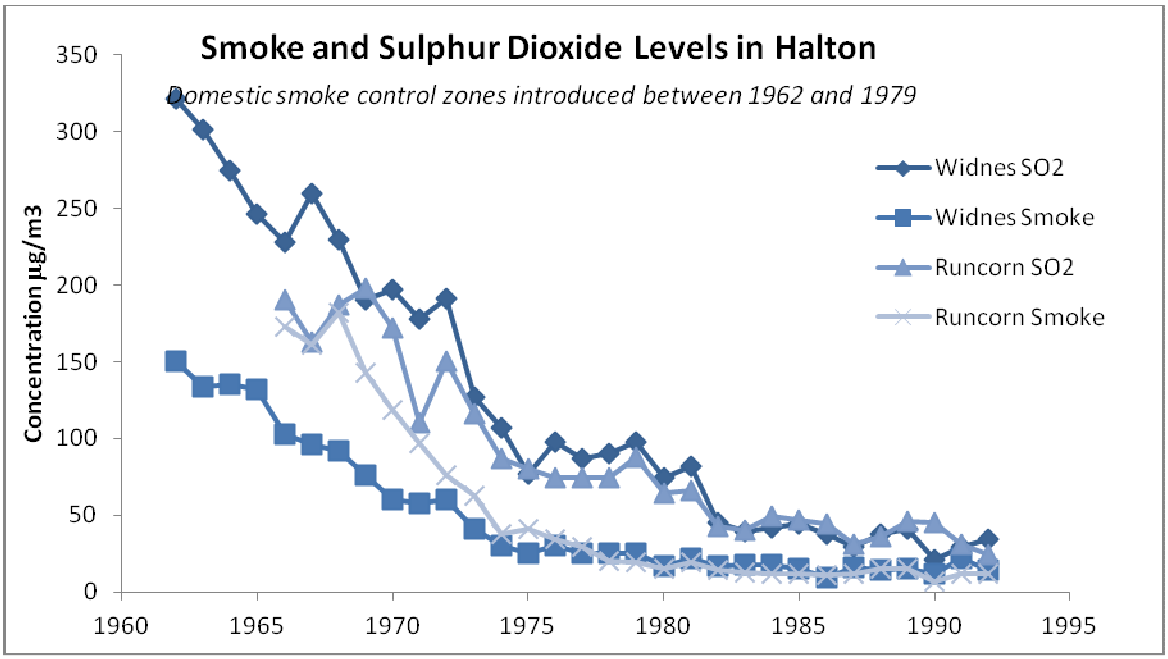
Sulphur dioxide contributes to the formation of acid rain and is associated with asthma and chronic bronchitis. The main source of sulphur dioxide is the combustion of sulphur containing fossil fuels in power stations.

A national survey was undertaken from 1962 to 1992. There were two monitoring stations – Widnes Municipal Building and Runcorn Library. At each monitoring station air was drawn through a filter paper and then through a bubbler containing Hydrogen Peroxide. The smoke concentration was

estimated using a reflectometer reading of the stain produced and the sulphur dioxide concentration was calculated from a titration of the acidity produced in the bubbler.

Levels of smoke and sulphur dioxide show a dramatic decrease over the 1960s and 1970s and a levelling off during the 1980s. The decrease coincides with the implementation of smoke control zones in Halton leading to controls on coal burning, introducing cleaner solid fuels and building taller power station stacks. Filtering equipment at power stations, burning low sulphur coal and using alternative methods for electricity production have reduced sulphur dioxide levels further. **Figure 9** shows the local results from the national survey and highlights the steep downward trend in smoke and SO_2 levels.

Figure 9: Local results from the National Survey for Smoke and Sulphur Dioxide



Subsequent monitoring of sulphur dioxide has shown that the levels remain low and are consistently below the objectives. **Figures 10 to 10.1** show the SO_2 objectives and local monitoring data.

Figure 10: Air quality objectives for sulphur dioxide

Concentration	Averaging period	Allowed excursions	Date standard to be achieved by
350 µg/m^3	1-hour mean	24 times per year	31.12.2004
125 µg/m^3	24-hour mean	3 times per year	31.12.2004
266 µg/m^3	15-minute mean	35 times per year	31.12.2005

A mobile air monitoring station was used to measure the background concentration of SO_2 in Halton to monitor achievement of SO_2 Air Quality Objectives. The station was situated at several locations in Runcorn and Widnes and the results obtained show that the levels were consistently below the objectives (**Figure 10.1**).

Figure 10.1: Results from SO_2Mobile Air Monitoring Station

Averaging Period	2000	2001	2002	2003	2004	2005
	Result $\mu g/m^3$	Result $\mu g/m^3$	Result $\mu g/m^3$	Result $\mu g/m^3$	Result $\mu g/m^3$	Result $\mu g/m^3$
1-hour mean	70	80	62	42	35	32
24-hour mean	48	40	30	24	19	18
15-minute mean	94	114	125	64*	47	52

*1 result exceeded objective during the monitoring period

West Bank School Widnes

All Saints Runcorn

Runcorn Town Hall

Lower House Lane Widnes

More recent monitoring of sulphur dioxide has been undertaken as a result of the planning consent for the new energy from waste plant in Runcorn. Background Monitoring on Runcorn Hill undertaken between March 2012 and February 2013 shows that the levels are well below the objectives with no exceedences recorded.

The results of SO_2 monitoring show that the air quality objectives have been achieved across the borough.

Lead

Lead is a cumulative poison to the central nervous system. It can also cause abdominal pain, kidney damage, high blood pressure and can affect fertility. The main sources of lead are now restricted to industrial applications, such as the manufacture of batteries, paint pigments, alloys, radiation shielding, inert tank lining and piping.

Lead used to be added to petrol to enhance its performance but the EC Directive on the Quality of Petrol and Diesel Fuels led to a ban on the sale of leaded petrol with effect from the 1st January 2000.

Monitoring at UK National Network Sites has shown a significant decline in the ambient concentration of lead (as sales of leaded petrol were phased out) and annual means are now well within the objectives.

In Halton, Lead particles were monitored up to 1998 by capture on membrane filter and analysis by atomic absorption spectroscopy. The filters were changed at 14-day intervals. The results show that both the 2004 and 2008 objectives were achieved in Halton as shown in **Figure 11 to 11.2**).

Figure 11: Air quality objectives for Lead

Concentration	Averaging period	Date standard to be achieved by
0.5 μg/m^3	Annual mean	31.12.2004
0.25 μg/m^3	Annual mean	31.12.2008

The results of the monitoring show that the levels of lead were persistently below the limits. Levels decrease, despite the increased traffic, because the lead content of petrol has been reduced.

The sites of lead monitoring were:

1. Runcorn Library, Runcorn

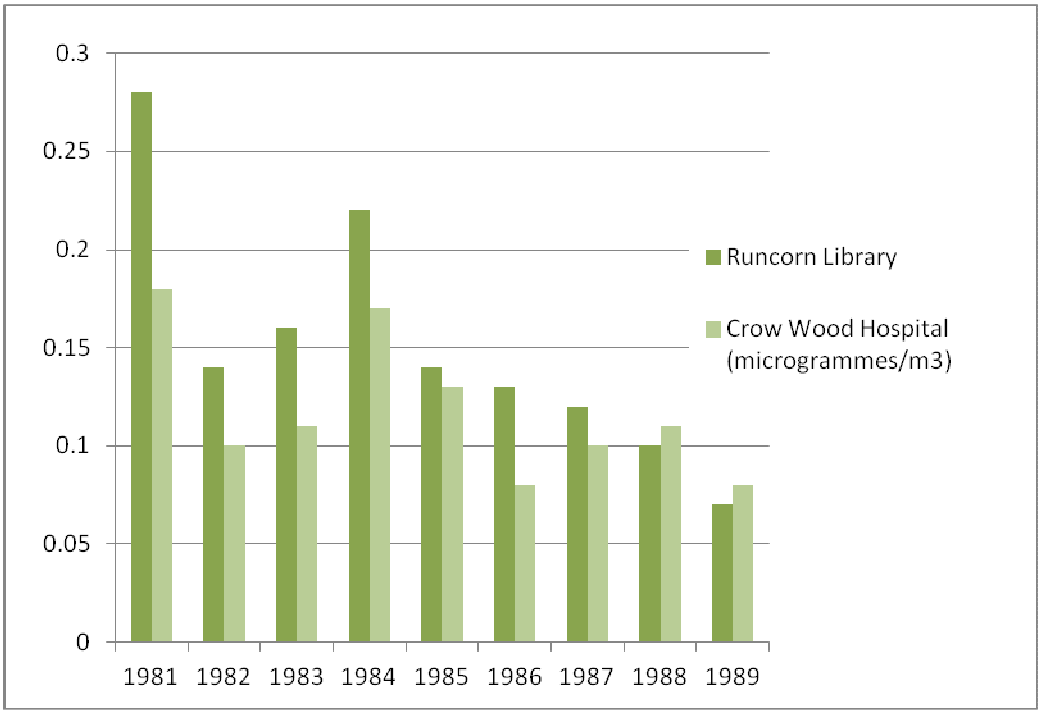
   The library is 84 metres from the overhead approach to the Silver Jubilee Bridge and is sited in a residential area of terraced housing.

2. Crow Wood Health Park, Widnes.

   The health park was formerly a hospital and is sited in a residential area away from major roads.

The annual mean concentrations (μg/m^3) of lead at these sites per year of monitoring are shown in **Figure 11.1** which highlights the downward trend over the years to well below Objective levels.

Figure 11.1: Annual Mean Lead concentrations (μg/m^3)



Additional monitoring has been undertaken on an ad hoc basis at West Bank School, Widnes. The school is sited adjacent to the Silver Jubilee Bridge approach road (Figure **11.2**). This continues to show levels well below objective levels.

Figure 11.2: Lead monitoring at West Bank School

Sampling period	Mean lead concentration $\mu g/m^3$
Feb to July 1979	0.28
Dec 1990 to Oct 1991	0.23
May 1994 to 1995	0.08
July 1997 to July 1998	0.11

With the implementation of lead free fuels, restriction of lead in paint products and other factors, alongside no additional developments in Halton resulting in the significant increase in lead, levels of lead are not predicted to approach objective levels.

The results of lead monitoring show that the air quality objectives have been achieved across the borough.

Benzene

Benzene is an aromatic volatile organic compound (VOC) that contributes to the formation of ground level ozone and is a known carcinogen. The main sources of benzene are petrol-engine vehicle exhausts and associated activities; petrol refining, distribution and petrol station forecourts.

In general VOC emissions increased until the late 1980s, but then declined due to tighter controls on vehicle emissions and improved vehicle technologies. Since 1991 average benzene concentrations fell as new cars equipped with exhaust catalysts replaced the older models. Emissions of benzene from the majority of petrol station forecourts during tanker discharge to storage tanks have been reduced by the introduction of vapour recovery systems (introduced by 1st January 1999 where fuel throughput is greater than 1000m3 per year). In addition, in January 2000 the maximum benzene content of petrol was reduced from 5% to 1%.

The Air quality objective concentrations and local monitoring data is tabled below (**Figure 12 to 12.2**)

Figure 12: Air quality objective for benzene

Concentration	Averaging period	Date standard to be achieved by
16.25 $\mu g/m^3$	Running annual mean	31.12.2003
5.0 $\mu g/m^3$	Annual mean	31.12.2010

Benzene was monitored in Halton up to 1998 using different monitor types, Opsis and diffusion tubes in different locations across Halton. Data show that the objective was achieved by 1996.

Figure 12.1: Summary of Opsis data

Site	Monitored running annual mean benzene (μg/m^3)		
	1994	1995	1996
Runcorn Town Hall	11.7	6.8	9.8
Widnes Path 1	13.0	6.8	15.0
Widnes Path 2	N/A	11.7	10.1

Figure 12.2: Summary of diffusion tube data (μg/m^3)

Date:- Jan 97 to Aug 98	Bradley Way		Morrisons	West Bank School
	Site 1	Site 2		
Benzene Mean μg/m^3	3.0	3.5	2.5	2.5

The results of benzene monitoring show that the air quality objectives have been achieved across the borough.

Sulphur Dioxide, Lead and Benzene are no longer regularly monitored in Halton, the previous data results show that levels were well below the national objectives and with continued improvements in technologies and no new developments in the area that would influence these pollutants, it is not considered necessary to measure these locally. National data remains low.

1,3 butadiene

1,3-butadiene is an aromatic VOC that contributes to the formation of ground level ozone and is a known carcinogen. The main source of 1,3-butadiene is motor vehicle exhausts although there are a few important industrial chemical sites where the chemical is handled in bulk.

Like benzene, 1,3-butadiene is a VOC emitted into the atmosphere principally from fuel combustion of petrol and diesel vehicles. Unlike benzene, however, it is not a constituent of the fuel but is produced by the combustion process. Since 1991 new petrol-engine vehicles have been fitted with exhaust catalysts and this has significantly reduced 1,3-butadiene emissions despite the increasing number of vehicles on the road.

Monitoring of 1,3-butadiene nationally, at urban background locations, urban centres and at roadside locations, demonstrated that the 2003 objective had been achieved. 1,3-butadiene has not been monitored in Halton. Concentrations of 1,3-butadiene will correlate with benzene as the major source of both pollutants is vehicle exhausts. There have no significant developments within Halton since the achievement of the air quality objective that would increase the levels of 1,3-butadiene above objective levels.

The results of 1,3 butadiene monitoring show that the air quality objectives have been achieved across the borough.

Carbon monoxide

Carbon monoxide is a colourless, odourless and tasteless gas that inhibits the blood's capacity to carry oxygen. It can also contribute to the formation of ground level ozone, which can cause breathing difficulties for humans and can damage plants and crops. Carbon monoxide also contributes to the green house affect and global warming through reactions with other gases in the lower atmosphere. It is the product of incomplete combustion with road traffic being the main source.

Concentrations of Carbon Monoxide are highest near busy and congested roads. National monitoring data demonstrated that the objective for carbon monoxide was met by the target date of 31st December 2003. Cleaner fuels together with the improved engine efficiency and the increasing proportion of petrol-engine vehicles that are fitted with exhaust catalysts ensured a reduction in Carbon Monoxide emissions despite the increasing number of vehicles on the road.

National carbon monoxide monitoring show that the air quality objectives have been achieved.

Air Quality Modelling in Weston Point

The development of the Energy from Waste Plant at Weston Point in Runcorn has raised concern regarding air quality in that area. As previously identified, Halton Borough Council have undertaken monitoring as part of the planning consent process in and around the affected areas. All the pre development monitoring has shown that levels of key pollutants are well within accepted levels. In order to assess the impact that the plant operations may have on air quality in the longer term, the Council commissioned an independent Air Quality Consultancy to undertake a series of modelling to determine the levels of 3 main pollutants most commonly associated with combustion processes (NO_2 PM_{10} and $PM_{2.5}$) to predict changes to air quality around Weston Point as a result of likely emission levels and environmental factors.

The report that was commissioned was based on baseline data collected in 2013. The model predicts both the long term and short term average concentrations. Where the model predicts short term averages it assumes the worst case weather conditions and so is likely to over-predict the anticipated concentrations.

The model took background air quality levels from the national air pollution inventory. It also included emissions data from surrounding industrial plants incuding Ineos, Mexichem, Scottish Power Station and Rocksavage Power Station and Hanson Quarry, together with traffic data from 66 locations on approximately 20 roads and slip roads in the area.

The results of the modelling demonstrate that current concentrations are well below the objective levels in all relevant exposure locations (ie the locations where members of public are likely to be exposed). The predicted concentrations across Weston Point with the Energy from Waste plant in full operation will remain well below the objective levels. The model demonstrates some exceedences of the annual objective for PM_{10} and NO_2 along the edge of the expressway which are a direct result of emissions from traffic. The concentration of both PM_{10} and NO_2 falls quickly within a short distance of the edge of the roadside and members of the public are not likely to be exposed.

The consultancy identified 4 'worst case receptors' (these are 4 locations, which include properties, in the areas that could to be most affected by any emissions from the plant). The model demonstrates that concentrations of the NO_2, PM_{10} and $PM_{2.5}$ as modelled are currently well below the objective levels and will remain well below objective levels once the Energy from Waste Plant is in full operation.

Figures 13, 14 and 15 show the modelled annual average levels of NO_2, PM_{10} and $PM_{2.5}$ across Weston Point with the Energy from Waste plant in full operation.

The independent report concludes that based on the available data and modelling, with the Energy from Waste plant in full operation:

'Concentrations of NO_2, PM_{10} and $PM_{2.5}$ are well below the respective air quality objectives, which have been set to protect the most sensitive members of the community'

Figure 13: Annual Mean NO_2 Concentration with Energy for Waste plant in operation, µg/m3
(Objective is 40 µg/m3)

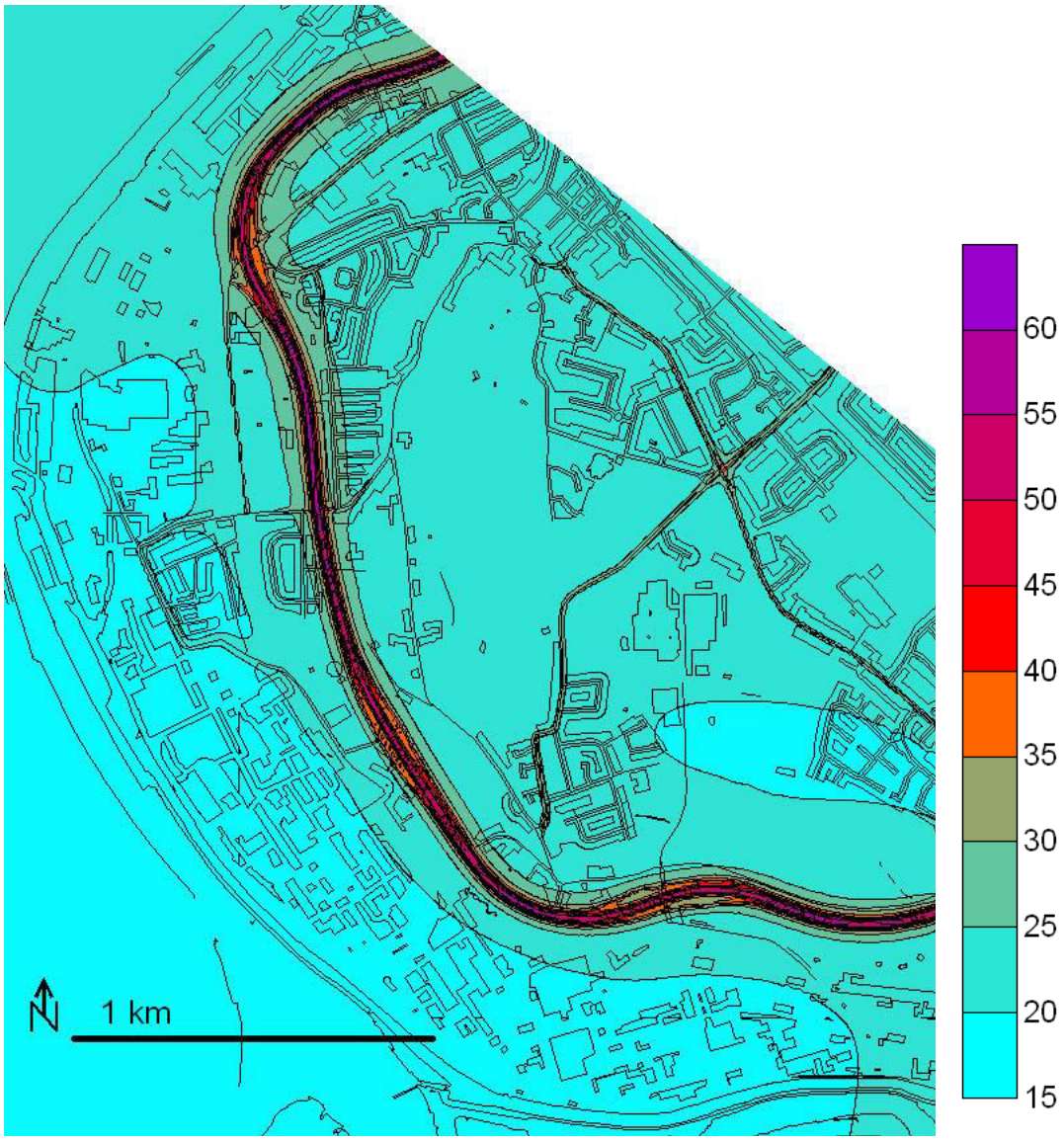


Figure 14: Annual Mean PM_{10} Concentration with Energy for Waste plant in operation, µg/m3
(Objective is 40 µg/m3)

