

Monday 11 February 2019

New figures show nearly 18 million patients (1 in 3) are registered at GP surgeries with unsafe levels of pollution

New analysis of air pollution data (2) produced by the environmental cities network UK100 today shows that 17.9 million NHS patients in England are registered at a GP practice that exceeds the World Health Organisation annual limit for PM2.5 air pollution.

17.9 million is equivalent to nearly **one in three (30%) of all NHS patients registered in England**. The data presents the startling impact of air pollution in our towns and cities. UK100 are calling for leadership from central Government to tackle the problem with new laws and new funding for local authorities to clean up our toxic atmosphere.

That is *equivalent* to the population of London and all the 30 largest towns and cities in England, including everywhere from Leeds and Liverpool, Birmingham and Bristol, Nottingham and Newcastle, Manchester and Milton Keynes, Sheffield and Sunderland, Portsmouth and Plymouth.

The research is being published ahead of a major Clean Air Summit being hosted in London on 14 February to be attended by the London Mayor Sadiq Khan as well as mayors and council leaders from across England. They are due to be joined by Environment Secretary Michael Gove MP, Health Secretary Matt Hancock MP, and the Chief Executive of the NHS, Simon Stevens.

The Mayor of London Sadiq Khan, said: "Our toxic air is a national health crisis, contributing to tens of thousands of premature deaths across the UK every year.

"Air pollution harms the lung growth and respiratory health of our children, and is also linked to asthma, cancer and dementia. I'm proud that London has taken positive action by cleaning up our bus and taxi fleet, encouraging clean air innovation, establishing the largest air quality monitoring network of any major city and, starting in April this year, introducing the world's first 24/7 Ultra Low Emission Zone in central London.

"UK100's findings are a timely reminder of how many people are exposed to poor air when they are at their most vulnerable. Government must recognise that cities can't win this battle alone and we now need to be given greater powers and funding to clean up our filthy air and protect future generations."

Commenting on the figures, **Polly Billington, Director of UK100, said:**

"These figures show that air pollution is a national problem. Some of the most vulnerable groups of people including young children and older people will walk to their GP, often to get help with respiratory conditions like asthma and bronchitis. This shows the real danger to their health of the air pollution in their communities. We need urgent action from the government, with a new Clean Air Act passed by parliament to tackle toxic fumes."

The head of NHS England is also backing calls for tougher action on air pollution. Causing up to 20,200 respiratory and cardiovascular hospital admissions every year, air pollution is a grave threat to the nation's health. Previous scientific studies have put the cost to health as a result of car and van exhausts at £6bn.

Mr Stevens is also encouraging NHS bodies across the country to adopt a similar cross-sector partnership to one successful scheme in east London that has seen Barts Health NHS trust working with local partners to tackle the effects of air pollution.

Simon Stevens, Chief Executive of NHS England added: "Air pollution causes thousands of hospital admissions and early deaths every year, but while doctors, nurses and therapists are treating the health consequences, the NHS is also taking action to tackle the problem at source. The NHS' Long Term Plan sets out how better use of technology can help make up to 30 million outpatient appointments – and the millions of patient journeys to hospital they involve – unnecessary.

“The NHS has already cut its carbon footprint by 11% between 2007 and 2015 and now we are working to cut emissions from the NHS fleet by 20% by 2024, with at least 90% of vehicles using ultra-low emission engines.

"Bold action like this has been estimated to help avoid over 50,000 cases of coronary heart disease and almost 10,000 cases of asthma by 2035. The UK100 summit this week is an important opportunity to come together and focus on the next steps we can all take to ensure a happier, healthier future for everyone."

According to the Royal College of Physicians (4), exposure to PM2.5 has been linked to including asthma, heart disease, stroke, and lung cancer, with emerging evidence showing impacts on low birth weight, diabetes and neurodegenerative diseases such as Alzheimer's and Parkinson's.

Professor Dame Parveen Kumar, Chair of the BMA's Board of Science, said:

“Poor air quality is a serious problem in many cities across the UK and has a detrimental impact on the environment and the health of the population, including causing as many as 40,000 deaths each year. It is a shocking state of affairs that this invisible killer is still not taken seriously enough by policy makers. The government needs to look at evidence, like that compiled by UK100, and ensure that the forthcoming environment bill has legally enforceable air quality limits that meet World Health Organisation guidelines and gives local authorities adequate powers and funding to restrict air pollution.”