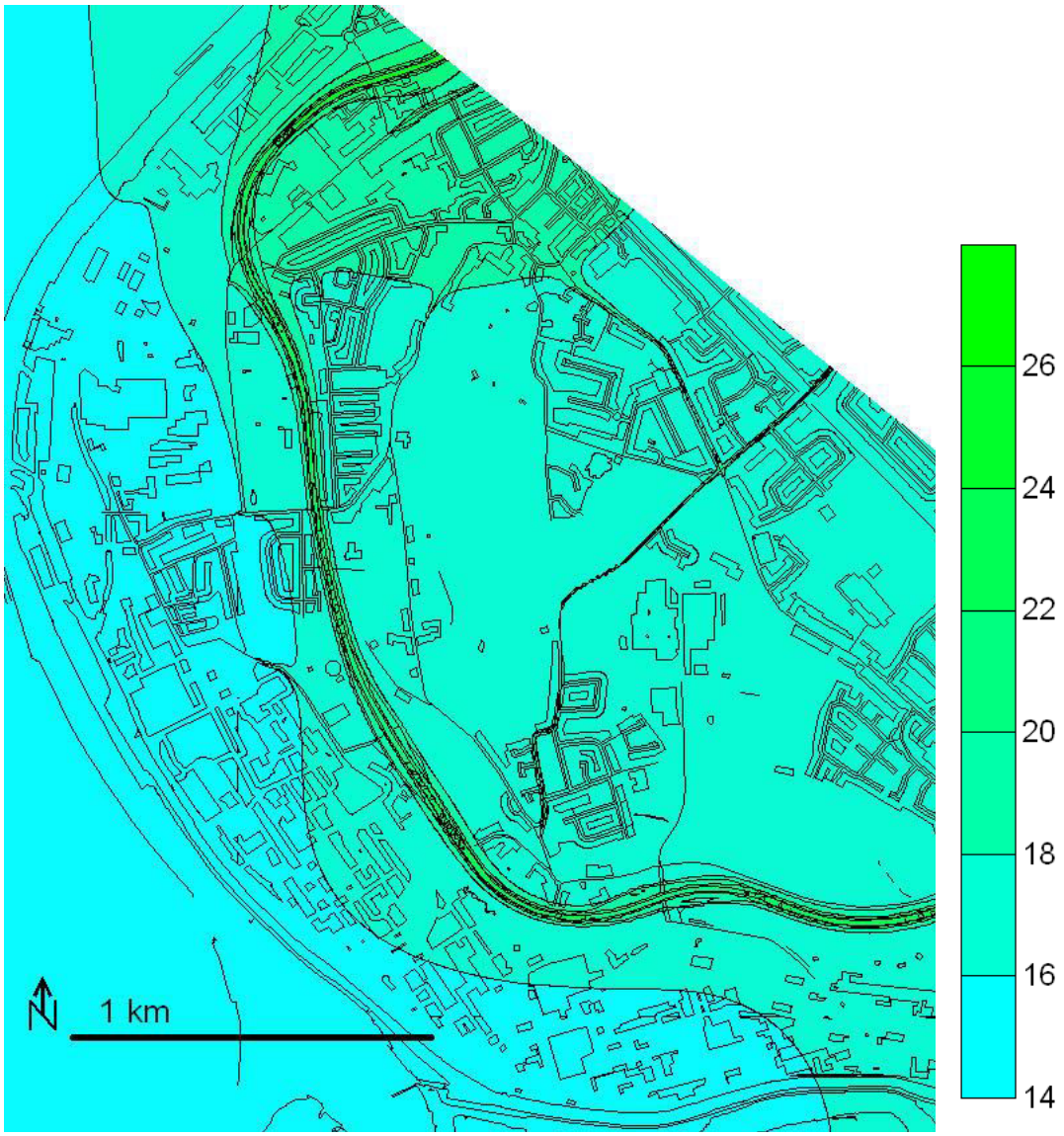
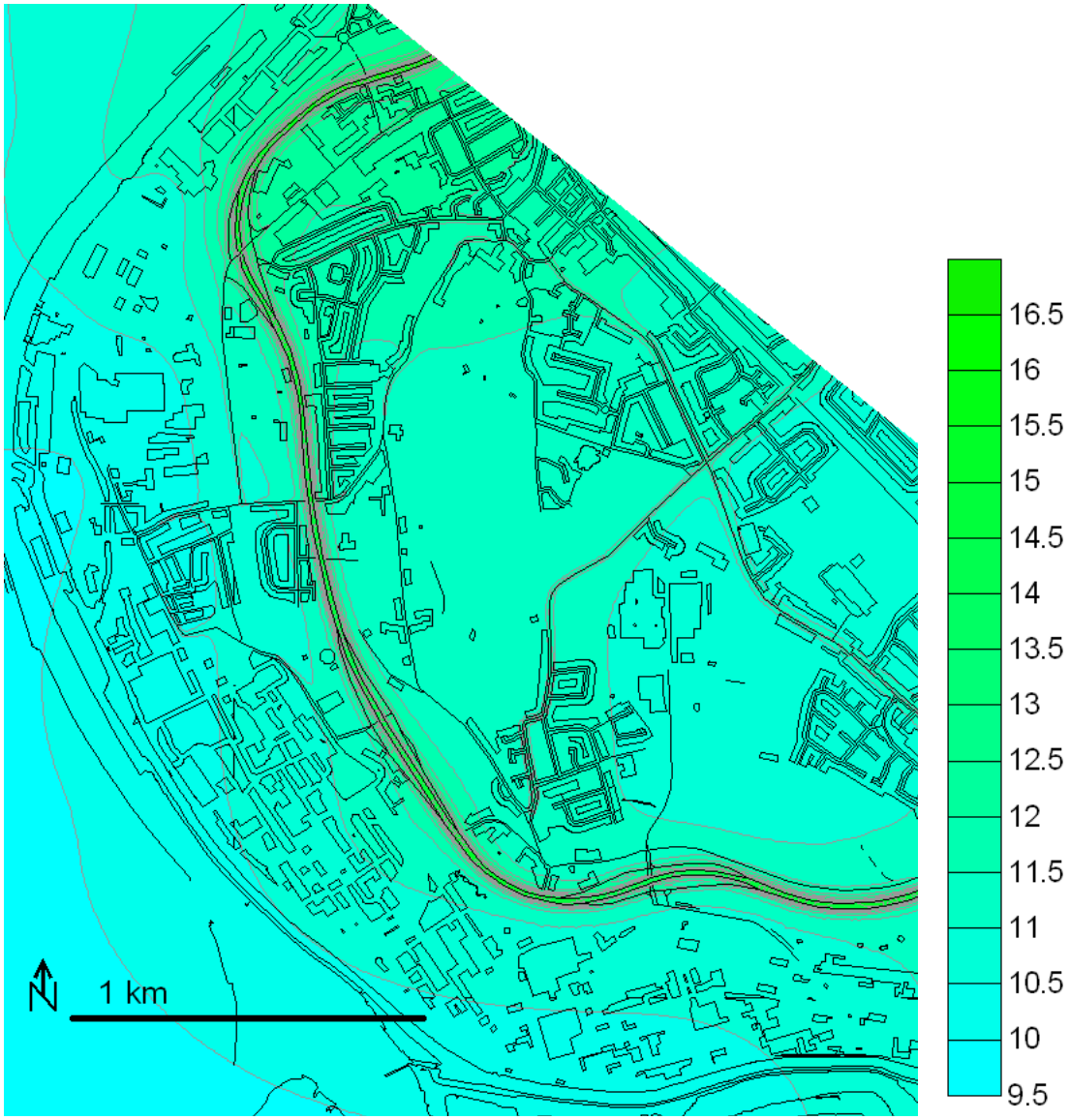


Figure 15: Annual Mean $PM_{2.5}$ Concentration with Energy for Waste plant in operation, µg/m3
(Objective is 25 µg/m3)



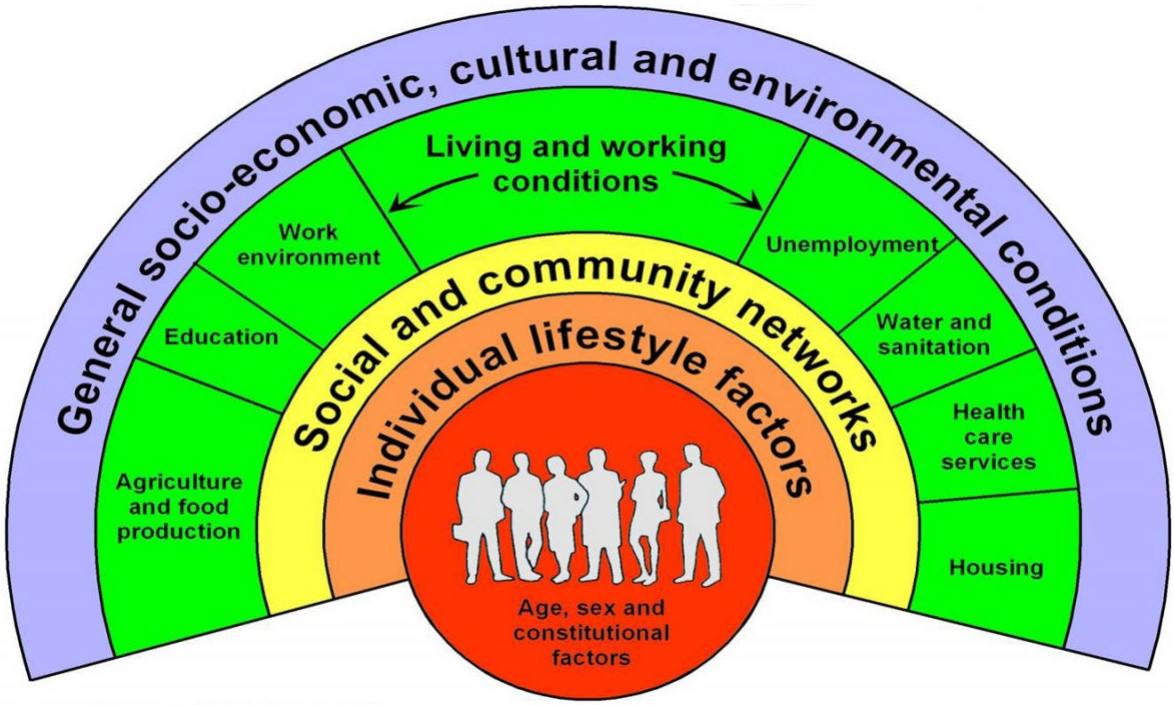
Health in Halton

Halton health profile

The health of people in Halton is generally worse than the England average for a number of indicators. The heath profile for England identifies key outcomes that are significantly worse for people in Halton than the England average.[18] There are a variety of factors which have a significant influence in determining the health of an individual, as well as the health of a population.

The main determinant of health, after individual physical and genetic factors, are the lifestyle choices that we make, and the social context in which we live, eg, the educational, employment, housing choices that we have available. The environmental factors that influence our health represent only a small part of determining our overall health. **Figure 16** shows the Dahlgren and Whitehead model of Determinants in Health and describes the key influences in determining the health of a population.

Figure 16: Dahlgren and Whitehead model of Determinants in Health



Source: Dahlgren and Whitehead, 1991

Halton has higher rates of less healthy lifestyle activities undertaken within the borough, such as smoking, poor diet, reduced physical activity, unhealthy alcohol consumption. Halton is an area of high deprivation, with around 50% of the population living in some of the most deprived areas in England.

These factors play a significant role in determining the health of people in Halton and can, in part, explain some of the poorer health outcomes facing people in Halton, compared to other parts of the Country.

[18] Halton: Health Profile 2014. Public Health England
http://www.apho.org.uk/resource/item.aspx?RID=142121

Mortality associated with Air Pollution

A report by Public Health England estimate that 5.6% of deaths across England may be attributed to long term exposure to man-made fine particulate ($PM_{2.5}$) air pollution.[19] This report estimates that in Halton, 5.5% of deaths (approximately 62 deaths per year) can be attributed to $PM_{2.5}$ pollution. The proportion of deaths attributable to air pollution is similar to the national average and to neighbouring authorities (although direct comparison cannot be made). Attributable deaths in local neighbouring authorities are shown in **Figure 17**.

Figure 17: Table showing population size, number of deaths, and the number and fraction of deaths attributable to $PM_{2.5}$ as estimated in the PHE 2015 report

	Population age 25+ (x1000)	**No. Deaths age 25+**	**No. Attributable deaths age 25+**	**% deaths attributed to $PM_{2.5}$**
England	35878	458743	25002	**5.6**
North West	4733	67871	3427	**5.1**
Halton	80.6	1131	62	**5.5**
Warrington	138.1	1746	95	**5.4**
St Helens	123.8	1792	98	**5.5**
Knowsley	99.9	140	77	**5.5**
Liverpool	289.3	4388	239	**5.4**

The impact of $PM_{2.5}$ on the contribution made towards deaths varies between authorities due to demography and epidemiology and so comparisons are difficult. Proportion of attributable deaths is not solely associated with either deprivation or amount of local industry. **Figure 17.1** shows the population size, number of deaths, and the number and fraction of deaths attributable to $PM_{2.5}$ as estimated in the PHE 2015 report in London and some central London Boroughs.

Figure 17.1: Table showing population size, number of deaths, and the number and fraction of deaths attributable to $PM_{2.5}$ as estimated in the PHE 2015 report

	Population age 25+ (x1000)	**No. Deaths age 25+**	**No. Attributable deaths age 25+**	**% deaths attributed to $PM_{2.5}$**
London	5330.6	47998	3389	**7.2**
Kensington and Chelsea	128.0	842	68	**8.3**
Westminster	182.5	1061	88	**8.3**

[19] Public Health England (PHE) 2015. Estimating Local Mortality Burdens Associated with Particulate Air Pollution. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/332854/PHE_CRCE_010.pdf

Illnesses associated with Air Pollution

There are a number of illnesses that have been associated with long term exposure to poor air quality and/or specific types of air pollution. The proportion that air quality contributes to the rate of these illnesses has not been quantified. The illnesses most commonly associated with poor air quality and their prevalence in Halton are described below.

Cardiovascular disease/heart disease

A COMEAP report in 2006 assessed the range of evidence to suggest a link between cardiovascular disease and air pollution and identified that there is likely to be an association. [20] The contribution that air pollution plays in the development of or worsening of existing of cardiovascular disease is unknown. There are a number of more significant risk factors in the development of cardiovascular disease.

In Halton, the known prevalence (4.3% of the population) and modelled prevalence of coronary heart disease (6.0%, this includes the numbers expected to have heart disease but who have not been diagnosed) are slightly higher than the England Average (known prevalence 3.3%, modelled 5.8%)[21]. The risk factors which are also more strongly associated with cardiovascular disease are also higher amongst the Halton population, which are most likely to account for the higher rates of cardiovascular disease locally than the national average. These risk factors include:

- Tobacco use and smoking
  Smoking is known to increase the risk of coronary heart disease by between 2 and 4 times. The 2013 Health Survey for England (HSE)[22] suggests that 18.4% of all people in Halton smoke, which is the same as the national average. However, a survey carried out in Halton for the Merseyside lifestyle survey 2012/13 suggests that 30% of people in Halton smoke. As it is not possible to determine a true number, the real level of smoking in Halton is likely to lie between 18-30%, which represents a significant population placing themselves at increased risk of coronary heart disease.

- Poor diet
  A balanced healthy diet with at least 5 fruit and vegetables a day, low salt intake and appropriate fat consumption is needed to maximise heart and circulatory heath. Poor diet can significantly increase the risk of cardiovascular disease. The Merseyside Health Survey suggests that on average, adults in Halton eat 1.9 portions of fruit and two portions of vegetables per day. One in three eat the recommended daily amount of five portions of fruit and vegetables per day (35%). Half of people tend to add salt to their food during cooking (52%), and a further 28% generally do so at the dinner table. Poorer diets of people within Halton will be contributing to higher rates of cardiovascular disease.

- Low Physical activity

[20] Committee on the Medical Effects of Air Pollutants (COMEAP), 2006. Cardiovascular Disease and Air Pollution
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/304668/COMEAP_cardiovascular_disease_and_air_pollution.pdf
[21] Halton Joint Strategic Needs Assessment: Long Term Conditions – Cardiovascular Disease 2014/2015
http://www3.halton.gov.uk/Pages/health/JSNA/longterm/CardiovascularDisease.pdf
[22] Health and Social Care Information Centre (2014) *Health Survey for England 2013*
http://www.hscic.gov.uk/catalogue/PUB16076

The Merseyside Lifestyle Survey 2012/13 suggests that just over a third of Halton residents engage in moderate-intensity activities such as brisk walking, cycling, or swimming for at least 10 minutes continuously (36%) and one in five adults (19%) engage in vigorous-intensity activities such as running or football, this means that just under half of our population (45%) do not participate in moderate or vigorous exercise. Adults in Halton estimate that they spend an average 263 minutes (almost 4 and a half hours) each day either sitting down or reclining (excluding sleep). Being physically inactive increases the risk of cardiovascular disease. There are lower rates of physical activity amongst men and women in Halton compared to the Merseyside and England average, increasing the likelihood of Halton residents developing cardiovascular diseases compared to other areas.

- Obesity
  Based on the Body Mass Index, 36% of people in Halton are overweight and 25% are obese according to the Merseyside Lifestyle Survey. Excess weight is a significant modifiable factor to help prevent cardiovascular disease. A population with excess weight will lead to higher rates of cardiovascular disease in Halton.

- Excess alcohol
  The Merseyside Lifestyle Survey identifies that two in three adults in Halton drink alcohol (67%). This is higher than both the overall Merseyside figure of 59%, the national average of 62%. Among those who drink alcohol, two in three drink at least once a week (66%). Among all Halton residents one in nine people drink at increasing levels (11%) and four per cent drink at higher risk levels, which is in line with the average across Merseyside. Excess alcohol consumption will contribute to the higher burden of cardiovascular disease in Halton.

Respiratory disease

- Chronic Obstructive Pulmonary Disease (COPD)
  COPD is a group of lung diseases that block airflow and make breathing difficult. Emphysema and chronic bronchitis are the two most common conditions. Halton Clinical Commissioning group (CCG) Quality and Outcome Framework data identifies that COPD prevalence in Halton is 2.5% which is higher than the England average of 1.7%. The most common risk factor for COPD is smoking. Smoking is thought to account for around 90% of all COPD cases.[23] The higher than average smoking rates (and high historical smoking rates) are the most likely causal factor for Halton's higher rates of COPD. High levels of air pollution, particularly dust, could also contribute to some COPD, although current evidence is limited. Levels of particulate matter in Halton are well within European Directive levels.

- Asthma
  Halton Clinical Commissioning group (CCG) Quality and Outcome Framework data identifies that the prevalence of asthma in Halton is 6.9% which is higher than the England average of 6.0%. There are a number of factors that can cause asthma, the exact cause is unknown, but amongst these are:
  - Family history of asthma can increase the likelihood of an individual developing asthma and this is largely not preventable.
  - A high proportion of asthma can be brought about allergies to things such as dust, dust mites, animal hair etc.

[23] http://www.nhs.uk/Conditions/Chronic-obstructive-pulmonary-disease/Pages/Causes.aspx

- Smoking during pregnancy has considerable consequence to the growth and development of the child, including a significantly greater likelihood of the child developing severe asthma in childhood and later life. Halton also has a considerably higher proportion of women smoking at the time of delivery, with 18.9% of women smoking at delivery compared to 12.7% across England (2012/13).

Lung Cancer

The most predictive factor for the development of lung cancer is smoking and exposure to tobacco smoke. The risk of developing lung cancer is 25 times greater in a person who smokes than in a person who doesn't smoke. As previously identified, Halton has a higher rate of smoking than the national average, up to 30% of people living in Halton are putting themselves at a 25 times greater chance of developing lung cancer. The smoking rate in Halton has recently decreased, but data suggests that historically smoking rates could have been 35% or higher in Halton. The risk of developing lung cancer as a result of smoking does not disappear immediately if someone stops and so there will be a period of time where the impact of smoking are still felt locally, and higher levels of lung cancer (and other smoking related conditions) can be expected locally whilst there is a legacy of high smoking rates.

Petition response

Halton Borough Council received a petition entitled "Request for the Council to Monitor the Air Quality for $PM_{2.5}$ and other toxins" on 6th March 2015.

The petition stated:

"Halton is a highly polluted area and our local authority have allowed a massive waste incinerator to be built. We have had a number of leaks already at the plant.

We want to protect the health of our children from these highly toxic contaminants, this can only be done by Monitoring the Air Quality for PM 2.5 and other toxins.

Our council to date has refused even though we are in an area that the British Government is being sued by the European Courts for failing comply with the European Directive on Air Quality

For many years Halton claim to fame was the title of the highest cancer rates in the country not to mention asthma as a common household ailment. We also have a very high rate of multiple scleroses. Runcorn and Widnes, in the past, had a very large chemical industry and wielded great power. With the public becoming aware of the serious risk to health we of course want to protect our children (they are our future). Our local council maintain they meet the Government requirements which shows the air quality is good. If this is the case then why do they not monitor for Particulate Matter 10 (PM) or PM 2.5 The Silent Killer.

We need the monitors to get the proof our Air Quality is the cause of all the breathing ailments in our area. This is supported by the findings of the European Research."

The petition was signed by 5632 people, 946 (17%) of those signing the petition lived outside of the Halton area.

Response to statements made in the petition

The petition focusses on the development of the Energy from Waste incinerator and indicates that this is a significant cause of pollution locally including some leaks.

The Energy from Waste incinerator has been developed in Weston Point, operated by Viridor. The Incinerator was developed following a lengthy planning application process including local consultation. The development of the facility came under the Electricity Act 1989 and as such, consent for the development was given by the Secretary of State for Business, Enterprise and Regulatory Reform.

Following the planning application process an IPPC permit is required to control and assess emission activities. The Energy from Waste process is an A1 process and as such, the permit was issues and is regulated by the Environment Agency. **The Council have not been informed by the Environment Agency of any infringements to the permitted processes.**

Halton Borough Council to date has refused to monitor for PM 2.5 and other toxins, even though we are in an area that the British Government is being sued by the European Courts for failing comply with the European Directive on Air Quality.

The body of the report highlights the breadth and duration of air quality monitoring which takes place within the Borough. Halton Borough Council complies with the EU Air Quality Directives and assesses all pollutants required under legislation. Halton achieves the objective measures for all required pollutants, with the exceptions of NO_2 in two areas which have been identified as Air Quality Management Areas. These areas regularly exceeded permitted levels of NO_2 as a result of localised traffic flow issues and additional measures, previously highlighted, are being implemented to improve this situation.

Measurement of $PM_{2.5}$ is not current a requirement as part of the UK Air Quality legislation and the Council is not required to continually monitor this. **Halton Borough Council have however monitored $PM_{2.5}$ and levels have been found to be well below EU guideline objectives**. An independent Air Quality model to identify the effect of the Energy from Waste site operations has shown that $PM_{2.5}$ are predicted to remain well below EU guideline Objectives levels even during full plant operations. Should the EU Air Quality Directives change to require Local Authorities to monitor $PM_{2.5}$ on a continual basis, Halton Borough Council will comply with this.

The European Commission has launched legal proceedings against the UK for its failure to cut excessive levels of nitrogen dioxide and create a national plan to do so. This is based on NO_2 levels exceeding EU objectives at zonal levels and does not relate to individual Local Authority areas. **Halton is not included in any of the zonal areas to which the proceedings apply.** The EU directive standards are determined using a network of air quality monitors in populated areas which are distinct from the monitors used by local authorities to assess and monitor air quality within their own area as part of their own legal requirement. DEFRA are responsible for this network of monitors. Halton have a network affiliated monitor which contributes to the national network.

For many years Halton claim to fame was the title of the highest cancer rates in the country not to mention asthma as a common household ailment. We also have a very high rate of multiple scleroses

More than one in three people in the UK will develop some form of cancer during their lifetime.[24]Although there are more than 200 different types, lung, breast, prostate and bowel cancers account for more than half of cancer diagnoses each year.

Cancer is a group of conditions where cells in a specific part of the body grow and reproduce uncontrollably. It accounts for a quarter of all deaths in England. Halton **does not** have the highest cancer rate in the country. However, it must be recognised there is a higher incidence of all cancers than the England average. The directly standardised incidence all age, all cause cancer rate is 705/100,000 population in 2012 (for every 100,000 people in Halton, 705 on average will develop a cancer in that year). The regional North West rate of 626/100,000, and an average England rate of 586/100,000. In terms of deaths as a result of cancer, between 2011-13, there were 188 deaths per 100,000 population in Halton, this is ranked as 143rd highest out of all 150 England Local Authorities.[25]

The most common causes of cancer are widely accepted to be Smoking, Poor diet and Alcohol consumption. Smoking is by far the most important preventable cause of cancer. It is responsible for one in four UK cancer deaths, and nearly a fifth of all cancer cases. Nearly half of all smokers will eventually die from smoking-related diseases.[26] After smoking, poor diet is one of the most important avoidable causes of cancer, and has been linked to bowel cancer, pancreatic cancer and oesophageal cancer. Alcohol has been classified as a Group 1 carcinogen since 1988, and is responsible for around 4 per cent of cancers in the UK each year – around 12,500 cases. It is known to increase the risk of liver, mouth and bowel cancer among many others. Higher rates of these lifestyle factors within a community will lead to higher incidences of cancer. As previously described Halton has significantly higher than the England average rates of smoking, poor diet, and excess alcohol.

The contribution that air pollutants make to cancer incidence is unknown. However, **European Air Quality Objectives are set at levels to protect health, and air Quality in Halton complies with these directives**.

There is no accurate GP register for multiple sclerosis (MS) and it is therefore not possible to identify the actual number of people with Halton in a specific area. The MS Trust estimates that between 100 and 140 people per 100,000 have multiple sclerosis. There is no reason to believe that rates are higher in Halton. There is also no evidence in the scientific literature of a plausible link for air pollution as a significant cause of multiple sclerosis. The MS Trust identifies the cause of MS is still unknown but the widely acknowledged theory is that MS is an auto immune condition, where by the patients' own immune system attacks the nerves. There are also some correlation between MS and smoking.[27]

Our local council maintain they meet the Government requirements which shows the air quality is good. If this is the case then why do they not monitor for Particulate Matter 10 (PM) or PM 2.5 The Silent Killer

As identified within the body of the report, Halton Borough Council does monitor PM_{10} as part of the Air Quality legislation, and the results of this are publically available. The Annual

[24] Annual Report of the Chief Medical Officer: Volume 1, 2011: On the State of the Public's Health
[25] PHE Longer Lives, http://healthierlives.phe.org.uk/topic/mortality/area-details#are/E06000006/par/E92000001/ati/102/pat/ accessed 19th May 2015
[26] Mortality in relation to smoking: 50 years' observations on male British doctors. US National Library of Medicine. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC437139
[27] http://www.mstrust.org.uk/atoz/cause.jsp

Air Quality Review and Assessment is published on the Halton Borough Council Website and has been available since 2006.[28]

As previously identified, there is no legal obligation under the UK Air Quality Directives for the Council to monitor $PM_{2.5.}$ Halton Borough Council have, however, undertaken $PM_{2.5}$ monitoring and undertaken robust modelling analysis which show that $PM_{2.5}$ is well within EU guideline objectives and is predicted to remain below.

If the EU Directive guideline for $PM_{2.5}$ is implemented into UK law, the Council will meet the required obligations as part of any that legislation.

We need the monitors to get the proof our Air Quality is the cause of all the breathing ailments in our area. This is supported by the findings of the European Research

The petition is not clear to what European Research is being referred. However the European Commission has developed an extensive body of legislation which establishes health based standards and objectives for a number of air pollutants in order to protect health. Halton Borough Council has achieved all Air Quality Objectives (with the exceptions of NO_2 which exceeds the permissible number of exceedences of NO_2 mean levels in 2 Air Quality Management Areas within Widnes).

Conclusion

Air quality in Halton is assessed and monitored regularly in order to comply with UK and EU Air Quality legislation. Air Quality objectives have been achieved in Halton for all current pollutants with the exceptions of Nitrogen Dioxide.

Halton has identified two Air Quality Management Areas, both of them in Widnes, where levels of NO_2 exceed the objective levels on more occasions than is permissible as part of the objective standards. The levels of NO_2 are higher in these two areas as a result of higher town centre traffic activity. As a result of the declaration of Air Quality Management Areas, these areas are subject to additional measures and Halton Borough Council is working hard to ensure that the levels of NO_2 in these areas fall to within permitted levels as soon as possible. These activities include investigating traffic flow alterations and promoting alternative access to the town centre, cycling, walking etc.

National and European Air Quality Objectives are determined at levels to protect health. As Halton meets all these criteria (except in designated AQMAs) the air quality cannot be considered to be at levels poor enough to affect health.

Halton experiences poorer levels of health than many other areas in the country. This however can be explained in the most part by lifestyle factors and the higher rates of people making less healthy lifestyles choices in Halton. The Council and local partners are continuing address the factors which impact greatly on health including encouraging people to stop smoking, improving access to and

[28] http://www4.halton.gov.uk/Pages/planning/air-quality.aspx

awareness of healthy diets, access to weight management programmes, improvements in local amenities and encouraging more active lifestyles. The Council have a set of Key Health and Wellbeing Priorities to improve the health of the population, and is engaged in improving life chances and making it easier to make healthy lifestyle choices by ensuring we work across all agencies to improve education, enhance employment opportunities, and provide healthy safe and thriving homes and communities.

Over 4600 people who live in Halton have signed a petition believing that the Council do not monitor air quality and that air quality in Halton is poor enough to affect health despite evidence being available that both of these assertions are incorrect.

Recommendations

In order to address the issues raised in this report and ensure that air quality in Halton remains good and ultimately to improve health and wellbeing in Halton, the Council has identified a number of recommendations for future action:

i. Undertake a series of public engagement events to build a greater understanding of the concerns local people have regarding air quality in Halton and identify opportunities to build improved relationships to ensure a clear way forward in all concerns.
ii. Develop an active multi agency Air Quality Forum (including lay representation) to enable issues and concerns to be raised and discussed in an open, engaged forum and facilitate agreement on actions and outcomes.
iii. Investigate further opportunities to limit emissions and reduce NO_2 in areas of potential high traffic activity around built up areas and achieve compliance with NO_2 Air Quality Objectives.
iv. Develop a full Air Quality Strategy, based on available local and national data and evidence to ensure that Halton is able to sustain recent improvements in Air Quality across the borough and proactively seek to remove the declaration of Air Quality Management Areas within the borough.

REPORT TO: Health and Wellbeing Board

DATE: 16th September 2015

REPORTING OFFICER: Director of Public Health

PORTFOLIO: Public Health

SUBJECT: Respiratory Strategy for Halton 2015-2020

WARD(S) Borough-wide

1.0 PURPOSE OF THE REPORT

1.1 The report presents a new expanded Strategy to address respiratory health for Halton. It identifies key factors influencing respiratory health and provides recommendations for action to prevent respiratory illness, improve identification, treatments and outcomes and ensure provision of appropriate, high quality, primary, secondary and community health and social care services for all ages.

2.0 RECOMMENDATION: That:

The Health and Wellbeing Board support the Respiratory Health Strategy for Halton 2015-2020.

3.0 SUPPORTING INFORMATION

3.1 Respiratory disease is one of the key contributing factors to reduced life expectancy in Halton and is the third leading cause of death after circulatory disease and cancer.

There are significant health inequalities in Halton concerning respiratory diseases where the mortality rate in our most deprived areas is double that of Halton as a whole.

Whilst most respiratory illnesses are associated with smoking or exposure to tobacco smoke in the environment, smoking is not the only risk factor to explain the relationship between deprivation and respiratory illness. Work related conditions, housing conditions, fuel poverty, and exposure to outdoor air pollution are all associated with respiratory disease, independently of smoking.

3.2 The 2014 Halton Respiratory Health Profile[1] details the significant respiratory health issues within Halton. The key issues identified within the health profile include:

- It is estimated about 3,916 people aged 16+ living in Halton

[1] http://www3.halton.gov.uk/Pages/health/PDF/health/RespiratoryHealthProfile.pdf

had Chronic Obstructive Pulmonary disease (COPD) in 2010. By 2020 this figure may be as much as 4,420.

- There have been improvements in case finding since 2009/10 closing the gap between the modelled expected number of people with COPD and those known about on GP disease registers. However, the number of people on the asthma register remains lower than the expected number.
- The management of patients with COPD and asthma are in line with the North West and England averages
- There is significant ward level variation in emergency hospital admission rates and at GP practice level. There is also a relationship with temperature, with a greater percentage of admissions seen in the winter months.
- Death rates for COPD have been falling but are above the North West and England rates. Death rates from respiratory causes in those aged under 75 years and pneumonia are also higher than England but similar to the North West.

3.3 There has been a significant improvement in the rate of detection of cancers in Halton. Lung cancer represents the greatest proportion of all cancers within Halton (almost 17% of all cancers)[2] and numbers of cases fluctuates unequally across the Borough. Lung cancer represents a significant burden of respiratory illness for the population of Halton.

3.4 Halton had historically high rates of smoking but has seen a significant reduction in recent years. The most recent health profile 2015 data shows that the overall smoking rate is 18.4% the same as the England average. The smoking rate may be higher than this in areas of deprivation.

3.5 The rate of smoking related deaths is 416 (per 100,000 population), worse than the average for England. Smoking results in considerable respiratory health problems and exacerbates existing conditions resulting in increases in secondary care usage and poorer outcomes for patients. Halton has seen a considerable decline in the numbers of women smoking at the time of delivery, however 19% of pregnant women continue to smoke compared to 12% as an England average. Smoking during pregnancy effects the growth and development of the child, not least a significantly greater likelihood of the child developing severe asthma in childhood and later life. Further improvements in smoking rates remain a key recommendation within the strategy.

The treatment and management of people with respiratory conditions represent a significant challenge on current health and

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2 http://www3.halton.gov.uk/Pages/councildemocracy/pdfs/CensusandStatistics/General_Cancer_Profile_2013.pdf

social care systems

3.6 The strategy presents a single vision for respiratory health across all partners to ultimately improve the respiratory health and well-being of people in Halton, and reduce the impact that respiratory conditions have on people and services across Halton.

Our vision is:
to improve the respiratory health and well-being of the population of Halton, from the start to the end of their lives.

3.7 In order to achieve the vision, the strategy identifies a set of aims to address every element of the health and care system which impacts upon respiratory health. The strategy aims to;

I. Prevent respiratory ill health

Increase awareness of how to maintain good respiratory health so that people are aware how to live healthy lifestyles and make informed healthy choices to minimise the risks to poor respiratory health. Ensure that services and agencies activities support activities to prevent poor respiratory ill health.

II. Earlier detection of respiratory diseases

Make sure people are aware of the signs and symptoms of respiratory diseases to encourage positive health seeking behaviours and ensure robust services and pathways are in place to enable access to early investigation and treatment.

III. Primary Care and Community based support

Provide a fully integrated approach to primary care and community based services, to ensure all community treatment and support services are aligned to best meet the needs of patients and carers, and facilitate seamless community services.

IV. High Quality Hospital Services

Ensure that pathways and services are in place so that people who need them receive prompt effective treatment for their respiratory condition and have the best chance to optimise their quality of life and survival.

V. Promoting Self Care and Independence

Ensure that people are placed at the centre of their own respiratory care, able to identify their individual needs and provided with appropriate information, support and interventions to help them manage their own respiratory health issues.

3.8 The strategy provides the evidence and analysis to identify what they key issues affecting the population of Halton are in terms of their impact upon respiratory health for each overall aim. Using this data, in conjunction with key guidance, an assessment of local need and current provisions and gaps, a set of key recommendations and actions are identified in order to achieve each individual aim of the strategy and ultimately improve respiratory health and respiratory health outcomes for people in Halton. The recommendations are covered in detail in the strategy but briefly cover the following areas:

I. Prevent respiratory ill health

- Reduce smoking rates
- Increase appropriate vaccination rates
- Reduce overweight and obesity
- Measures to improve housing quality and warm homes
- Identify opportunities to further improve air quality across Halton

II. Earlier detection of respiratory diseases

- Mechanisms to improve early signs, symptoms and diagnosis of cancer
- Early case finding and rapid treatment access for COPD, Sleep apnoea and Interstitial lung disease
- Ensure risk markers are identified on patient records, known risk occupations etc.
- Consideration of needs of people with learning disability

III. Primary Care and Community based support

- Compliance to appropriate NICE Guidance and Quality Standards
- Pro Active Care programme Local Enhanced Service (2014/15)
- Review provision of pulmonary rehabilitation across Halton
- Establish integrated delivery of respiratory services across Halton
- Improve prescribing, in line with guidance[3], of respiratory medication across primary care
- Improved case finding and rapid treatment access across a number of conditions

IV. High Quality Hospital Services

- Review Warrington & Halton NHS Foundation Trust Rapid Response Respiratory Team
- Review arrangements regarding Halton residents admitted

[3] Pan Mersey Area Prescribing Committee Guidelines
http://www.panmerseyapc.nhs.uk/guidelines.html

to Whiston Hospital with respiratory health problems

V. Promoting Self Care and Independence

● Develop a range of interventions to support self-management
● Further develop and expand the Expert Patients Programme

3.9 The strategy will inform the continuous development of the Respiratory Action Plan which is implemented and overseen by the Respiratory Strategic group, outcomes against which are measured and fed back through to the CCG and the Health and Wellbeing board.

4.0 POLICY IMPLICATIONS

4.1 The strategy addresses some key issues relating to the provision of services to protect respiratory health and for people requiring treatment and support for respiratory illness. As such the recommendations will cover a broad scope of policy areas across the council, CCG and health and care partners.

5.0 OTHER/FINANCIAL IMPLICATIONS

5.1 There may be financial implications in the implementation of recommendations within the strategy which will be assessed and managed within the Strategic Group and through partner agencies for which the implication affects.

5.2 Respiratory health is a significant cause of ill health within the Borough and inequalities exist within the distribution of ill health and services which need to be addressed in order to improve respiratory health across the Borough.

6.0 IMPLICATIONS FOR THE COUNCIL'S PRIORITIES

6.1 **Children & Young People in Halton**
There are number of respiratory health conditions which affect children to a greater extend. Ensuring that appropriate and high quality prevention, identification and treatment and support services are in place is essential to safeguarding the respiratory health of children and young people in Halton

6.2 **Employment, Learning & Skills in Halton**
Maximising respiratory health for the population of Halton and limiting the effect that respiratory illness has on an individual, is likely to improve life chances, including employment potential for people in Halton

6.3 **A Healthy Halton**

Ensuring the health and wellbeing of the population is key priority. Protecting the health of Halton's population is a statutory responsible for Public Health and the Council.

6.4 **A Safer Halton**

None

6.5 **Halton's Urban Renewal**

None

7.0 **RISK ANALYSIS**

7.1 *There are no risks associated with the development and implementation of this strategy*

8.0 **EQUALITY AND DIVERSITY ISSUES**

8.1 *The strategy is developed in line with all equality and diversity issues within Halton.*

9.0 **LIST OF BACKGROUND PAPERS UNDER SECTION 100D OF THE LOCAL GOVERNMENT ACT 1972**

None under the meaning of the Act.

Respiratory Health Strategy for Halton 2015 – 2020

HALTON BOROUGH COUNCIL

NHS Halton Clinical Commissioning Group

myhalton living life well

Foreword

Sadly the impact of respiratory disease has no bounds – from the school child with asthma who wakens in the night and is unable to compete with his peers to the elderly COPD patient with recurrent exacerbations and subsequent admissions. Their suffering is devastating for them and their families and there is a real risk of premature death. The impact of exacerbations and poor control places a further burden on the resources of an already stretched NHS.

There are many excellent therapies and guidance but still the basics of delivering evidence-based and personalised care remains essential for effective timely intervention for these respiratory patients.

This strategy will attempt to fully integrate health and social care aspects on respiratory care and encourage a more equitable service across the Borough incorporating primary, secondary and community services. It will empower local health care & other professionals to deliver the best possible care through better organisation, use of evidence-based care, improved self-management, prevention strategies and appropriate effective therapies and interventions.

The CCG, local authority and health and community partners should all be proud to participate in the initiative to improve the health and social well-being of all respiratory patients and their carers in Halton.

Dr Chris Woodforde, Respiratory Lead GP for NHS Halton CCG

People in Halton, on average, live shorter lives than people in many other parts of the country. Respiratory disease is the third leading cause of death after circulatory disease and cancer. There are significant health inequality in respiratory diseases, people in the most deprived communities in Halton, are twice more likely to die from a respiratory illness than the general Halton population.

Smoking and tobacco smoke is a cause of many respiratory problems and is linked to deprivation, but this is not the only link; working conditions, poor housing, fuel poverty and lifestyle are all associated with respiratory disease and more greatly affect people in poorer communities. Only when all organisations and partners are working together with a single strategic vision, and across all sectors, can we deliver a full range of services to reduce the impact respiratory illness has on the people of Halton. Ensuring that we improve opportunities to delay or prevent the development of respiratory conditions, improve access to appropriate good quality health services, and support people with respiratory problems, and their carers, to confidently manage their condition(s) and achieve the best possible quality of life, are key outcomes of this strategy.

Eileen O'Meara, Director of Public Health, Halton Borough Council

Executive Summary

Respiratory disease is one of the key contributing factors to reduced life expectancy in Halton and is the third leading cause of death after circulatory disease and cancer. There are significant health inequality issues in Halton concerning respiratory diseases where the mortality rate in our most deprived areas is double that of Halton as a whole.

Whilst most respiratory illnesses are associated with smoking or exposure to tobacco smoke in the environment, smoking is not the only risk factor to explain the relationship between deprivation and respiratory illness. Work related conditions, housing conditions, fuel poverty, and exposure to outdoor air pollution are all associated with respiratory disease, independently of smoking, all of which are addressed within the scope of the strategy.

The strategy presents a vision for respiratory health in Halton:

Our vision is:

to improve the respiratory health and well-being of the population of Halton, from the start to the end of their lives.

In order to achieve the vision, the strategy identifies a set of aims across the treatment and condition pathways to improve respiratory health for the people of Halton, identifying the key issues and concerns for each strategic area, identifying the current provision and gaps and making recommendations for action against each. There are numerous recommendations identified in detail at the end of the document which will help achieve the following stated aims:

I. **Prevent respiratory ill health**

II. **Earlier detection of respiratory diseases**

III. **Primary Care and Community based support**

IV. **High Quality Hospital Services**

V. **Promoting Self Care and Independence**

The recommendations will inform the Respiratory Action Plan which will be overseen and monitored by the Respiratory Health Strategy Group in order to assess progress and analyse overall outcomes.

Contents

Strategic Context

Scope of the strategy

This strategy will address the key issues around respiratory health in Halton, it will address a spectrum of respiratory illnesses, causes, treatments and outcomes. While this strategy will aim to provide a broad picture, it cannot address every aspect of respiratory ill health within the one document, a number of related issues are covered in other local Strategic documents, for example, A Cancer Strategy for Halton, 2014-2019[1],identifies specific issues and actions around lung cancer ; A Housing Strategy for Halton , 2013-2018[2] identifies the issues around warm, healthy homes which also impact upon respiratory health; Halton Health and Wellbeing Strategy 2013-2016[3] also provides detailed activity and needs around certain lifestyle issues such as smoking cessation, to which this document will refer.

The Respiratory Strategy for Halton will identify the major respiratory health issues affecting the population of Halton and sets out how Health and Social Care organisations in Halton will deliver on its responsibility to meet the needs of people at risk of developing, or affected by, a wide variety of acute and chronic lung conditions. This is a significant challenge, for individuals and their carers and the whole Health and Social Care.

While the strategy cannot cover the full extent of potential lung and respiratory conditions it will focus on conditions which cause the most significant problems for local people and where illness may be preventable or amenable to treatment and where local action could significantly improve outcomes. The strategy will include the conditions: Chronic Obstructive Pulmonary Disease (COPD); Asthma; Pneumonia; Lung cancer; sleep disordered breathing; Interstitial Lung disorders; bronchiectasis; potentially work related lung disorders and other associated conditions.

Why Do We Need A Halton Respiratory Health Strategy?

Respiratory disease is one of the key contributing factors to reduced life expectancy in Halton and is the third leading cause of death after circulatory disease and cancer.

There are significant health inequality issues in Halton concerning respiratory diseases where the mortality rate in our most deprived areas is double that of Halton as a whole.

Whilst most respiratory illnesses are associated with smoking or exposure to tobacco smoke in the environment, smoking is not the only risk factor to explain the

[1] http://www4.halton.gov.uk/Pages/health/PDF/health/HWB/ACancerStrategyforHalton.pdf last accessed 3.12.14
[2] http://www3.halton.gov.uk/Pages/councildemocracy/pdfs/housing/Halton_Housing_Strategy_2013-18.pdf last accessed 3.12.14
[3] http://www3.halton.gov.uk/Pages/health/PDF/health/Halton_Health_and_Wellbeing_Strategy.pdf last accessed 3.12.14

relationship between deprivation and respiratory illness. Work related conditions, housing conditions, fuel poverty, and exposure to outdoor air pollution are all associated with respiratory disease, independently of smoking.

The 2014 Halton Respiratory Health Profile[4] details the significant respiratory health issues within Halton. The key issues identified within the health profile include:

- It is estimated about 3,916 people aged 16+ living in Halton had Chronic Obstructive Pulmonary disease (COPD) in 2010. By 2020 this figure may be as much as 4,420.
- There have been improvements in case finding since 2009/10 closing the gap between the modelled expected number of people with COPD and those known about on GP disease registers. However, the number of people on the asthma register remains lower than the expected number.
- The management of patients with COPD and asthma are in line with the North West and England averages
- There is significant ward level variation in emergency hospital admission rates and at GP practice level. There is also a relationship with temperature, with a greater percentage of admissions seen in the winter months.
- Death rates for COPD have been falling but are above the North West and England rates. Death rates from respiratory causes in those aged under 75 years and pneumonia are also higher than England but similar to the North West.

In addition, the incidence and mortality from cancer is higher in Halton than in many other parts of the country. Lung cancer represents the greatest proportion of all cancers within Halton (almost 17% of all cancers)[5] and incidence fluctuates unequally across the Borough. While the incidence amongst men has seen a decline since the early 1990s, the incident rate amongst women continues to increase (increasing by 15.43 cancers per 100,000 population, from 1993-95 to 2009-11). Lung cancer represents a significant burden of respiratory illness for the population of Halton.

Halton has high rates of smoking. In 2014, 22.6% of the adult population smoked compared to an England average of 19.5%[6]. Other data suggests that the Smoking rate within Halton may be 30%, and up to 38% in some age groups (the NHS Merseyside Lifestyle Survey identifies that 38% of 25-34 year olds smoke). The rate of smoking related deaths was 416 (per 100,000 population), worse than the average for England. This represents 248 deaths per year and is considerable worse than the England average smoking related death rate of 292 (per 100,000

[4] http://www3.halton.gov.uk/Pages/health/PDF/health/RespiratoryHealthProfile.pdf

[5] http://www3.halton.gov.uk/Pages/councildemocracy/pdfs/CensusandStatistics/General_Cancer_Profile_2013.pdf

[6] Halton health profile 2014 http://www.apho.org.uk/resource/item.aspx?RID=142121

population). Smoking results in considerable respiratory health problems and exacerbates existing conditioned resulting in increases in secondary care usage and poorer outcomes for patients. Halton also has a considerably higher proportion of women smoking at the time of delivery, with 18.9% of women smoking at delivery compared to 12.7% across England (2012/13). Smoking during pregnancy has considerable consequence to the growth and development of the child, not least a significantly greater likelihood of the child developing severe asthma in childhood and later life.

The treatment and management of people with respiratory conditions represent a significant challenge on current health and social care systems:

- 547 Children aged under 16 years of age presented at Whiston Accident and Emergency in 2013, 56% (305) of these were due to 'difficulty breathing'. 254 of those attending with difficulty breathing (83%) were subsequently admitted.
- CHIMAT data indicates 88 asthma admissions in 2013/2014 across Warrington & St Helens and Knowsley Hospitals.
- The proportion of people dying from respiratory disease in Halton is higher than the North West average and is significantly higher than the England average.
- Fewer people within Halton with existing respiratory illnesses are protecting themselves from the complications of flu. 89.8% of COPD patients received their annual seasonal flu vaccination compared to 92.7% across England as a whole.
- Adult Social Care records show 572 individuals registered with Care First who have asthma or COPD.
- In 2014/15, Halton CCG spend just over £3.4 million on prescribing for respiratory health. This is approximately 15% of the total prescribing spend for Halton CCG.
- The overall spend on respiratory services, prescribed drugs and patient activity for 2013/14 has been estimated to be £5.8 million within Halton.

Our Vision & Aims

We want to improve the respiratory health and well-being of people in Halton, and reduce the impact that respiratory conditions have on people and services across Halton.

Our vision is:

to improve the respiratory health and well-being of the population of Halton, from the start to the end of their lives.

In order to achieve our vision, this strategy aims to;

VI. **Prevent respiratory ill health**
Increase awareness of how to maintain good respiratory health so that people are aware how to live healthy lifestyles and make informed healthy choices to minimise the risks to poor respiratory health. Ensure that services and agencies activities support activities to prevent poor respiratory ill health.

VII. **Earlier detection of respiratory diseases**
Make sure people are aware of the signs and symptoms of respiratory diseases to encourage positive health seeking behaviours and ensure robust services and pathways are in place to enable access to early investigation and treatment.

VIII. **Primary Care and Community based support**
Provide a fully integrated approach to primary care and community based services, to ensure all community treatment and support services are aligned to best meet the needs of patients and carers, and facilitate seamless community services.

IX. **High Quality Hospital Services**
Ensure that pathways and services are in place so that people who need them receive prompt effective treatment for their respiratory condition and have the best chance to optimise their quality of life and survival.

X. **Promoting Self Care and Independence**
Ensure that people are placed at the centre of their own respiratory care, able to identify their individual needs and provided with appropriate information, support and interventions to help them manage their own respiratory health issues.

The strategy will inform the development of a comprehensive action plan to oversee the delivery of actions to enable the achievement of the identified aims within the Strategy. The Strategy and Action plan will be overseen by the Respiratory Health Group. The multidisciplinary Respiratory Health Group will oversee and receive assurance from all partners with regards performance towards achieving the action plan objectives and outcomes. The Respiratory Health Strategy Group is accountable to Halton Clinical Commissioning Group's Service Development Committee, a multiagency group consisting of a range of health, public health, social care and voluntary sector providers.

The action plan will be reviewed at least annually and refreshed as required.

Achieving the Aims

i. Preventing respiratory ill health

Health education and disease prevention activities should inform everyday lifestyle choices for the population of Halton. Motivating people to be aware of and take action to reduce their risks of developing respiratory ill health must remain a key focus of activity within this strategy.

Smoking

In Halton:

The average smoking rate in Halton is now the same as the national average at 18.4%

Up to 30% of adults smoke in deprived areas, significantly higher than the Halton Average (18.4%)

19% of pregnant women smoke at the time of delivery, significantly worse than the England average (12%)

There are 416 smoking related deaths per 100,000 over 35 population per year, compared to 292 as an England Average[7]

Reducing the prevalence of smoking will have the greatest impact upon respiratory disease prevention. Improving access to smoking cessation services and encouraging long term quit rates would have a significant impact on reducing prevalence of a variety of respiratory disease, including COPD, lung cancer, adult and childhood asthma amongst others. Increasing work within schools and youth settings and identifying innovative and best practice techniques to prevent young people taking up the habit of smoking will help limit future impacts of respiratory ill health. There is increasing evidence that young people may be using e-cigarettes as a gateway to smoking. Targeting activities towards limiting the increasing usage of e-cigarettes, and working across agencies to limit access and lobby for legislative change could help prevent people in Halton becoming smokers in the near future.

Current data on smoking prevalence varies, with the national Lifestyle survey suggesting that smoking in Halton is the same rate as the national average but other local surveys suggest that as many as 30% of the local population (in the most deprived areas) may smoke.

Vaccination

In Halton:

In 2013/14, against a national target of 75%

[7] Halton Health Profile 2014, Public health England http://www.apho.org.uk/resource/item.aspx?RID=142121

- 73.5% of those 65 years old and over received their annual flu vaccination
- 51.9% of those under 65 but at risk received a flu vaccination
- 38.3% of pregnant women received a flu vaccination

71.2% of those 65 and over had received a Pneumococcal vaccine (national average 68.9%, 2013/14)

Uptake of childhood vaccinations is generally good, with the Halton average uptake for Pneumococcal and Pertussis vaccines by 12 months and Hib vaccine by 24months being above the 95% national target (although there is wider practice level variation)

Next to clean water and sanitation, vaccination is the most effective public health intervention of all time. Vaccinations can prevent respiratory illnesses.

Promoting and improving the uptake of appropriate vaccination programs (Influenza and Pneumococcal) amongst our target populations is essential to reduce in the burden of respiratory illness caused by influenza and pneumococcal infections amongst the most vulnerable people in our communities (the very young, older people and those with existing chronic health conditions). Achieving recommended uptake of influenza and Pneumococcal vaccination (at least 75% uptake amongst all people over 65, those under 65 with an existing health condition, and pregnant women, and achieving a 90% uptake amongst those with COPD), would make a significant contribution to reducing the number of excess winter deaths in Halton.

The uptake of primary Immunisations in childhood is good. Across Halton as a whole, the uptake of primary immunisations including those preventing respiratory diseases Pneumococcal disease, Pertussis (whooping cough) and Haemophilus Influenzae type B (Hib) were above the national target of 95%. There is some variation across GP practices, with some practices reporting 88.9% while others achieved 100% uptakes. Halton Council are working closely with Public Health England to ensure that we maximize opportunities to increase vaccination coverage across Halton.

Obesity

In Halton:

There is a higher percentage of obese adults than the England average.

35.2% of adults in Halton are obese (England average 23%).

Levels of obesity in year 6 children are similar to the national average (20.4% in Halton compared to the England average 19.1%).

Obesity can have a very serious negative impact on the respiratory system, significantly reducing respiratory health. Some of the health effects of obesity on respiratory system include diseases like:-

- Exertion dyspnoea – severe breathlessness as a result of only minor physical activity. This is a common feature among people who are obese.
- Obstructive sleep apnoea syndrome (OSA) – This condition leads to closing or narrowing of the airways during sleep leading to snoring, repeated waking and lack of adequate and restful sleep.
- COPD - a group of lung diseases that block airflow and make breathing difficult. Emphysema and chronic bronchitis are the two most common conditions.
- Asthma – Obese patients are more at risk of asthma exacerbations. The prevalence of asthma is around 38% higher in overweight patients and by 92% in obese patients. Obese patients with asthma also get more acute attacks, need more asthma medication, need more frequent visits to the emergency department (ED), and have more hospital admissions than non-obese patients with asthma.
- Pulmonary embolism – This is a serious condition where a blood clot gets lodged in the blood vessels of the lungs leading to a life threatening medical emergency. Pulmonary embolism may lead to failure and death.

Respiratory illnesses for which obesity can represent a significant cause have a great impact upon the health of people in Halton and the health services across Halton. There are estimated to be 1328 adults with moderate to severe Sleep apnoea.[8] The cost of treating all people with moderate to severe OSA would be £1,092,406 per year. In 2013-14, there were 180 emergency admissions as a result of COPD across Halton. In the same time there were 43 emergency admissions for adults aged 45-74 years of age as a result of asthma.

Encouraging people to lose weight and maintain a healthy weight through a healthy balanced diet and regular exercise is the only way in which the population of health on can stay within a healthy weight range and reduce the likelihood of obesity related respiratory ill health. Halton has a number of services to promote healthy lifestyles, diet and exercise. Current programmes range from interventions in Schools (Food and nutrition awareness, cooking skills, exercise programmes) to Adult Fresh Start programmes to encourage healthy weight loss, provide healthy food skills and supporting regular exercise programmes and opportunities across the Borough and we need to work across partner agencies and the public to a greater extent to ensure that everyone has an equal opportunity to benefit from the services available.

[8] British Lung Foundation 2015 OSA Calculator

Drugs

In Halton

According to the North West Mental Wellbeing Survey 2012/13

A local schools survey suggests that approximately 5 % of secondary school children had used cannabis in the previous year, which is generally lower than national trends.

In a sample of 500 adults aged 16 and over in Halton 11.3% reported cannabis use

Cannabis use is associated with longer-term damage to the respiratory tract, with an increased risk of chronic bronchitis, asthma and potentially lung cancer. There is also a reported association between cannabis smoking and an increased risk of developing infectious lung diseases such as tuberculosis and Legionnaires disease.

Education to reduce the levels of cannabis use, and prevent young people from using cannabis could help to reduce rates of chronic bronchitis and asthma.

Housing

In Halton

In 2012, 4841 households (9.2% of all households) were in fuel poverty, spending more than 10% of their household income on heating costs. This is not distributed evenly, in some areas within Halton, as much as 26% of households in privately rented accommodation are in fuel poverty.

Halton has seen a general increase in Excess Winter mortality over recent years (although the most recent data is lower than). Nationally, respiratory diseases account for the second highest proportion (32%) of excess winter deaths[9]. Cold homes are a considerable contributor to the excess deaths resulting from respiratory illnesses (particularly exacerbations of COPD) and fuel poverty is a significant cause of cold homes. Damp living conditions are also a major cause of respiratory illness, ranging from allergy to mould resulting in significant rhinitis, wheeze, coughs and exacerbations of asthma and COPD, to increased rates of infections ranging from flu like symptoms to significant lung damage.

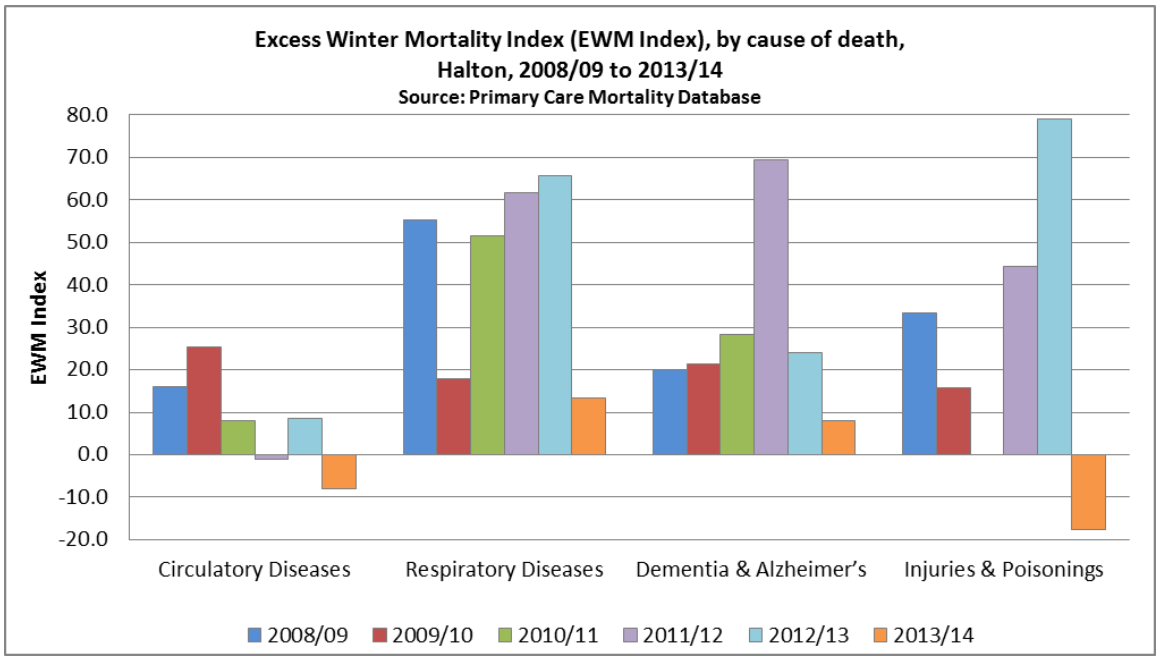
Fuel poverty and cold homes can have severe and life-long effects on children. Studies show that long-term exposure to a cold home can increase hospital admission rates for children and increase the severity and frequency of asthmatic symptoms. Children in cold homes are more than twice as likely to suffer from breathing problems and children in damp and mouldy homes are up to three times more likely to suffer from coughing, wheezing and respiratory illness, compared to

[9] Office for National Statistics (2010). Statistical bulletin *http://www.ons.gov.uk/ons/rel/subnational-health2/excess-winter-mortality-in-england-and-wales/2010-11--provisional--and-2009-10--final-/index.html*

those with warm, dry homes.[10] During 2013-14 there were 82 emergency admissions for asthma in children under the age of 14.

Figure 1 shows the proportion of Excess Winter deaths attributable to different causes, in Halton from 2008 – 2014. This shows that respiratory disease generally account for the highest proportion of these deaths,

Figure1: Excess Winter Mortality Index, by cause of death, Halton 2008/09 to 2013/14



During 2011/12 to 2013/14, of all emergency admissions for lower respiratory tract infections in 0-18 year olds, 81.5% were for those under 1 year of age (the England average was 70%) and 79% of these were for acute bronchiolitis. Bronchiolitis can be best prevented by good hygiene and living conditions. Children who are exposed to passive smoking, can suffer more severely with bronchiolitis.

Halton Housing strategy 2013-18 identifies key actions around developing the affordable warmth strategy and promoting energy efficiency and green deals to help reduce the local burden, although further multidisciplinary and health involvement would benefit the development and promotion of these interventions.

[10] Fact-file: Families and fuel poverty ; Association for the conservation of energy, February 2013 http://www.ukace.org/wp-content/uploads/2013/02/ACE-and-EBR-fact-file-2012-02-Families-and-fuel-poverty.pdf

Environment

In Halton:

Air quality as a whole has improved in Halton over the previous decades.

There are 2 Air Quality Management Areas which regularly exceed recommended emissions levels which can affect health. These are a result of high density traffic flow and congestion.

The environment that we live in can have a great impact upon our respiratory health, both indoor and outdoor environmental factors, predominantly air quality, can significantly influence our chances of experiencing good respiratory health. Breathing fine particles (those produced through burning), high levels of gases such as nitrogen oxide and sulphur dioxide, and low level ozone can all irritate the lungs. In the short term they can cause breathlessness, and exacerbate symptoms of asthma and COPD. In the long term they could lead to reduced lung function, initiation of asthma, and cause scaring and damage to the lung or causes some forms of Interstitial lung disease (a range of conditions which include most commonly Idiopathic pulmonary fibrosis).

Indoor environment

Our indoor environment plays a significant role on our health, particularly so for young children who may spend considerable amounts of their time indoors. Indoor environmental tobacco smoke is the main indoor environmental pollutant to affect peoples, especially children's, respiratory health. Passive smoking is breathing in the smoke from someone else's tobacco. Passive smoking can be either secondary of tertiary; secondary smoking is exposure to smoke from other peoples cigarettes, and tertiary smoking is exposure to residual smoke on persons, clothing and furniture etc. as a result of smoking). The predominant source of passive smoke exposure in children is smoking in the home by parents. The best way to prevent passive smoking in the home is therefore to reduce the prevalence of smoking among parents and would-be parents.[11]

Passive smoking can have a significant impact on health, increasing the likelihood of recurrent lower and upper respiratory infections, recurrent pneumonia, development and worsening of asthma, as well as a significant cause of lung cancer in smokers and none smokers:

- Smoking by the mother increases the risk of lower respiratory infections in children by about 60%, and smoking by any household member increases the risk by over 50%. Most of this increase is due to an effect on bronchiolitis,

[11] Passive smoking and children. Royal College of Physicians 2010.

which is about 2.5 times more likely to occur in children whose mothers smoke[12]

- Secondary smoking increases the risk of wheezing at all ages. Again, the effect is strongest for amongst children whose mothers smoke, with increases in risk of 65% to 77% according to the age of the child. The risk of asthma is increased by household smoking by about 50%.[13]

Other indoor environmental factors which can impact upon respiratory health include:

- Mould - Poor quality damp housing and lack of ventilation in humid places such as kitchens and bathroom can lead to the growth of mould. There are many types of mould, many of which harmless, but some people can have allergic reactions to mould or mould spores which can lead to rrespiratory symptoms including persistent sneezing, eye irritation, rhinitis (runny nose), coughing and wheezing, which can be worse in children.
- Pets – fur and feathered pets are sources of allergies. Some people are allergic to certain proteins and substances found in the skin or some secretions (saliva etc) from some animals. Pet allergies can lead to long term rhinitis, coughing and wheezing. Identifying the source of the respiratory ill health can be difficult to detect and can develop even when pets have been present for a long time.
- Dust – dust can harbour mites. Faeces from dust mites are also a very common allergen that can be a significant contributor to the development of asthma and/or triggering asthmatic attacks. Mites accumulate in or on surfaces that accumulate human skin cells or sweat etc. They also thrive in conditions of high humidity and temperature. They accumulate in bedding, pillows, mattresses, carpets and furniture. People are exposed by inhalation and can result in allergic respiratory symptoms as well as asthma.

Ensuring that the environment is clear of potential allergens, when there is a known or likely link (family history) is key to preventing poor respiratory health, and removing/ limiting contact with potential allergy sources where a respiratory allergy symptoms are present is key to preventing ongoing or worsening conditions.

Outdoor environment

Outdoor Air pollution is also a key determinant of respiratory health. There are several kind of pollutants which affect health, and are of major concern, these are pollutants for which there are national and international criteria to monitor their levels

[12] Cook DG, Strachan, DP. Health effects of passive smoking
[13] Parental smoking and prevalence of respiratory symptoms and asthma in school age children. *Thorax*1997;52:1081–94.

and limit the impact that they have upon health. The council has a responsibility to regularly monitor, review and assess air quality as part of the Environmental Act (1995) and national Air Quality Strategy.

The Committee on Medical Effects of Air Pollution (COMEAP) estimated that air pollution accounts of 29,000 deaths nationwide every year[14]. The most recent COMEAP Report looks at the proportion of deaths in a local area that can be attributable to particulate pollution. The proportion of deaths attributable to long term exposure to manmade particulate air pollution in Halton is 5.5%, while this still represents a fraction of deaths for which preventive action must be sought, it is reassuring that Halton has no greater risk than many other areas of the country. The average attributable risk across England is 5.6%.[15]

Halton is an industrial area, with a long history of industrial processes. It has had historically poorer air quality than other areas of the country. However, with the reduction in industrial manufacturing, cleaner technologies and closer processes monitoring and permitted processes has significantly improved air quality in Halton over the decades. Halton currently collects data on air quality across the borough to regularly assess air quality. Halton is generally well within national Criterial levels for common air pollutants (particulates, Sulphur dioxide, nitrogen dioxide). However, there are 2 areas which have been identified as Air Quality Management Areas (AQMA) where nitrogen dioxide are above Air quality objective levels, both these areas are in Widnes Town Centre and are associated with high volume traffic flows.

Halton Borough Council in partnership with other agencies is working towards improving transport options, increasing sustainable transport options, cleaner technologies, assessing traffic routes and active travel options (walking and cycling etc.)

Actions for Prevention

Smoking

- Increase the number of people attending Smoking Cessation Services in Halton
- Reduce the proportion of people smoking in Halton

Vaccination

- Increase the uptake of flu vaccination amongst at risk groups, to achieve national target

[14] The Mortality Effects of Long Term Exposure to Particulate Air Pollution in the UK. COMEAP Dec 2010

[15] Estimating Local Mortality Burdens Associated with Particulate Air Pollution. PHE, COMEAP April 2014

● Increase uptake of childhood vaccinations in lowest uptake practices.

Obesity

● Improve uptake to lifestyle advice across the borough

● Increase the proportion of people taking regular daily exercise in Halton

Drugs

● Improve education and awareness of the impacts of cannabis use, especially preventing young people from starting to use cannabis.

Housing

● Increase access to grants and equipment to increase energy efficiency in People's homes

● Continue to work across the private rented sector to improve housing standards

Environment

● Continue the implementation of the Halton Council Transport Plan to improve traffic flow, reduce emissions and encourage active transport

● Identify opportunities to further improve air quality across Halton

ii. Earlier detection of respiratory diseases

In Halton:

43.1% of lung cancers are detected at early stage 1 and 2.

One and five year survival from lung cancer is higher than regionally and nationally.

2.6% of the population have COPD, but there is a possible 0.79% we don't know about.

Failing to treat the estimated 1328 people in Halton who have Sleep Apnoea could increase NHS costs, social care costs and accidents locally.

Early diagnosis of lung disease delivers significant benefits, particularly in such conditions as asthma, COPD, and lung cancer. There is a need for greater public awareness of the symptoms of such lung diseases, of the risks posed by smoking and by any delay in diagnosing smoking-related lung conditions such as lung cancer and COPD to encourage people to recognise early indications that there may be a problem and to seek medical attention early. In addition, there is a requirement to ensure that primary care are fully aware of the early symptoms of specific conditions and explore appropriate diagnostic tests, and referrals early.

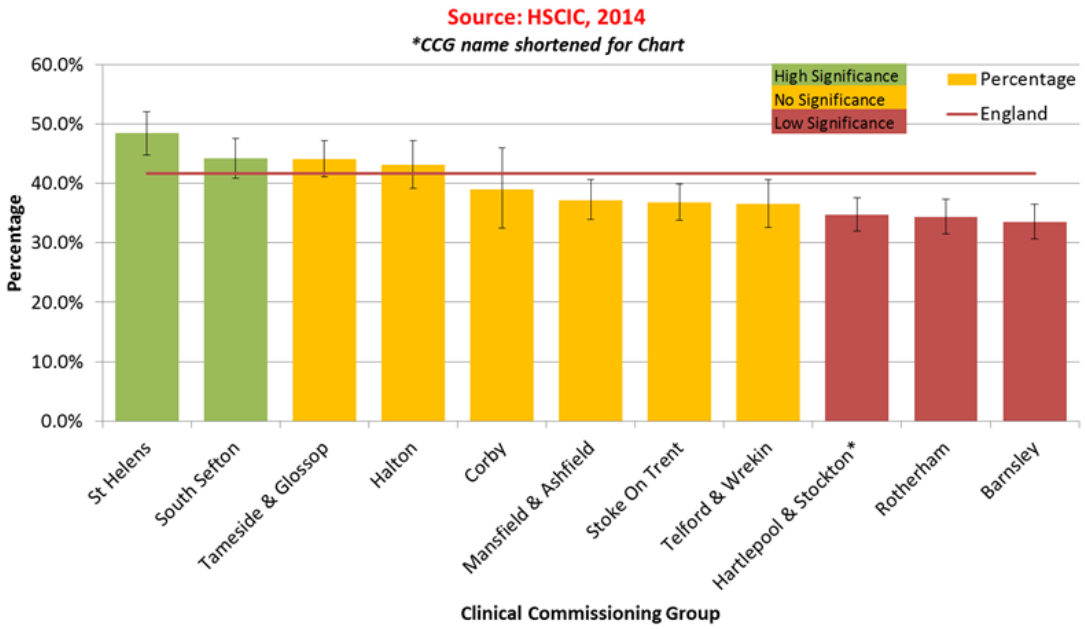
Whilst prevention of ill health remains the primary long term focus to safeguard respiratory health in to the future, significant improvements in health outcomes and mortality can only be made by earlier diagnosis and interventions for respiratory illnesses. There are a number of respiratory conditions that have early signs and symptoms, that can be diagnosed early, or that are more frequently diagnosed late and opportunities may exist for earlier diagnosis. Such conditions include

Lung cancer

In Halton, 43.1% of lung cancers were detected at an early stage (stage 1 and 2), where the cancer is much more treatable, has generally had less opportunity to spread and leads to much better outcomes for the patient. This is slightly higher than the England average early diagnosis and is significantly higher than many of comparable Clinical Commissioning Group (CCG) areas as seen on **Figure 2**.

People with lung cancer normally present with common respiratory symptoms (cough, coughing blood and breathlessness). These patients are nearly always seen by a respiratory physician for diagnosis before referral to oncologists and many are admitted as an emergency because the correct diagnosis is not made. This means that we should put emphasis on early and accurate diagnosis of any unusual respiratory symptoms.

Figure 2: Percentage of lung cancers diagnosed at stage 1 and 2 for Halton and Statistically similar CCGs



Halton has been running a Get Checked public awareness campaign since 2008 which raises awareness about the early symptoms of cancer to the public. From 2008 to date, 'Get checked', in combination with other national awareness initiatives such as Be Clear on Cancer have increased the volume of fast track GP referrals year on year for suspicious breast, bowel and lung cancer symptoms by 24% with an associated increase of cancer diagnosis of 19%. The continuation of the Halton Get Checked campaign and further innovations in delivery are required to further increase awareness of signs and symptoms of lung cancer. These approaches should be backed up with a system approach to ensure that 2 week wait referrals are made appropriately, that system capacity is able to meet any increase in demand in terms of urgent referrals, diagnostics, and treatment and rehabilitation pathways.

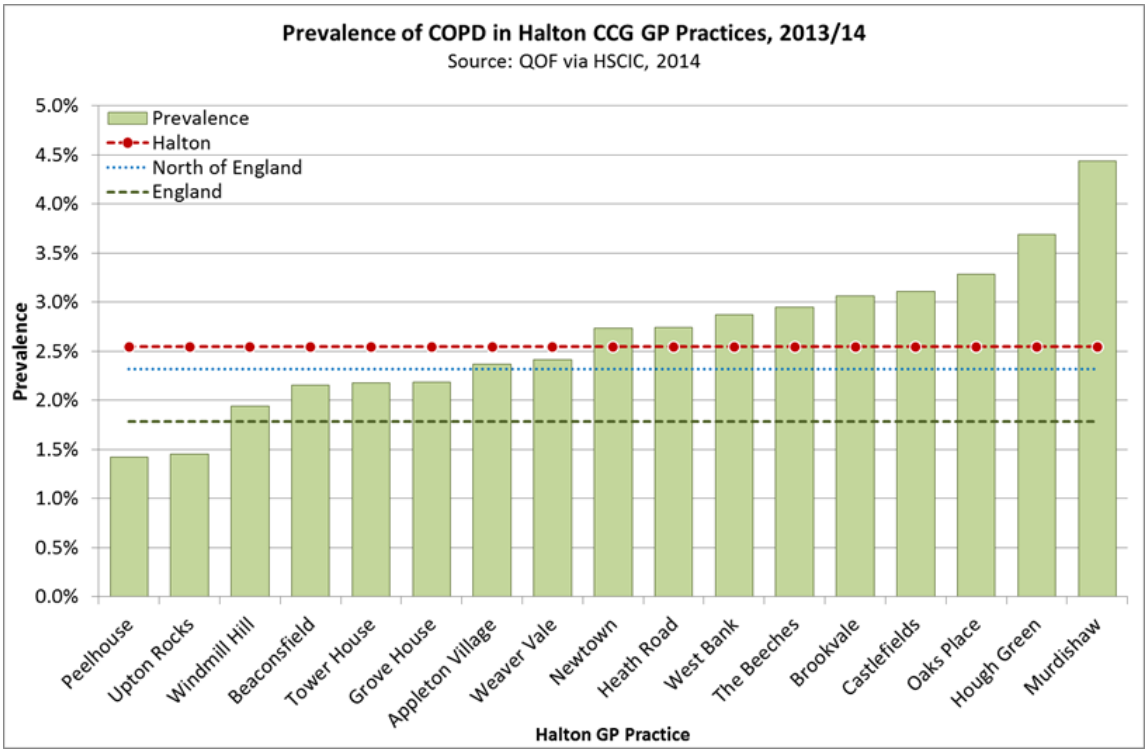
COPD

In Halton it is estimated that 3,916 residents over the age of 16 had COPD as of 2010, which is predicted to rise to 4,420 by 2020. The biggest increase is predicted to be in the 65 plus age group.

It is a requirement of the GP contract that practices hold a register of all patients with COPD, data for 2012/13 indicates that 3,210 patients who are registered with practices in Halton have COPD. This represents 2.6% of the registered population.

The prevalence of COPD varies considerably by practice, with some practices experiencing higher than average rates of COPD, and other considerably lower. **Figure 3** below shows the practice variation in COPD prevalence ranging from 1.4% to 4.4% prevalence across the practices.

Figure 3: Prevalence of COPD in Halton CCG GP practices 203/14



Estimates have been made of the number of people that would be expected to have COPD, based on the demographics within the Borough, and these suggest that 3207 people (3.39% of the population)[16] would have COPD. The difference between expected and actual registered cases of COPD suggests that there is a proportion of the population who have undiagnosed COPD. There have been improvements in case finding since 2009/10 closing the gap between the modelled estimated number of people with COPD and those of GP disease registers. But it is important that we continue to actively identify those with undiagnosed COPD. Early diagnosis and treatment initiation for COPD can markedly slow down decline in lung function provide patients with an opportunity to enjoy an active life for longer. Improving public awareness of COPD, including what good respiratory health looks like and signs and symptoms of possible COPD, in addition to wider community, high quality spirometry to assess lung function will help to identify possible COPD patients to enable more rapid diagnosis and earlier treatment plans.

Interstitial lung diseases

Interstitial Lung Diseases (ILD) comprises a large number (over 150) of diverse conditions which primarily affect the lung's smallest airways and alveolar air sacs. Whilst the cause of some ILDs is unknown, there is an overlap with occupational and

[16] COPD Prevalence Estimates Dec 2011, East of England Public Health Observatory http://www.apho.org.uk/resource/item.aspx?RID=111122

environmental lung diseases such as Coal and Slate workers' pneumoconiosis, asbestosis and Farmer's lung.

Due to the variety of the illness that comprise ILD, there is no single early diagnosis tool or single set of signs and symptoms, although shortness of breath especially with relatively minor exertion is one common feature. A number of the most common ILD can be related to occupational or environmental factors, and therefore, it is important that a full personal and work history is taken within primary care when a patient presents with breathing problems. In addition, it is also important to ensure that the population are aware of the potential risks so that those who may be in higher risk groups, coal workers, farmers etc. are aware of possible signs and symptoms and encouraged to present early to health services.

Obstructive Sleep Apnoea (OSA)

Due to the risk factors and profile of those who develop OSA, it is possible to predict the likely proportion of a local population who are likely to have OSA. Based on the British Lung Foundation OSA calculator, 1328 people (1.06% of the population) will have OSA. By assessing predicted rates within a population, against known rates, it would possible to identify how many people are likely to have the condition, but remain undiagnosed. However, there are no accurate data on the actual local prevalence of OSA. Locally we need to ensure that we are aware of the population rates of OSA.

The British Lung Foundation estimates that cost of not treating all those with moderate to severe OSA will cost the local health and social care economy will be over £109,000 more per year than the cost of actually treating all people with moderate to severe OSA. In addition, identifying and treating all those with moderate to severe OSA could prevent 157 road traffic accidents every year.

People with symptoms, abnormal tests or screening results should have these addressed locally and/or where appropriate, should be referred for further assessment and management when lung disease is suspected or confirmed.

Spirometry, oxygen saturation measurement and chest radiology are important investigations widely available in both primary and secondary care practice. They can be used to identify at risk groups within case finding strategies which can be most effectively undertaken in local community settings and we must ensure that local spirometry services are robust and accessible.

People with Learning Disability

The Confidential Inquiry into the Premature Death of People with Learning Disability found the most prevalent immediate cause of death in people with learning disabilities was respiratory disorders, followed by heart and circulatory disorders. The report highlights that these deaths are most likely to be amenable to health care interventions. The most common

respiratory illness associated with premature death in people with Learning Disability was usually pneumonia.[17]

15.5% of the general population develop respiratory disease and 17% of those die from it. By comparison, 19.8% of people with a learning disability develop the disease but about 50% of these die from it.

Actions for early detection

Cancer

● Ensure that increase the number of appropriate 2 week wait referrers to increase early diagnosis and enable early treatment of lung cancer

● Expand the Get Checked campaign to further increase awareness of signs, symptoms and encourage early presentation for lung cancer.

COPD

● Encourage improved and early case finding to facilitate better management and treatment access

● Develop and implement a Borough wide, inclusive community spirometry service

ILD

● Ensure risk markers are identified on patient records, known risk occupations etc

OSA

● Improve mechanisms for case finding, including access to spirometry and diagnostic tools to ensure rapid access to treatment and management

People with Learning Disability

● Adults with learning disability should be considered a high risk group for deaths from respiratory problems, screening and risk assessment should be included as part of the annual health check for patients with a learning disability.

● People with learning disability should be regarded as a high risk group for the purpose of seasonal flu and pneumonia vaccination programmes even if they do not live in a residential care setting.

[17] Confidential Inquiry into premature deaths of people wioth Learning Disability (CIPOLD) 2013 http://www.bristol.ac.uk/media-library/sites/cipold/migrated/documents/fullfinalreport.pdf

XI. Primary Care and Community based support

In Halton

- GP practices perform slightly better than the England average for all but 1 clinical indicator for asthma
- GP practices perform slightly better than the England average for all but 1 clinical indicator for COPD
- There is a higher rate of emergency admissions for bronchiolitis than the England average.

Conditions affecting respiratory health are numerous, varied and often complex, requiring a multidisciplinary approach to identification and management offered by many different providers. The route of these approaches invariably lies within primary care. Ensuring that primary care, and the community health approaches are robust and effective will improve outcomes for patients and minimise the health system burden resulting from respiratory ill health.

There are a number of lung conditions where improvements in the delivery of effective primary care and community support care can result in high impact changes to the respiratory health of people in Halton.

Asthma

Asthma is a condition that can affect people of any age. It is an important factor in repeated respiratory infections in children and causes breathlessness in adults. If undiagnosed or inadequately treated it can in the short-term lead to potentially life-threatening exacerbations and in the long-term to irreversible damage to the lungs.

To ensure high quality diagnosis and treatment, it is key that appropriate services are commissioned that enable all practitioners and services to meet the NICE Quality Standards 25 for asthma. The 10 quality statements which will improve care and treatment for people with asthma are:

Statement 1	People with newly diagnosed asthma are diagnosed in accordance with BTS/SIGN guidance.
Statement 2	Adults with new onset asthma are assessed for occupational causes.
Statement 3	People with asthma receive a written personalised action plan.
Statement 4	People with asthma are given specific training and assessment in inhaler technique before starting any new inhaler treatment.
Statement 5	People with asthma receive a structured review at least annually.

Statement 6	People with asthma who present with respiratory symptoms receive an assessment of their asthma control.
Statement 7	People with asthma who present with an exacerbation of their symptoms receive an objective measurement of severity at the time of presentation.
Statement 8	People aged 5 years or older presenting to a healthcare professional with a severe or life-threatening acute exacerbation of asthma receive oral or intravenous steroids within 1 hour of presentation.
Statement 9	People admitted to hospital with an acute exacerbation of asthma have a structured review by a member of a specialist respiratory team before discharge.
Statement 10	People who received treatment in hospital or through out-of-hours services for an acute exacerbation of asthma are followed up by their own GP practice within 2 working days of treatment.
Statement 11	People with difficult asthma are offered an assessment by a multidisciplinary difficult asthma service.

Most people with asthma are managed within primary care. However, some people will require hospital admission. In some instances, increased hospital admissions may result for poor management of the condition which can result in inadequate response and management of exacerbations.

The GP contract requires that practices closely monitor diagnosis, assessment of control and smoking status in young people. For 2012/13, **figure 4** shows that Halton Practices performed better than the England average for asthma diagnosis and assessments of control, but below the national average for recording of smoking status.

Figure 4: Achievement against asthma clinical indicators, 2012/13

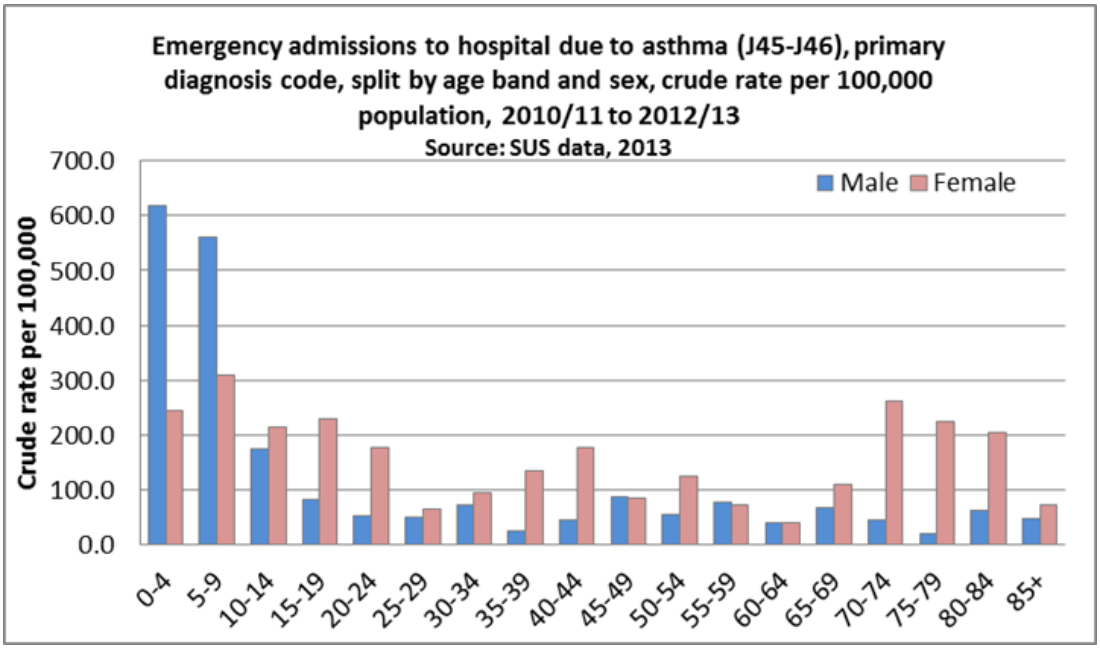
Practice Code	Practice Name	ASTHMA08	ASTHMA09	ASTHMA10
N81011	Beaconsfield	82.6%	79.3%	85.1%
N81019	Castlefields	95.9%	73.4%	87.5%
N81035	Appleton Village	83.1%	71.1%	100.0%
N81037	Beeches	85.5%	62.3%	75.6%
N81045	Peelhouse	89.0%	78.9%	89.4%
N81054	Weaver Vale	94.9%	81.9%	86.8%
N81057	Tower House	97.5%	90.7%	95.7%

N81064	Newtown	82.2%	78.0%	88.5%
N81066	Grove House	95.6%	74.5%	85.5%
N81072	Murdishaw	94.4%	77.2%	87.5%
N81096	Brookvale	81.9%	76.7%	87.5%
N81119	Hough Green	98.1%	74.2%	100.0%
N81618	Heath Road	91.9%	62.1%	100.0%
N81619	Oaks Place	94.0%	75.0%	90.0%
N81625	West Bank	91.4%	89.4%	84.6%
N81651	Upton Rocks	82.8%	78.3%	100.0%
Y02512	Windmill Hill	87.5%	77.9%	83.3%
Halton CCG		**90.5%**	**76.1%**	**88.9%**
Merseyside Area Team		**87.4%**	**76.4%**	**90.6%**
North of England		**87.8%**	**75.4%**	**89.6%**
England		**87.6%**	**74.8%**	**89.3%**

ASTHMA08: The percentage of patients aged 8 years and over diagnosed as having asthma from 1 April 2006 with measures of variability or reversibility
ASTHMA09: The percentage of patients with asthma who have had an asthma review in the preceding 15 months that includes an assessment of asthma control using the 3 RCP questions
ASTHMA10: The percentage of patients with asthma between the ages of 14 and 19 years in whom there is a record of smoking status in the preceding 15 months

Effective primary care and case management is key to preventing exacerbations and preventing hospital admissions. **Figure 5** shows that the highest rate of admissions is for the 0-9 age groups, this could be admissions as a result of first diagnosis or where management systems are not yet in place, however, for older age group, effective management is more likely to be in place and close monitoring and engagement with primary care and community could potentially reduce emergency admissions.

Figure 5: shows the emergency admissions by age group for Asthma from 2010/11 to 2012/13.



Smoking cessation is an important part of ensuring good respiratory health, for people with asthma (and COPD) it is even more vital that they receive high level support to quit smoking to improve treatment out comes and limit potential serious exacerbations. All people who are on the asthma (and COPD) registers in practice should also have smoking status recorded, and regular (repeated as necessary) offers to engage with smoking cessation services. Encouraging practices to benchmark smoking status and set reduction targets for smoking in these practice populations can have a significant effect on ongoing symptom management.

COPD

COPD is a chronic progressive disease of the airways associated with high morbidity and mortality. It is largely managed in primary care but exacerbations of symptoms often result in acute admission to hospital. Patient and community support groups can improve quality of life for patients living with COPD. Secondary care is involved with providing increasingly more complex interventions such as domiciliary ventilation and assessment for referral to thoracic surgery. As the disease progresses, accessing palliative care services can improve the quality of life of patients with advanced disease.

Adherence to evidence-based guidelines, regular review in primary care, self-management initiatives, long-term oxygen therapy and pulmonary rehabilitation programmes (PRP) can all improve quality of life and reduce hospital admission.

Non-invasive ventilation is cost effective and improves outcomes for selected patients. Optimisation and full integration of COPD care following discharge from hospital improves life for the patient and reduces re-admission rates.

NICE COPD Quality Standards 10 identifies 13 key statements that will improve care and management for patients with COPD, that we must endure appropriate services are commissioned locally and that clinicians are able to meet these standards to maximise care and treatment for COPD patients in Halton. The statements are:

Statement 1	People with COPD have one or more indicative symptoms recorded, and have the diagnosis confirmed by post-bronchodilator spirometry carried out on calibrated equipment by healthcare professionals competent in its performance and interpretation.
Statement 2	People with COPD have a current individualised comprehensive management plan, which includes high-quality information and educational material about the condition and its management, relevant to the stage of disease.
Statement 3	People with COPD are offered inhaled and oral therapies, in accordance with NICE guidance, as part of an individualised comprehensive management plan.
Statement 4	People with COPD have a comprehensive clinical and psychosocial assessment, at least once a year or more frequently if indicated, which includes degree of breathlessness, frequency of exacerbations, validated measures of health status and prognosis, presence of hypoxaemia and comorbidities.
Statement 5	People with COPD who smoke are regularly encouraged to stop and are offered the full range of evidence-based smoking cessation support.
Statement 6	People with COPD meeting appropriate criteria are offered an effective, timely and accessible multidisciplinary pulmonary rehabilitation programme.
Statement 7	People who have had an exacerbation of COPD are provided with individualised written advice on early recognition of future exacerbations, management strategies (including appropriate provision of antibiotics and corticosteroids for self-treatment at home) and a named contact.
Statement 8	People with COPD potentially requiring long-term oxygen therapy are assessed in accordance with NICE guidance by a specialist oxygen service.
Statement 9	People with COPD receiving long-term oxygen therapy are reviewed in accordance with NICE guidance, at least annually, by a specialist oxygen service as part of the integrated clinical management of their COPD.

Statement 10	People admitted to hospital with an exacerbation of COPD are cared for by a respiratory team, and have access to a specialist early supported-discharge scheme with appropriate community support.
Statement 11	People admitted to hospital with an exacerbation of COPD and with persistent acidotic ventilatory failure are promptly assessed for, and receive, non-invasive ventilation delivered by appropriately trained staff in a dedicated setting.
Statement 12	People admitted to hospital with an exacerbation of COPD are reviewed within 2 weeks of discharge.
Statement 13	People with advanced COPD, and their carers, are identified and offered palliative care that addresses physical, social and emotional needs.

The GP contract requires practices to manage patients in line with best practice. For COPD this relates to diagnosis, recording of FEV1 (maximal amount of air you can forcefully exhale in one second), influenza vaccination and an assessment of the level of breathlessness a patient is experiencing. For 2012/13, Halton practices showed better than the national average performance on all but one factor. The percentage of COPD patients who received a flu vaccination was below the England average (**Figure 6**).

Figure 6: Achievement against COPD clinical indicators, 2012/13

Practice Code	Practice Name	COPD08	COPD10	COPD13	COPD15
N81011	Beaconsfield	96.9%	89.4%	92.1%	100.0%
N81019	Castlefields	96.6%	87.6%	96.4%	97.2%
N81035	Appleton Village	88.9%	80.5%	97.0%	97.2%
N81037	Beeches	97.1%	85.0%	90.8%	90.0%
N81045	Peelhouse	93.0%	90.0%	91.3%	86.2%
N81054	Weaver Vale	87.4%	95.1%	93.3%	90.0%
N81057	Tower House	97.4%	98.4%	98.6%	100.0%
N81064	Newtown	31.9%	88.1%	96.0%	91.7%
N81066	Grove House	90.6%	93.2%	91.1%	87.5%
N81072	Murdishaw	94.0%	89.1%	97.4%	98.8%
N81096	Brookvale	96.3%	80.9%	90.1%	90.9%

N81119	Hough Green	81.5%	93.9%	94.6%	88.9%
N81618	Heath Road	92.7%	95.1%	95.0%	88.9%
N81619	Oaks Place	94.9%	94.0%	92.0%	85.7%
N81625	West Bank	94.5%	95.6%	97.1%	85.7%
N81651	Upton Rocks	97.6%	92.7%	93.0%	83.3%
Y02512	Windmill Hill	85.7%	87.5%	92.5%	100.0%
Halton CCG		**89.8%**	**89.4%**	**94.2%**	**93.6%**
Merseyside Area Team		**92.4%**	**82.8%**	**91.0%**	**92.0%**
North of England		**92.7%**	**87.9%**	**91.1%**	**91.3%**
England		**92.7%**	**88.4%**	**91.1%**	**91.3%**

COPD08: The percentage of patients with COPD who have had influenza immunisation in the preceding 1 September to 31 March
COPD10: The percentage of patients with COPD with a record of FEV1 in the preceding 15 months
COPD13: The percentage of patients with COPD who have had a review, undertaken by a healthcare professional, including an assessment of breathlessness using the MRC dyspnoea score in the preceding 15 months
COPD15: The percentage of all patients with COPD diagnosed after 1 April 2011 in whom the diagnosis has been confirmed by post bronchodilator spirometry

COPD is a rare condition before the age of 40. Most people who develop the condition are managed within primary care. However, some people will develop exacerbations of the condition or they may be undiagnosed, which can result in an emergency (unplanned) admission to hospital. **Figure 7** shows the data for 2010/11 to 2012/13 which show that admissions rise from the age 45 onwards for both males and females but that the rate of admissions is generally higher for men than for women.

A number of people with COPD are admitted on more than one occasion during a single year. Research suggests that there are nearly half a million 'frequent flyers' in the United Kingdom and that they cost the health service approximately £2.3 billion a year (2003-4 figures). Assessing the numbers of re-admissions or frequent flyers, does not indicate that the hospital admissions are unnecessary, but we need to understand the data to ensure that primary care and patient management are maximised to prevent these repeated admissions.

Figure 7: Emergency admissions due to COPD for 2010/2011 to 2012/13

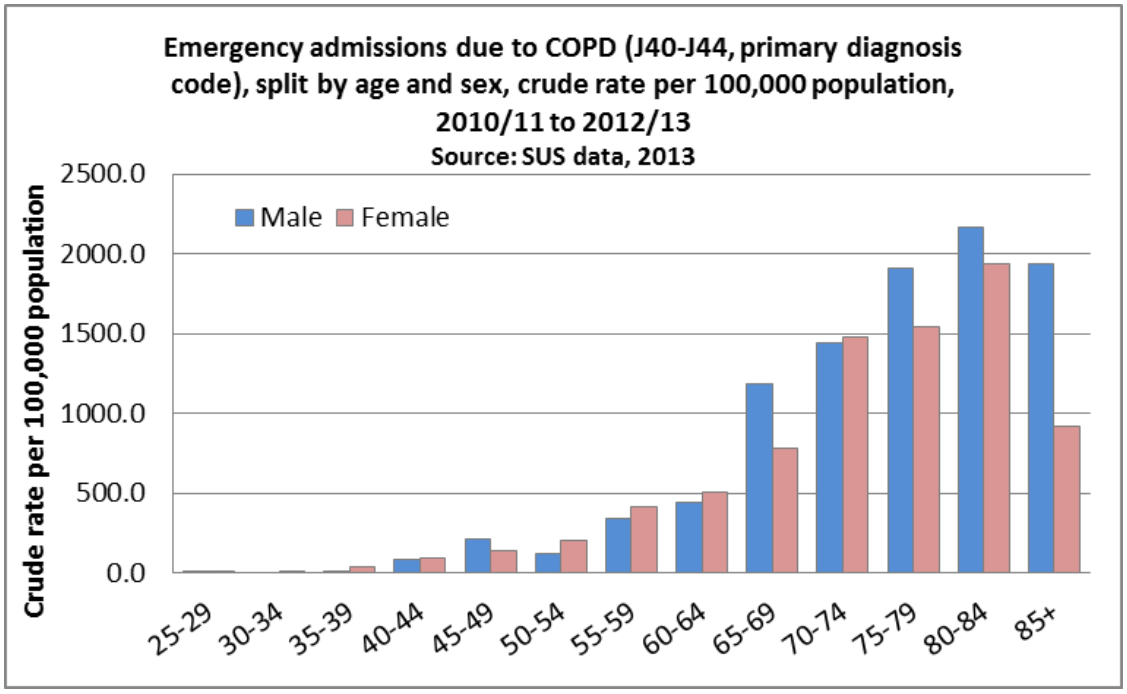
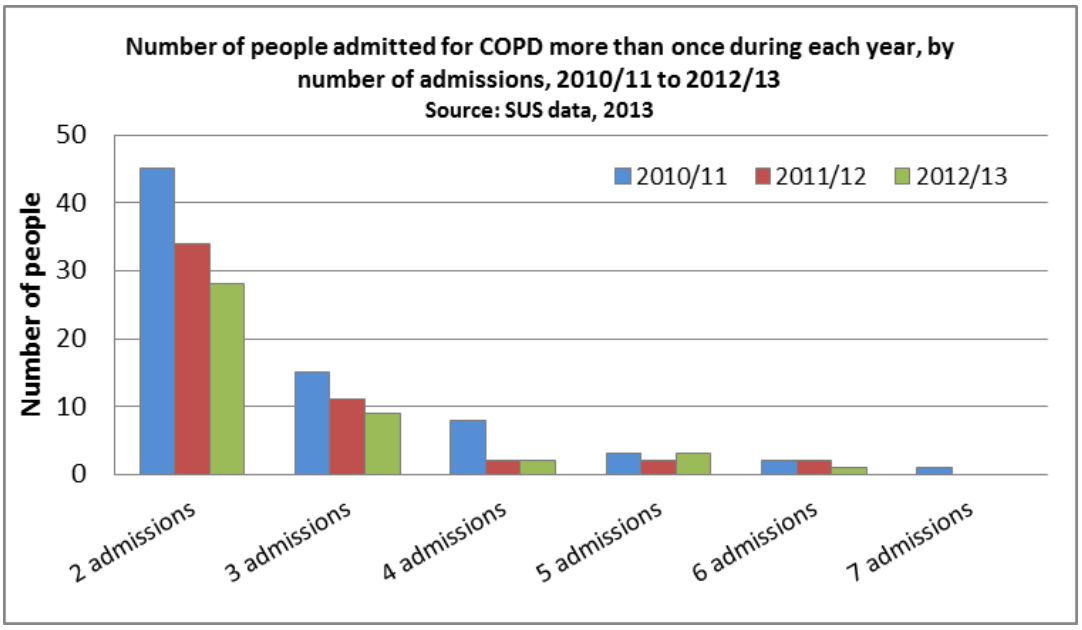


Figure 8 shows the number of patients admitted more than once during a year from 2010/11 to 2012/13. In Halton, most people who were admitted more than once were admitted either 2 or 3 times, with very few people being admitted more than this.

Figure 8: Number of people admitted for COPD more than once in a year



During 2012/13 there were over 100 readmissions due to COPD, however, the number, and percentage of total COPD admissions, has decreased from 2010/11.

	2010/11	2011/12	2012/13
Total number of admissions	452	331	358
Number of readmissions	201	131	112
Percent	44.5%	39.6%	31.3%

Halton Rapid Response Respiratory Team provide services for patients with respiratory illness in the Halton area, assessing conditions such as COPD, asthma, pneumonia, bronchiectasis, interstitial lung disease and lung cancer. The team also has expertise in non-invasive ventilation (NIV) to help support patients with neuromuscular disease, chest wall deformity and OSA. It provides an accessible and responsive service that strives to deliver the highest standards of care possible, to patients with respiratory illness.

Halton Rapid Response Respiratory Team

About this service

The Team offer an award winning service for patients with respiratory illness in the Halton area, assessing conditions such as COPD, asthma, pneumonia, bronchiectasis, interstitial lung disease and lung cancer. The team also has expertise in non-invasive ventilation (NIV) to help support patients with neuromuscular disease, chest wall deformity and obstructive sleep apnoea.

The Team aim is to provide an accessible and responsive service that strives to deliver the highest standards of care possible, to patients with respiratory illness.

The team can be accessed by referral from the GP or hospital and will undertake an assessment to of what you need. Available services and information include:

- Respiratory assessment in your own home
- Pulmonary Rehabilitation
- Long-term Oxygen Therapy
- Ambulatory Oxygen clinics
- Nurse Led Clinics
- Physiotherapy led clinics

Patients are referred to the team either by the GP or the hospital with an aim to seeing each patient the same day or within 24 hours for advice, assessment, support, intervention and supported discharge.

British Lung Foundation's COPD Patient Passport, available through practices and Breathe Easy Groups, helps patients with COPD identify if they are getting the right care and support.

Bronchiectasis

Bronchiectasis is a condition characterised by chronic sputum production and a increased likelihood of developing frequent lung infections, often requiring hospital admission.

There is often pre-existing COPD. People with a suspected diagnosis of bronchiectasis should have the diagnosis confirmed by chest CT (computed tomography).

There has been a steady rise in the number of emergency admissions involving bronchiectasis over the last few years, from 62 in 2011/12, 92 in 2012/13 to 121 in 2013/14. The causes of this are unknown. Primary care management of patients and early identification and treatment of infections could prevent admissions. Physiotherapy has a major role in the management of bronchiectasis and self-help to enable patients to manage signs and symptoms better, helping to reduce infections and hospital admissions.

Halton Oxygen Assessment Service for Long Term Oxygen Therapy

Halton oxygen assessment service was formed in January 2009, following the introduction of the NICE COPD guidelines which recommended that all oxygen assessments should be completed in secondary care.

The service is run by **Senior Respiratory Nurse Specialists**. Our service is based with the Respiratory team at Halton General Hospital in block 4. Our working hours are **Monday-Friday 8.30am to 6.30pm,** our direct telephone number during these hours is **01928 753165.** We are also available on **Bank Holidays** and **weekends** from **8.30am to 6.30pm** on **01928 714567** - please ask for on call staff.

Our initial aim is to provide an up to date assessment for the people who are already on oxygen therapy so that they know what their oxygen needs are. As the service becomes more established and more funding becomes available we are hoping to expand the service and take open referrals. At this time we are limited to completing assessments on individuals with respiratory diseases, unfortunately there is no capacity for the assessment of cardiac related breathlessness at this time.

Referral criteria: Individuals should be considered for oxygen assessment if their oxygen saturations are <92% at rest on room air. To complete the oxygen assessment the individual needs to be stable (i.e. 6 weeks post exacerbation/chest infection).

Interstitial Lung Disease

Interstitial Lung Diseases (ILD) comprises a large number (over 150) of diverse conditions which primarily affect the lung's smallest airways and alveolar air sacs. Whilst the cause of some ILDs is unknown, there is an overlap with occupational and environmental lung diseases such as Coal and Slate workers' pneumoconiosis, asbestosis and Farmer's lung. It is known that some ILDs are caused by cigarette smoke and others may occur as a reaction to medication and yet others occur in association with diseases such as rheumatoid arthritis. Finally, ILDs need to be distinguished from other lung conditions which they sometimes mimic.

Idiopathic pulmonary fibrosis (IPF), the commonest ILD, has shown a greatly increased prevalence over the past 20 years although local prevalence data is not easy to determine as a result of the range of conditions that could be included under the ILD definition.

NICE Quality Standard 79 identifies the set of 5 key statements which will improve the quality and standard for care for people with ILD, these should be adopted locally to ensure best quality of care for patients in Halton.

Statement 1	People are diagnosed with idiopathic pulmonary fibrosis only with the consensus of a multidisciplinary team with expertise in interstitial lung disease.
Statement 2	People with idiopathic pulmonary fibrosis have an interstitial lung disease specialist nurse available to them.
Statement 3	People with idiopathic pulmonary fibrosis have an assessment for home and ambulatory oxygen therapy at each follow up appointment and before they leave hospital following an exacerbation of the disease.
Statement 4	Pulmonary rehabilitation programmes provide services that are designed specifically for idiopathic pulmonary fibrosis.
Statement 5	People with idiopathic pulmonary fibrosis and their families and carers have access to services that meet their palliative care needs.

Hospital admissions for ILD increase with age. **Figure 9** shows the admissions per 5 year age group for the period 2011/12 to 2013/14. The higher rates of admission amongst men are likely to reflect the work related nature of some forms of ILD, but the crude rates represent a significant burden on secondary care capacity.

The number of emergency admissions per year for ILD (**Figure 10**) has increased in the last few years. An assessment is needed to identify if this increase is as a result of increasing prevalence. There is also a need to assess if community and primary care management and services achieve quality standards locally to prevent emergency admissions.

Figure 9: Admissions by 5 year age band and sex, 2011/12 to 2013/14

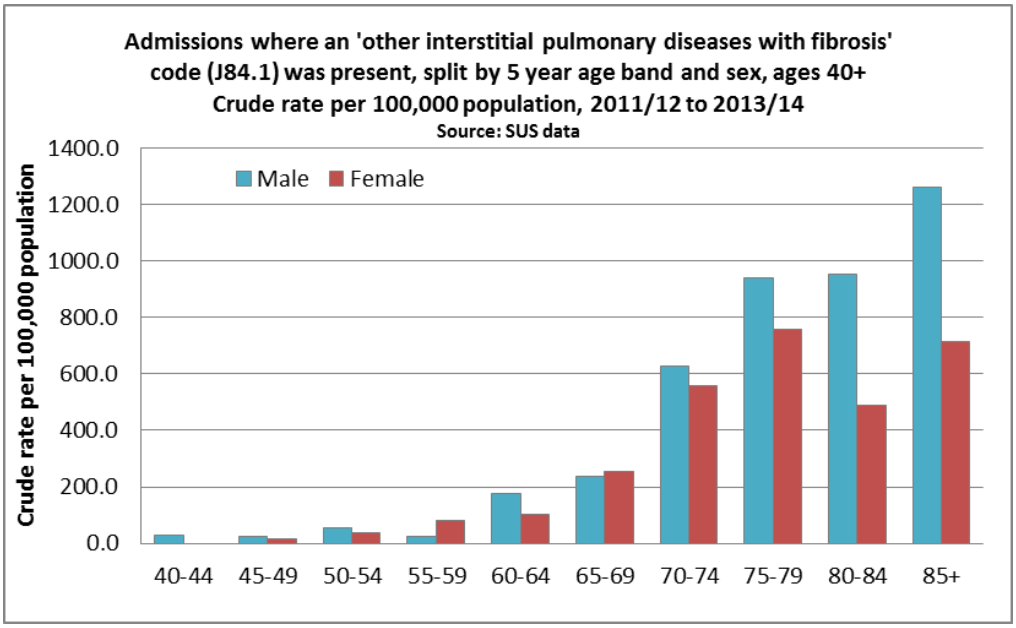


Figure 10: Number of admissions by year

Year	Elective	Emergency
2011/12	31	68
2012/13	33	95
2013/14	21	150

The median survival for IPF is just three years – a prognosis that is worse than many cancers. Lung transplantation is the only treatment proven to improve survival in some forms of ILD.

Ambulatory oxygen therapy (AOT) assessment

AOT allows the patient to leave the home and improves daily activities and quality of life.

The purpose of a formal **AOT assessment** is to:

1. Determine if the patient has evidence of exercise desaturation, which is defined as a 4% drop in SaO2 below 90%.
2. To determine the appropriate flow rate to correct exercise desaturation.
3. To see if an oxygen conserving device is appropriate for that particular patient

Who qualifies for AOT?

Ambulatory Oxygen only indicated in a number of conditions. There are 3 grades of patients who qualify for AOT.

- **Group 1**. On Long Term Oxygen Therapy with low activity level. This group **do not** usually require a **formal** AOT assessment. There flow rate is usually set to their Long Term Oxygen Therapy flow rate.

- **Group 2**. On Long Term Oxygen Therapy but are active.

- **Group 3**. Not on Long Term Oxygen Therapy but demonstrate exercise oxygen desaturation. In this group AOT should be considered only if there is evidence of improvement in exercise tolerance and dyspnoea and the Patient is motivated to use it.

Sleep-Disordered Breathing

Identification and diagnosis of Obstructive Sleep Apnoea is a key challenge. Once diagnoses has been made promotion and provision of lifestyle advice including

assessment of weight and measures of obesity, with primary care support and access to community weight management service, smoking cessation and exercise provides a primary approach to reduction in symptoms. Halton Health Improvement Team are able to provide a wide range of lifestyle interventions which would improve outcomes for people with OSA, from diet and exercise based weight management to smoking cessation services and can receive referrals directly from primary care.

Bronchiolitis

Bronchiolitis usually presents with cough with increased work of breathing and it often affects a child's ability to feed. Symptoms are usually mild and might only last for a few days, but in some cases the disease can cause severe illness. There are several individual and environmental risk factors that can put children with bronchiolitis at increased risk of severe illness.

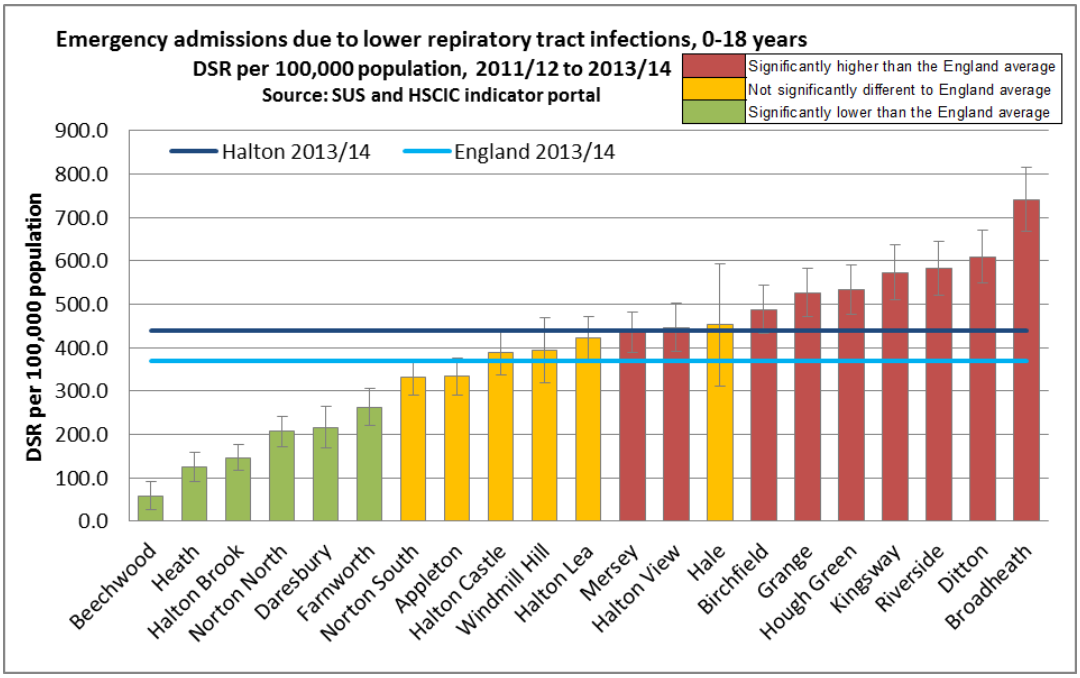
Most children with bronchiolitis present in primary care to a GP. The diagnosis of bronchiolitis is based on clinical assessment showing the presence of various characteristic symptoms and signs. Although bronchiolitis can usually be managed at home, approximately 3% of affected children are admitted to hospital. In 2011/2012 in England there were 30,451 secondary care admissions for the management of bronchiolitis.

The management of bronchiolitis depends on the severity of the illness. In most children bronchiolitis can be managed at home by parents or carers. In mild or moderate cases treatments that improve feeding and reduce the work of breathing could be beneficial. A range of treatments have been trialled, including: inhaled bronchodilators; inhaled corticosteroids; systemic corticosteroids; antibiotics.

Children in Halton are admitted as an emergency admission for lower respiratory tract infections (of which bronchiolitis is the most common) at a higher rate than the England average, and there is significant variation in the rate of admission across different wards within the Borough, which suggests that there could potentially be variations in the primary care management for children with respiratory infections. **Figure 11** shows the variation in emergency admission rate for lower respiratory tract infections for 0-18 year olds between 2011/12 to 2013/14 by ward across Halton. There is little correlation between the variations and the levels of local deprivation, or known lifestyle factors to explain the pattern in variation, which could suggest a potential primary care link (although the data is not presented by practice)

There are 6 wards with significantly higher admission rate for lower respiratory tract infections than the Halton average, and 9 wards are significantly higher than the England average emergency admission rate. During 2011/12 to 2013/14, 81.5% of all emergency admissions in Halton for lower respiratory tract infections were for children under 1 year of age, 79% of these were for acute bronchiolitis; for the rest of England this was 70%.

Figure 11: Emergency Admission due to lower respiratory tract infection in children 2011/12 to 2013/14



NICE are due to publish Guidance for the Diagnosis and Management of Bronchiolitis in Children in May 2015. This guidance needs to be assessed against local services provision and pathways to ensure that local case management and care follow the best practice guidance.

Actions for Primary Care and community based support

General

- Ensure the NICE Guidance and Quality Standards compliance in the recognition, diagnosis and management of respiratory illness and ensure best practice service commissioning.
- Pro Active Care programme Local Enhanced Service (2014/15)
- Review provision of pulmonary rehabilitation across Halton
- Establish integrated delivery of respiratory services across Halton
- Improve prescribing of respiratory medication across primary care

Asthma and COPD

- Implement standardised COPD and Asthma template across primary and secondary case

● Practices to benchmark recording of smoking status for patients on the COPD and asthma registers and set local reduction targets.

● Every patient diagnosed with asthma to receive a personalised action plan and annual review.

ILD

● Recording of occupation, particularly for risk occupations, on primary care records and identify those at possible risk of ILD to red flag early warning signs and symptoms.

OSA

● Maximise case finding against OSA predictor calculator and ensure rapid access to diagnostics.

● Review the pathway for people with OSA

Bronchiolitis

● Rapid review (and application) of NICE Guidance when it is released in May 2015

● Review cause for practice variations in admissions for bronchiolitis across Halton practices

iii. High Quality Hospital Services

Conditions that affect respiratory health are numerous. They are often varied and often complex and need a multidisciplinary approach to treatment and management. In terms of ensuring appropriate high quality hospital services are available, this document will identify were improvements in the delivery can result in high impact changes for respiratory health conditions.

Nurse Led Clinic

The **respiratory nurses** at Halton and Warrington Hospitals run nurse led clinics. These are done in conjunction with **Respiratory Consultants** and are in parallel to their clinics. If the nurse feels the patient is not responding to treatment or needs further advice, they can discuss the patient with the consultant.

Types of patients seen in the clinics are;

- Medication review and optimisation of medication
- Trial of nebuliser
- Post discharge
- To review pulmonary function tests
- To review post discharge
- Review medication change
- To assist in diagnosis, such as asthma
- General monitoring of patients
- Prior to pulmonary rehabilitation
- Following pulmonary rehabilitation
- Following rapid response respiratory team input
- Request from consultant
- GP requests

The clinics run on **Tuesday mornings**, in the Delemere Centre, Halton and **Thursday afternoons**, clinic A, Halton. **Monday afternoon**, OPD clinic Warrington.

Patients can be referred to the clinic by letter to the respiratory nurse, Block 4, Halton General Hospital or respiratory support team, A7/A8 corridor, Warrington Hospital.

Patients cannot self-refer to the clinic, this must be done by a health professional.

Asthma

Asthma is a condition that can affect people of any age. It is an important factor in repeated respiratory infections in children and causes breathlessness in adults. If undiagnosed or inadequately treated it can worsen and in the short-term lead to potentially life threatening symptoms, but in the longer term can lead to irreversible damage to the lungs

Once a diagnosis of asthma has been achieved, information about asthma which is relevant, easy to understand and in an accessible format should be provided to the patient and their family. Those diagnosed should all be provided with an individual asthma management plan including relevant contacts and what to do in the event that their asthma becomes uncontrolled, including training in inhaler technique to support effective self-management strategies for the condition. All patients with asthma will receive treatment appropriate to the severity of their Illness.

With regard to children there is a multidisciplinary asthma pathway in place at St Helens & Knowsley Acute Hospital Trust for children who present at A&E, which incorporates issuing of self-management plans. Follow ups take place with the GP. At Warrington & Halton Hospitals Foundation Trust there is a similar A&E Pathway, which incorporates issuing of an Asthma/Wheeze Management Plan. Follow ups take place in an asthma clinic at Springfield Medical. Asthma UK self-management plans have also been made available to all GP practices for use in annual reviews to ensure those children who do not attend secondary care services also have the choice for robust self- management.

COPD

COPD is largely managed in primary care but exacerbations of symptoms often result in acute admission to hospital. Patient support groups can improve quality of life for patients living with COPD. Secondary care is involved with providing increasingly more complex interventions such as domiciliary ventilation and assessment for referral to thoracic surgery.

As the disease progresses, accessing palliative care services can improve the quality of life of patients with advanced disease. Adherence to evidence-based guidelines, regular review in primary care, self-management initiatives, long-term oxygen therapy and pulmonary rehabilitation programmes (PRP) can all improve quality of life and reduce hospital admission. Optimisation and full integration of COPD care following discharge from hospital improves life for the patient and reduces re-admission rates.

Lung Cancer

Liverpool Heart and Chest Hospital is the local specialist unit for Lung Cancer. It is essential that decisions are made efficiently as a patient identified in primary care, or

via a local hospital will often need to be referred to a different provider for specialist treatment.

Timeliness of referrals between trusts for cancer treatments is monitored on a regular basis in line with national cancer waiting time targets. This process allows the identification of any recurrent issues in relation to cancer pathways and allows multidisciplinary discussion to take place to work towards improving them.

From April 2013, diagnostic imaging has been unbundled from the Outpatient tariff (PbR Guidance 13/14), which includes; Magnetic resonance imaging (MRI) scans, Computerised tomography scans (CT), Dexa scans, Contrast fluoroscopy procedures, Non-obstetric ultrasounds, Nuclear medicine and simple echocardiograms. There is local commitment (from the CCG) to working with healthcare providers to explore options for direct access, in particularly direct GP access to diagnostics that will aid with the diagnosis of lung cancer including MRI, ultrasound and chest X-Ray.

Acute respiratory illness

Acute respiratory illnesses are common and include community-acquired pneumonia, acute exacerbations of COPD, asthma attacks and a number of less common conditions. Together these represent a major demand on primary and particularly hospital care.

We need to ensure that we have adequate primary and community provision in place so that we can maximise admission avoidance wherever possible and ensure people can be treated successfully in the community and at home. From secondary care, we need to ensure that early assessment and discharge schemes can be effectively utilised to reduce delays in effective treatment and subsequently the length of hospital stay, thus optimising the use of hospital beds and reducing the considerable costs of such conditions.

Actions for High Quality Hospital Services

General

- Review Warrington & Halton NHS Foundation Trust Rapid Response Respiratory Team
- Review current arrangements regarding Halton adult residents admitted to Whiston Hospital with respiratory health problems
- Review current arrangements regarding Halton children & young people admitted to Halton and Warrington Hospitals and ST Helens and Knowlsey Hospitals with respiratory health problems

● Ensure the NICE Guidance and Quality Standards compliance in the treatment and secondary care management of respiratory illness and ensure best practice service commissioning.

iv. Promoting Self Care and Independence

Improving health outcomes for people with respiratory disease not only requires appropriate medical interventions but also enhanced communication, knowledge, skills, and the development of a therapeutic alliance between the patients and the healthcare professional. All patients with respiratory disease and/or their carers should strive to become better informed. Every effort should be made to equip patients, carers and families with the necessary knowledge and skills to improve decision making and thereby improve outcomes.

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 benefit greatly from a multidisciplinary approach to care and gain the most benefit from this care if delivered in the community, closer to home. This ensures 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. Pulmonary rehabilitation provides many aspects of this care and should be available locally for all patients with chronic lung disease.

Pulmonary Rehabilitation

Pulmonary rehabilitation is a programme of exercise and education for people with long-term chest problems designed to help patients manage breathlessness due to respiratory conditions. Pulmonary rehabilitation aims to improve patients' exercise tolerance, quality of life, and reduce breathlessness. The service in Halton is provided by Warrington and Halton NHS Foundation Trust's Rapid Respiratory Team. The programme runs twice weekly for 6 weeks. Each session comprises of 1 hour of individualised exercise and 1 hour of education. Each person receives a resource pack on completion with all aspects of education topics included and encouragement for people to continue with exercises at home after they have completed the course in order to maintain the benefits it produces. There are a number of ongoing exercise classes arranged for pulmonary rehabilitation patients the Halton Health Improvement Team.

- Between March 2012 and December 2013, 420 patients attended Pulmonary Rehabilitation in Halton. 69% at Halton Hospital and 31% at Ditton Community Centre.
- The largest referrers were GPs, Respiratory Consultant (Halton) and respiratory physiotherapists. Of the GPs, Castlefields, Weavervale and Grove House referred the most patients.
- Of those that attended; 171 patients completed at least 9 of the 12 sessions, 64 patients partially completed (<9 sessions), 49 did not attend and 101 were unable to attend due to illness.
- As of June 2015 there were 22 people waiting for an appointment for assessment with a waiting time to assessment of 10 weeks. The service currently sees around 17% of people with respiratory illnesses.

Pulmonary rehabilitation

The programme

Pulmonary rehabilitation is an exercise and educational programme designed to help patients manage breathlessness due to respiratory conditions such as COPD. Pulmonary rehabilitation aims to improve patients' exercise tolerance, quality of life, and reduce breathlessness. For more detailed information about pulmonary rehabilitation there are links to the NHS Choices and British Lung Foundation Websites below.

We run a six-week programme which patients attend twice weekly for two hours. Classes will run every Monday and Friday in Runcorn and Tuesday and Thursday in Widnes.

Pulmonary rehabilitation is available both in Widnes and Runcorn; all sessions are in the afternoon.

Who should be referred?

Patients with a diagnosed respiratory condition with symptomatic breathlessness do well on this course.

Expert Patient programme

The Expert Patients Programme (EPP) is a self-management programme for people living with a chronic (long-term) condition. The aim is to support people by:

- increasing their confidence

- improving their quality of life
- helping them manage their condition more effectively

Local Authority Public Health have just commissioned an extension of the Expert patient programme which will encourage people to live healthy active lives, better manager their own conditions and be able to be more involved in decision making around their care.

Asthma

The children's multidisciplinary asthma pathway at St Helens and Knowsley Acute Trust and Warrington & Halton Hospitals Foundation Trust for children presenting at A&E incorporates self-management plans and guidance on self-care. School nurses also signpost parents/carers to access their GP/Practice nurse for appropriate asthma management as necessary.

Lung cancer

The Runcorn and Widnes Cancer Support Group has been providing numerous support services for a number of years ranging from basic information, to caravan breaks, it offers support and information on the whole range of cancers including lung cancer. Funding for the service has been agreed collaboratively between the CCG, Halton Borough Council and Public Health going forward and the service will continue to receive referrals from a variety of health professionals across the locality including GP's and social services and explore ways to raise awareness of the service across Halton.

Integrated Breathe Easy Project

The British Lung Foundation's Nesta-funded 'Integrated Breathe Easy project' aims to increase self-care opportunities for people affected by respiratory illness. Halton Clinical Commissioning Group is working in partnership with BLF to support the development of two new groups (Widnes and Runcorn). The groups provide peer support and access to a wide range of information that enhances and supports wellbeing. The groups are part of a national project seeking to establish the value of group-delivered self-care due to report in June 2016.

Breathe Easy Widnes	**Breathe Easy Runcorn**
Where: Ditton Community Centre, Dundalk Road, Widnes, WA8 8DF **Date:** First Tuesday of each month **Time:** 12.30pm to 2pm	**Where:** Palacefields Community Centre, The Uplands, Runcorn, WA7 2UA **Date:** Second Wednesday of each month **Time:** 12.00pm to 1.30pm

Patients, Friends, family or carers are welcome to just turn up
There is usually a respiratory healthcare professional in attendance

Breathe Easy groups provide support and information for people living with a lung condition, and for those who look after them.

Groups hold regular meetings, usually monthly, where people can meet and talk to others, share their experiences and learn from each other. Regular speakers can also share information about living with their condition and coping with the emotional aspects of having a lung condition.

They also raise awareness locally about lung conditions, their group and the BLF.

Breathe Easy Case study

"When I returned from Australia I found that I was unable to walk my dogs, walk up slopes or even bend down without getting out of breath. I then caught flu which also affected my chest quite badly. I visited my practice nurse who gave me spirometry and informed me my lung age was 80. I was prescribed an inhaler and told to come back in 4 weeks. My flu got worse. Two weeks later I collapsed and ended up in hospital. I was prescribed antibiotics. I felt down as I used to be so active. Four weeks later when I saw my nurse again she gave me the BLF COPD leaflet and told me that I had COPD. I went home and cried and felt really down again. I read the leaflet which really helped but I still felt panicky. I then went on to the BLF website and found out that there was a Breathe Easy group in Runcorn and the next meeting was imminent. I went along to the Breathe Easy group meeting and haven't looked back. I found BLF information including the BLF COPD passport available and it was so good to meet and chat to other members who have the same condition as me. They gave me advice and tips at that meeting. I took a copy of the COPD passport away and went with my daughter to see my GP who went through each step and explained what it meant. At the next Breathe Easy meeting the community respiratory nurse talked to us about inhalers and inhaler technique. I realised that I had been using mine incorrectly and the nurse showed me how to use it properly. When I visit the chemist they sometimes call me in to ask me about my medications and I had been prescribed a new inhaler. We tried to work out how to use it but I realised that I had been using it incorrectly until the nurse showed me at the Breathe Easy meeting. Next time I am at the chemist I am going to tell them the correct way. I am also waiting to go on a course of pulmonary rehabilitation which I am looking forward to. Sometimes I still feel down but I can honestly say that since joining the Breathe Easy group I have felt so much better and it has changed my life; I know that it is not the end. I have also joined other local groups and realise that I can lead a full life."

Actions for Promoting Self-care and Independence

- Develop a range of interventions to support self-management
- Improve the feedback of patients and carers on their experiences of respiratory services
- Further develop and expand the Expert Patients Programme

Recommendations

There are key actions to be considered in order to achieve each individual aim of the strategy and ultimately improve respiratory health and respiratory health outcomes for people in Halton that are highlighted at the end of each chapter. These actions form the key recommendations of this strategy and are summarised below:

I. Prevent respiratory ill health

Smoking

● Increase the number of people attending Smoking Cessation Services in Halton
● Reduce the proportion of people smoking in Halton

Vaccination

● Increase the uptake of flu vaccination amongst at risk groups, to achieve national target
● Increase uptake of childhood vaccinations in lowest uptake practices.

Obesity

● Improve access and uptake to lifestyle advice across the borough
● Increase the proportion of people taking regular daily exercise in Halton

Drugs

● Improve education and awareness of the impacts of cannabis use especially preventing young people from starting to use cannabis.

Housing

● Increase access to grants and equipment to increase energy efficiency in People's homes
● Continue to work across the private rented sector to improve housing standards

Environment

● Continue the implementation of the Halton Council Transport Plan to improve traffic flow, reduce emissions and encourage active transport
● Identify opportunities to further improve air quality across Halton

II. Earlier detection of respiratory diseases

Cancer

● Ensure that increase the number of appropriate 2 week wait referrers to increase early diagnosis and enable early treatment of lung cancer
● Expand the Get Checked campaign to further increase awareness of signs, symptoms and encourage early presentation for lung cancer.

Chronic Obstructive Pulmonary Disease

● Encourage improved and early case finding to facilitate better management and treatment access

● Develop and implement a Borough wide, inclusive community spirometry service

Interstitial Lung Disease
● Ensure risk markers are identified on patient records, known risk occupations etc

Obstructive Sleep Apnoea
● Improve mechanisms for case finding, including access to spirometry and diagnostic tools to ensure rapid access to treatment and management

People with Learning Disability
● Adults with learning disability should be considered a high risk group for deaths from respiratory problems, screening and risk assessment should be included as part of the annual health check for patients with a learning disability.
● People with learning disability should be regarded as a high risk group for the purpose of seasonal flu and pneumonia vaccination programmes even if they do not live in a residential care setting.

III. Primary Care and Community based support

General
● Ensure the NICE Guidance and Quality Standards compliance in the recognition, diagnosis and management of respiratory illness and ensure best practice service commissioning.
● Pro Active Care programme Local Enhanced Service (2014/15)
● Review provision of pulmonary rehabilitation across Halton
● Establish integrated delivery of respiratory services across Halton
● Improve prescribing, in line with guidance[18], of respiratory medication across primary care

Asthma and COPD
● Implement standardised COPD and Asthma template across primary and secondary case
● Practices to benchmark recording of smoking status for patients on the COPD and asthma registers and set local reduction targets.
● Every patient diagnosed with asthma to receive a personalised action plan and annual review.

ILD
● Recording of occupation, particularly for risk occupations, on primary care records and identify those at possible risk of ILD to red flag early warning signs and symptoms.

OSA
● Maximise case finding against OSA predictor calculator and ensure rapid access to diagnostics.

[18] Pan Mersey Area Prescribing Committee Guidelines http://www.panmerseyapc.nhs.uk/guidelines.html

● Review the pathway for people with OSA

Bronchiolitis
● Rapid review (and application) of NICE Guidance when it is released in May 2015
● Review cause for practice variations in admissions for bronchiolitis across Halton practices

IV. High Quality Hospital Services

General
● Review Warrington & Halton NHS Foundation Trust Rapid Response Respiratory Team
● Review current arrangements regarding Halton adult residents admitted to Whiston Hospital with respiratory health problems
● Review current arrangements regarding Halton children & young people admitted to Halton and Warrington Hospitals and ST Helens and Knowlsey Hospitals with respiratory health problems
● Ensure the NICE Guidance and Quality Standards compliance in the treatment and secondary care management of respiratory illness and ensure best practice service commissioning.

V. Promoting Self Care and Independence

General
● Develop a range of interventions to support self-management
● Improve the feedback of patients and carers on their experiences of respiratory services
● Further develop and expand the Expert Patients Programme

The recommendations will be translated in to the Respiratory Action Plan and progressed assessed against these, and current actions by the Respiratory Health Group

How Will We Know Strategy Is Successful?

By 2020 this strategy will have;

I. Embedded respiratory health into a range of preventive programmes and be seeing a decline in prevalence of a number of key preventable respiratory illnesses.
II. Improvements in smoking quit rates and increase number of people referred to smoking cessation services.
III. Increased uptake of flu vaccination amongst those with existing respiratory conditions and amongst those with other on term health conditions, including those with learning disability, to mitigate the effects of flu on general respiratory health.

IV. Improved awareness within the general population of factors that prevent and protect against respiratory ill health, enable earlier identification of problems and health seeking behaviours.
V. Improved the recognition, diagnosis and management of a variety of respiratory illnesses (including COPD, asthma, lung cancer) within primary care.
VI. Developed a range of interventions and support to enable individuals and their carers to better ‘self–manage’ their respiratory condition.
VII. Involved more individuals and their carers in the planning and quality assurance of respiratory health services.
VIII. Improved the pathways between primary, acute, residential, nursing and social care for individuals and their carers.

Contributors

Many thanks to the Halton Respiratory Strategy Group, and other colleagues who have contributed to the development of the strategy.

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Document Summary

Title
Respiratory Strategy for Halton 2015 – 2020,

Date
Produced July 2015

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REPORT TO: Health and Wellbeing Board

DATE: 16th September 2015

REPORTING OFFICER: Director of Public Health

PORTFOLIO: Public Health

SUBJECT: Seasonal Flu Vaccination Programme 2015/16

WARD(S) Borough-wide

1.0 PURPOSE OF THE REPORT

1.1 The report presents an overview of changes to and requirements of the annual seasonal influenza vaccination campaign for the 2015 – 2016 flu season and implications of this for the Local Authority and health and social care partner agencies.

2.0 RECOMMENDATION: That:

The Health and Wellbeing Board note the changes to the national flu vaccination programme for 2015-2016 and for each individual agency to note their requirements in relation to the programme.

3.0 SUPPORTING INFORMATION

3.1 Background

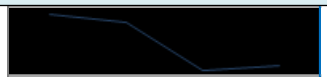
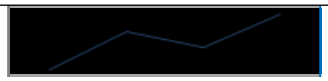
Influenza represents a significant cause of morbidity and mortality, and is a particular concern in those with existing health problems. Flu is ultimately preventable and flu vaccination remains an important tool in protecting the health of our population.

Influenza vaccination is a nationally developed programme for local implementation. The details of which are produced by Public Health England and published in the Winter Flu Plan for local adoption and delivery. This year sees some significant changes, predominantly to the extension of the offer of flu vaccine to a wider age range of children.

3.2 Previous campaigns

The target uptake of flu vaccination is for at least 75% of all at risk individuals to be vaccinated to ensure adequate community protection. Uptake of flu vaccination has generally decreased in the last few years in Halton and the uptake varies considerably by Practice. Variation in uptake across Halton puts some areas at increasing and inequitably higher risk.

Uptake of Flu Vaccines across Halton CCG

Vaccination Group	% uptake 2012/13	% uptake 2014/15	2014/15 Practice variation		Trend 2011/12 to 2014/15
			highest	lowest	
65 and Over	76.7%	73.8%	79.4%	67.2%	
Under 65 at risk	55.2%	50.3%	66.7%	38.5%	
Pregnant women	42.2%	46.7%	61.6%	33.0%	

Uptake across Halton has decreased in the last few years, with the exception of amongst pregnant women, where, as a new addition to the programme in 2011, considerable effort has been put in to expanding the uptake.

Uptake amongst front line health care workers continues to increase, with Warrington and Halton Hospital Trust achieving an overall uptake of 78.5% and St Helens and Knowsley Hospital Trust achieving 83.5% uptake amongst front line health staff.

Data for uptake amongst social care workers is not currently available but nationally the uptake amongst this cohort is low.

3.3 <u>Flu programme 2015-16</u>

The main change to the programme this year is the offer of flu vaccination to children of school years 1 and 2 age. Therefore, in 2015/16, the following are eligible for flu vaccination:

- those aged 65 years and over
- those aged six months to under 65 in clinical risk groups which include:
    - chronic (long-term) respiratory disease, such as severe asthma, chronic obstructive pulmonary disease (COPD) or bronchitis
    - chronic heart disease, kidney disease, liver disease, neurological disease, such as Parkinson's disease or motor neurone disease, or learning disability
    - diabetes
    - Non-functioning or absent spleen
    - a weakened immune system due to disease (such as HIV/AIDS) or treatment (such as cancer treatment)
- pregnant women
- all two-, three- and four-year-olds from 31 August 2015
- all children in school years 1 and 2 from September 2015
- those in long-stay residential care homes
- carers
- primary school-aged children in areas that previously participated in primary school pilots in 2014/15

3.4 Flu programme delivery

The vaccinations will be delivered through primary care (GP practices) for the majority of the eligible persons (over 65, under 65 in a clinical risk group, children aged 2,3 and 4, pregnant women and carers). The vaccine for children in school years 1 and 2 will be delivered by School Nurses. Midwifery are encouraged to vaccinate pregnant women.

Halton has also contracted with CRI for the flu vaccination to be offered to individuals in risk groups attending treatment services.

There is a requirement for all frontline health and social care workers to be offered flu vaccination by their employer. This includes general practice staff. General practice and hospital staff vaccinations are undertaken by their own staff and occupational health units.

It is the responsibility of the Local Authority as an employer of front line Health and social care staff to ensure that provision for vaccination is made for all relevant staff.

3.5 Publicity and marketing

Public Health England have announced that there will be a national public facing Winter Pressures publicity campaign, which will include flu vaccination promotion.

The announcement arrived late in the year and following a decision by Public Health and Halton CCG to undertake a local public facing campaign to encourage uptake. As part of this campaign, St Martins Primary School, Runcorn were engaged in developing images and artwork for a poster campaign. This is currently being developed and will be launched in the next few weeks. The campaign will target children and parents predominantly as the extension of the vaccination to a new cohort of children is a significant change to the regular programme. Protecting children is one of the main methods shown to prevent further transmission of flu amongst the wider community.

3.6 Potential challenges

A number of challenges have been identified for which consideration needs to be given.

Vaccine effectiveness
The flu vaccine is carefully determined by WHO annually to ensure maximum protection against the most likely strains of flu predicted to be circulating during any given year. The vaccine composition changes annually to reflect this. During the 2014/15 flu seasons, the vaccine did not exactly match the types of flu that were circulating and with media coverage suggesting that the vaccine was not effective. There were outbreaks of flu amongst previously vaccinated individuals (although evidence suggests that the illness experienced by vaccinated individuals was milder) from a strain not adequately covered by the

vaccine. It is anticipated that there may be a greater degree of public apathy and/or scepticism about the effectiveness of the vaccine which may impact upon numbers taking up the offer of vaccine. There is no evidence to suggest that the composition of this year's vaccine will be ineffective and therefore additional publicity and promotion may be necessary to prevent drops in uptake. The vaccine protects against 3 strains of flu, so even if a different strain of flu is circulated the vaccine should still offers a good level of protection against other strains.

Health, social care and all staff engaged in services facing the public are encouraged to take every opportunity to promote the benefits of flu vaccination, prevent and encourage participation in the programme to eligible groups.

Social Care staff
The council employs around 500-700 potentially eligible front line health and social care staff involved in direct 'patient' care. These staff should be encouraged to have the flu vaccine to protect themselves against flu and protect the vulnerable clients they are working with. Discussions are under way with the Health and Social Care and Children's directorates to identify eligible staff, identify the most effective source of provision and ensure resource is available.

Encouraging eligible staff to take the vaccination is an ongoing challenge, maximising uptake is key to protecting the wider and more vulnerable populations and every effort should be made to encourage uptake through high level leadership. Ensuring provision and uptake amongst eligible staff in contracted services also poses a challenge. This is currently undertaken through Quality Assurance and contracting processes, though uptake is historically low and this puts the wider population at risk.

In the last 2 years, the council has opted to offer flu vaccinations to all council staff; the Chief Officers Management Team took the decision to extend this offer to all staff again this year and options for this provision are being explored.

4.0 POLICY IMPLICATIONS

4.1 The flu vaccination programme is a national requirement, monitored through monthly returns to NHS England.

5.0 OTHER/FINANCIAL IMPLICATIONS

5.1 There will be financial implications in the implementation of the national programme – vaccinations within primary care and to risk groups is covered through national arrangements. Individual employer organisations of health and social care staff are required to resource arrangements for the provision of vaccination. Resource is required to promote vaccination uptake amongst all eligible groups and maximise the programmes impact.

5.2 Flu presents an annual health challenge on the health and social care system and is responsible for a large proportion of excess winter deaths. Cases of flu pose a significant burden on primary and secondary health care systems. Outbreaks amongst vulnerable groups are common in unprotected communities and can be difficult to manage and control. Flu is preventable and inequities in uptake across the Borough, within higher risk populations and staffing groups can put the most vulnerable people at greater risk.

6.0 IMPLICATIONS FOR THE COUNCIL'S PRIORITIES

6.1 Children & Young People in Halton

Children represent one of the key sources of carriage of flu virus in the community, ensuring high uptake amongst children is one of the best ways to ensure limit the spread of flu in our communities and protect our most vulnerable children and members of the community from a preventable illness.

6.2 Employment, Learning & Skills in Halton

Maximising vaccine uptake amongst eligible groups will protect members of our communities, facilitating people to maintain good health through the winter period will maximise employment and learning opportunities and limit absence from school and workplaces.

6.3 A Healthy Halton

Flu is a preventable illness. Ensuring good uptake of flu vaccination for risk groups and health and social care staff, will prevent illness and death within Halton.

6.4 A Safer Halton

None specified

6.5 Halton's Urban Renewal

Nonespecified

7.0 RISK ANALYSIS

7.1 Failing to adequately implement the national flu plan and protect our community puts the population at significant risk of outbreaks and increased incidence of a serious, preventable infection. Failure to provide flu vaccination for eligible front line health and social care staff is a corporate risk and can put employees and service users at increased risk of influenza.

8.0 EQUALITY AND DIVERSITY ISSUES

8.1 The strategy is developed in line with all equality and diversity issues within Halton.

9.0 **LIST OF BACKGROUND PAPERS UNDER SECTION 100D OF THE LOCAL GOVERNMENT ACT 1972**

None under the meaning of the Act.

REPORT TO: Health and Wellbeing Board

DATE: 16th September 2015

REPORTING OFFICER: Director of Public Health

SUBJECT: Local opportunities following the transfer of commissioning responsibilities for 0 – 5 Public Health Services

1.0 PURPOSE OF REPORT

1.1 This report seeks to provide the Health and Wellbeing Board with an update on the changes to the commissioning arrangements for the Health Visiting and Family Nurse Partnership Services and articulate the opportunities arising from the transition into Halton Borough Council.

2.0 RECOMMENDATION:

i. Note the update

ii. The board supports the investment in early years and notes its long term impact on health outcomes

iii. Supports the ongoing work to imbed the delivery of the healthy child programme through the integration of health visiting and family nurse partnership teams with the wider children' workforce.

3.0 SUPPORTING INFORMATION

3.1 The Best start in life for Halton children

A child's experience during the early years is critical to their physical, cognitive and social development. During this development phase the foundations are put in place for the rest of that child's life and is a once in a lifetime opportunity to give that child the 'best start in life'. Both the Allen report (2011) and the Marmot review (2010) recognised the importance of giving every child the optimum conditions, and how investing in this period of a child's life influences their school readiness, educational attainment, economic participation and long term health. It makes good economic sense to invest in this period of development.

3.1.2 More details on the importance of child development can be found in Appendix 1.

3.2 **Ensuring the safe transfer of 0-5 public health services**

From 1 October 2015, local authorities will take over responsibility from NHS England for commissioning public health services for children aged 0-5. It is not a transfer of the workforce, who will continue to be employed by their current provider, Bridgewater Community Healthcare NHS Trust but rather the transfer of commissioning responsibility for 0-5 public health services which include the Health Visiting Service and the Family Nurse Partnership (FNP) - a targeted service for teenage mothers.

3.2.1 The transfer of commissioning responsibilities will be a "lift and shift" arrangement, where the Department of Health will transfer over what NHS England's Area Teams are expecting to contract and spend on 0-5 services at the point of transfer. The Council has received confirmation of funding which is in line with the projected financial envelope. The financial plans have been based on a trajectory to increase the numbers of Health Visitors in line with the Governments "Call to Action". It is expected that the contract between NHS England and the provider will be transferred and novated to the Council.

3.2.2 The transfer will also include a clause guaranteeing the current provider a contract for 18 months (until March 2017) following the transfer, after which commissioners will be able to consider how best to plan for the future delivery of local services. This is to ensure that there is a minimum disruption to service delivery and to ensure the continued clinical governance and oversight of the service.

3.2.3 Another significant change for the transferred Health Visiting Service will be assuming the responsibility for the resident population of the Borough rather than the GP registered population. Work is now underway with the GP's to understand and support this change. This change will impact upon a small number of families, and will result in a net increased caseload of 10 families.

3.3 **Delivering the Healthy Child Programme**

3.3.1 Our aim is to ensure future commissioning will support sustainable health visiting services and we will use the model of **'4, 5, 6'**. This is the **four** tiers of health visiting service, with **five** elements of service delivery that are being mandated and will deliver **six** high impact areas.

3.3.2 The **Health Visiting Service** uses **four tiers**, which assess and respond to children's and families' needs appropriately:

•**Community Services** - linking families and resources and building community capacity.
• **Universal Services** - primary prevention services and early

intervention provided for all families with children aged 0-5 as per the Healthy Child Programme universal schedule of visits assessments and development reviews.

• **Universal Plus Services** - time limited support on specific issues offered to families with children aged 0-5 where there has been an assessed or expressed need for more targeted support.

• **Universal Partnership Plus Services** - offered to families with children aged 0-5 where there is a need for ongoing support and interagency partnership working to help families with continuing complex needs.

The above tiers are compatible with the Halton Levels of need.

3.3.3 There are **five universal checks** within the 0-5 healthy child programme that are mandated. These are:

1. the antenatal health promoting visits
2. new baby review
3. 6-8 week maternal mental health assessment
4. 1 year assessment
5. 2-2½ year review

In addition, The 6-8 week GP check (also known as child health surveillance) will continue as an element of the wider GP contract.

3.3.4 The Department of Health has also outlined **six high impact areas** to be addressed:

• transition to parenthood and the early weeks;
• maternal mental health (perinatal depression);
• breastfeeding (initiation and duration);
• healthy weight, healthy nutrition (to include physical activity);
•managing minor illness and reducing accidents (reducing hospital attendance/admissions); and
• health, wellbeing and development of the child at age 2 – two year old review (integrated review) and support to be 'ready for school'.

3.3.5 The **Family Nurse Partnership** programme is an important component of the Healthy Child programme. It is a targeted, evidence-based, preventive programme for vulnerable first time mothers aged 19 and under. FNP is a licensed, programme with a well-defined and detailed service model. This must be adhered to in order to replicate the excellent outcomes seen elsewhere. The programme builds a strong relationship between the specially trained FNP nurse, the mother and her family. The nurse works

through structured home visits and regular contact which are delivered from early pregnancy until the child is two. Participation in the FNP programme is voluntary.

3.3.6 When a mother joins the FNP programme, the healthy child programme is delivered by the family nurse. The family nurse works in partnership with all agencies working to supporting the family's health, education, employment and social care needs. The nurse plays an important role in any necessary safeguarding arrangements alongside statutory and other partners to ensure children are protected.

3.4 The future opportunities as a result of commissioning the Healthy Child Programme

3.4.1 Commissioning arrangements

Current arrangements for the delivery of 0-5 Public Health services will be contracted until March 2017 through existing providers. In advance of this date, the Local Authority will have the opportunity to consider how best it can meet its obligations to deliver the mandated elements of the Healthy Child Programme and review its commissioning arrangements for the future.

3.4.2 Improved child development

Work is underway to ensure the six high impact areas are addressed and the services deliver the outcomes for Halton families. Working closely with the provider we are in the process of developing local multi-disciplinary action plans against each high impact area; the implementation of which will be managed through the Halton Health in the Early year's group.

3.4.3 The importance of each high impact area and an indication of some of the work that is required in each of these areas are outlined in Table 1 below.

High Impact Area	Benefit to parental and child health and wellbeing
Transition to parenthood and the early weeks, including attachment	• Holistic assessment of the family and parental capacity to meet their infant's needs. • Early identification of risk factors such as domestic violence, alcohol and substance misuse, mental health issues and support issues. • Help parents develop a strong bond with children • Identify problems in children's health and development (e.g. learning difficulties) and safety (e.g. parental neglect) so that they can get help with their problems as soon as possible
Maternal Mental Health	• Around 1:10 mothers experience mild to moderate post natal depression • Reduce impact of poor maternal mental health on child • Prevent problem extending to child in later years • Training HVs to spot signs of post natal depression

	so they get the help they need as soon as possible • Provide additional support and help ensure the baby's wellbeing
Breast feeding	• Encourage and support breastfeeding which plays an important part in reducing health inequalities • Helps promote stronger emotional attachment between mother and baby • Reduced chance of respiratory infection and gastroenteritis, lower rates of obesity, reduced risk of type 2 diabetes and other chronic illnesses
Healthy weight, including nutrition and physical activity	• Overweight children are at greater risk of poor health outcomes • Overweight and obesity are strongly linked to deprivation • Embedding healthy eating and physical activity habits early on can lead to a life time approach to leading a healthy lifestyle • Reduce tooth decay
Development of the child two year review (the integrated review) and school readiness	• Identify the child's progress, strengths and needs at this age to promote positive outcomes in health and wellbeing, learning and behaviour and promote school readiness • Facilitate appropriate intervention and support for children and their families, especially for those whose progress is less than expected • To generate information which can be used to plan services and contribute to the reduction in inequalities in children's outcomes
Managing minor illness, preventing accident and reducing avoidable hospital admissions	• Health visitors are in a strong position to raise parental awareness of the biggest risks and to provide clear, practical, accurate safety advice • They are a trusted source of knowledge, advice and information and are often the first point of contact for parent's whose child is unwell. • There is a strong link between unintentional injury and inequality

Table 1: Outline of the Health Visiting six 'High Impact Areas'

3.4.4 **Integrated education and health two year review**

Of particular significance is the new mandated integrated review of children's development at age 2-2.5 years. This offers the opportunity to universally identify issues early, and where necessary to put in place an integrated plan for children at a critical stage in their development. This integrated review will support health and education to work together to improve outcomes for the family in a coordinated fashion.

3.4.4 There are a number of other developments which are being explored and have the potential to provide a more effective use of resources, improve communication and offer early help and support to families in need.

A) Co-location of staff.

In order to facilitate integrated working, some Health Visitors and all of the Family Nurse Partnership team are located in children's

centres. Consideration could be given to extending this for every Health visiting team where it is feasible.

B) Team Integration

The Health Visitor and Family Nurse teams are working closely with the new locality Early Intervention teams, to provide enhanced multiagency planning for families with complex needs. Work is also underway to strengthen the arrangements to bring health visiting into the Early intervention teams. The intention is that there will be an integrated front door into services, and that Health Visitors will play a key role in the multiagency locality team assessing and managing cases with higher level safeguarding needs.

3.4.5 The leadership and support to integrate services that are working with families who need Early help and support, is through the Early Intervention Partnership Strategic Board, upon which Public Health is working closely with colleagues to move this agenda forward, including work on the issues outlined above, and exploring opportunities for more coordinated intelligence, IT, management and governance, databases and assessment processes.

3.4.6 **Paediatric support in the community**

The Health Visiting and Family Nurse Partnership teams have the remit and expertise to support the pilot that is currently being developed to move some paediatric expertise into community settings. This work will facilitate paediatricians to work collaboratively with community and primary care staff and increase access to their expertise.

3.4.7 Some of the Health Visitors and Family Nurses have paediatric training and expertise which will be useful to support the pilot, to improve the care and ultimately outcomes for children. Evidence from similar work elsewhere has shown that this will result in increased education and knowledge sharing between health and social care professionals, the better coordination of care for children with complex and long term conditions and better support to parents for the 'self-care' of patients.

3.5 **Finance and Contracting update**

3.5.1 NHS England Area Teams have worked closely with local authorities to jointly agree the finance and contracting picture for the transferring service. This information has informed the development of local authority baseline allocations.

3.5.2 Every council has had to demonstrate its capacity and capability to receive public health functions from the NHS. The indicative contract value for Halton has been agreed and is based on the anticipated

number of Health Visitors who will be in post at the point of transfer in order to meet the national "call to Action" trajectory. For Halton this figure has been set at **37.29** whole time equivalent staff.

3.5.4 Recent announcements regarding proposed governmental efficiency requirements from the public health grant equate to c. £200 million in national efficiencies (or approximately £630,000 for Halton). It has been confirmed that funding for 0-5 services will not be ring fenced within the public health budget and is included in the efficiency targets. Future spend will need to be carefully managed to ensure that efficient, effective and services that represent the best value for money can be delivered to local people.

4.0 POLICY IMPLICATIONS

4.1 Children and Young People in Halton

Local Authorities are well placed to identify health needs and commission services for local people to improve health. The Government's aim is to enable local services to meet local needs. The Healthy Child programme is a critical component in giving every child in Halton 'the best start in life', and improving child development, which is a Halton priority. Improving the Health and Wellbeing of Children and Young People is a key priority in Halton and will continue to be addressed through the delivery of an effective and efficient Health Visitor Service that supports the delivery of both national and local strategies and action plans whilst at the same time meeting the needs of children and their families.

4.2 Employment, Learning and Skills in Halton

Employment, Learning and Skills is a key determinant of health and wellbeing and is therefore a key consideration when developing strategies to address health inequalities. An effective service will support children and their families in reducing the impact of ill health on their life chances and also encourage and support "school readiness".

4.3 A Healthy Halton

All issues outlined in this report focus directly on this priority.

4.4 A Safer Halton

Reducing the incidence of crime, improving Community Safety and reducing the fear of crime have an impact on health outcomes particularly on mental health. There are also close links between the service and on areas such as mental health, alcohol and domestic violence.

4.5 Halton's Urban Renewal

By providing education, information and support to children and their families the service can contribute to the wider urban renewal of Halton.

5.0 **FINANCIAL/RESOURCE IMPLICATIONS**

5.1 Financial arrangements for the transfer of commissioning responsibilities are set out in 3.8 of this report.

6.0 RISK ANALYSIS

6.1 There are currently no perceived risks for the transfer of 0-5's commissioning. Should any risks be identified at a later date these will be identified and reported.

7.0 EQUALITY & DIVERSITY ISSUES

7.1 This is in line with all equality and diversity issues in Halton.

8.0 **Appendix 1**

The case for early years investment.

The Case for Early Years Investment and Universal Health Services for Families and Young Children

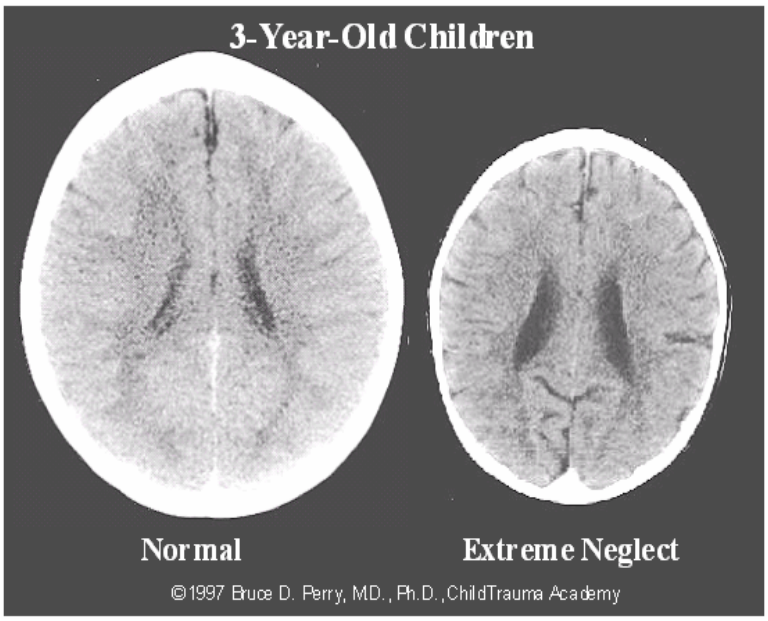
A child's experience during the early years is critical to their physical, cognitive and social development. During this development phase the foundations are put in place for the rest of that child's life and is a once in a lifetime opportunity to give that child the 'best start in life'. Both the Allen report (2011) and the Marmot review (2010) recognised the importance of giving every child the optimum conditions, and how investing in this period of a child's life influences their school readiness, educational attainment, economic participation and long term health. It makes good economic sense to invest in this period of development.

From October 2015 Local Authorities will be responsible for commissioning the Healthy Child Programme (HCP). The purpose of the Healthy Child Programme is to deliver services that work to achieve the ambition of giving all children the 'best start in life', and is delivered by Health Visitors and other professionals.

The purpose of this briefing sheet is to outline why investment in the early years is essential to maximise the health of the whole population, and how investment in this critical period will yield the greatest returns, in relation to improved health, higher educational performance and savings in social expenditure.

The importance of the home environment and parenting

Research has shown that children from less advantaged backgrounds have a higher risk of death in adulthood across almost all conditions including; mortality from stomach cancer, lung cancer, haemorrhagic stroke, coronary heart disease, and respiratory-related deaths, accidents, and alcohol-related causes of death. Research has demonstrated that the conditions in which children grow up are not just critical for child health, they are also critical for adult health, and this has profound public policy implications.



Human beings have large brains compared to other mammals, and so to enable a successful birth humans are born earlier in their development. Over the first three years the brain grows rapidly outside of the womb. By the age of three the human brain is almost 90% of adult size (Child welfare information gateway, 2009)

If the brain of a child is not stimulated and nurtured from conception to three years of age then the connections in the brain don't develop as they should and growth will be affected. This will cause irreversible damage, which will influence the child's personality, intelligence, empathy, health, education and employment.

The above image compares a healthy average size brain with the brain of a child exposed to extreme neglect, the brain of the neglected child has less brain tissue, and the tissue is abnormally developed. If neural pathways are not developed and strengthened by stimulation they may be discarded, and acquiring the same skills becomes more difficult in later life – for example child who has been experienced neglect and has not formed any attachments will have difficulty forming emotional attachments in the future.

"Investment in the early years is a rare public policy initiative that promotes fairness and social justice and at the same time promotes productivity in the economy and society at large". (J.J.Heckman)

The Case for Early Years Investment

- Optimal child development will provide solid foundations for community and economic development
- Brain development is an on-going process beginning before birth and continuing into adulthood – the quality of early brain development establishes either a sturdy or fragile foundation for all the capabilities and behaviours that follow.
- However the brain's ability to respond to changes in stimulation change behaviour decrease over time. Consequently, getting it right early leads to better outcomes and is less costly, than trying to fix it later
- Cognitive, emotional and social capabilities are all linked. Learning, behaviour, and physical and mental health are highly interrelated over the life course. You cannot address one domain without affecting the others.
- Toxic stress in the early years (e.g. from poverty, serious parental mental health impairment, child maltreatment and/or family violence) can damage developing brain architecture and lead to problems in learning and behaviour, with increased susceptibility to physical and mental illness. If a child's early experience is predominantly characterised by fear and stress, the neurochemical responses to fear and stress become the primary architects of the brain, as they are the responses most frequently triggered.
- By age three, children from the poorest fifth of homes in the UK are on average over a year behind in their expected development.

The Financial Argument

The table below outlines the cost to health and social care for circumstances that are linked, and potentially preventable through working with families and parents and maximising early child development.

Estimated costs dealing with a range of health and social problems	
Youth unemployment	£133 million per week
Youth crime	£1.2 billion per year
Educational underachievement	£22 billion per generation
One year in a children's residential home	£149,240
One year in secure accommodation	£230,000
One year in foster care	£ 35,152
CAMHS inpatient admission	£ 24,482

- Not all of the above problems are due to neglect, but children living in poverty or who experience trauma early in their lives are more at risk.

- As a society we currently under-invest in pre-school programmes when brain adaptability is at its greatest and the highest returns on investment can be achieved

- Speaking at the launch of 'Early Intervention City' in Nottingham, Paul Ennals, chief executive of the National Children's Bureau, said he expected that for every £1 invested in such services, the Government would save £7 in the future

- "Early years education and support is key to reducing violence in the long-term. It's the nearest thing to magic without being magic. 1,000 additional health visitors rather than 1,000 additional police officers would be more effective in cutting crime in the long term". (Detective Chief Superintendent John Carnochan, Head of Violence reduction Unit, Scotland)

"Investment in the early years is a rare public policy initiative that promotes fairness and social justice and at the same time promotes productivity in the economy and society at large". (J.J.Heckman)

It's a win – win situation!