Surprisingly, some of the worst affected areas are outside London. The top 10 most polluted GP practices are located in Barrow in Furness, Lowestoft, Penzance, Ipswich and Portsmouth.

Birmingham has the most numbers of patients at toxic GP surgeries, with nearly half a million patients registered in areas that exceed WHO air pollution limits. This is followed by a number of London boroughs including Lambeth, Newham and Wandsworth.

London has by far the biggest numbers – with 7.5 million patients attending a surgery that breaches WHO air pollution limits, representing three quarters of the GP population. Other regions with significant issues are the East Midlands with over 2 million patients, the East of England with 2.5 million patients and the South East with 2.3 million patients.

The regions with the most patients registered at GP practices that exceed WHO air pollution limits for PM2.5 are:

Region	Exceed	Total Patients	Percentage
London	7,516,991	9,967,034	75.4%
East Midlands	2,151,134	5,014,389	42.9%
East of England	2,515,497	6,453,953	39.0%
South East	2,310,372	9,580,110	24.1%
West Midlands	1,458,278	6,233,965	23.4%

According to the British Lung Foundation, who conducted some of the original research (3), the patients attend surgeries located in areas with levels of fine particulate matter (PM2.5) above the World Health Organisation's limit (10µg/m3 for the annual average)). PM2.5 are minuscule particles invisible to the naked eye that are small enough to pass through the lungs, and enter the bloodstream. Current legal limits for PM2.5 are twice as high as what the WHO recommends, and it is urgent to adopt and meet WHO's limit as soon as possible to protect and promote the public's health.

Dr Penny Woods, Chief Executive of the British Lung Foundation, said: “It's just not acceptable that nearly 18 million people are breathing unsafe levels of air pollution when seeking medical care from their GP. We know that our society's most vulnerable people – especially children, the elderly and those with heart and lung problems – are most at risk from air pollution. More must be done to keep them and health care staff safe; the World Health Organisation's limit on particulate matter pollution should be included in the upcoming Environment Bill to ensure we meet it.”

The figures are based on new analysis by UK100 of data published by the British Lung Foundation and the NHS Digital Database. (3,5)

Air pollution is one of the biggest killers in the UK, with more people dying from air pollution than diabetes and road deaths combined. According to figures published by King's College London on behalf of the Government, every year 36,000 people die prematurely from air pollution – the equivalent of the population of Redcar. (6)

The summit is expected to call for new legislation and funding to provide powers to elected mayors and local councils to tackle air pollution in a new Clean Air Act, planned for later in the year. Recommendations may include the creation of local clean air zones where the most polluting vehicles will be fined for entering which are being planned in London and Manchester.

Additional plans include funding for low income families, small businesses and the NHS to replace older polluting vehicles with low emission or electric vehicles.

Tables

Regional: Number of patients registered at GP practice that exceeds WHO limit for PM2.5 air pollution

Region	Exceed limit	Total Patients	Percentage
London	7,516,991	9,967,034	75.4%
East Midlands	2,151,134	5,014,389	42.9%
East of England	2,515,497	6,453,953	39.0%
South East	2,310,372	9,580,110	24.1%
West Midlands	1,458,278	6,233,965	23.4%
South West	864,982	5,785,943	14.9%
North West	699,582	7,735,367	9.0%
Yorkshire and The Humber	374,074	5,722,765	6.5%
North East	0	2,768,683	0.0%
England Total	17,890,910	59,262,209	30.2%

Table 2: Ten GP Surgeries with worst levels of PM2.5 air pollution in England

Name	Post Code	Local Authority	Region	NUMBER OF PATIENTS	PM2_5
Atkinson Health Centre	LA14 2LR	Barrow-in-Furness	North West	4,714	16.85
Norwood Medical Centre	LA14 5ES	Barrow-in-Furness	North West	11,026	16.71
Alexandra & Crestview Surgeries	NR32 1PL	Waveney	East of England	15,613	16.18
Duke Street Surgery	LA14 1LF	Barrow-in-Furness	North West	9,645	16.17
The Family Practice	LA14 5SL	Barrow-in-Furness	North West	3,301	16.17
Morrab Surgery	TR18 4EL	Cornwall	South West	11,231	14.92
Dr Solway & Dr Whale Practice	IP4 2PZ	Ipswich	East of England	6,210	14.67
Orchard Medical Practice	IP4 2PZ	Ipswich	East of England	14,534	14.67
The Hanway Group Practice	PO1 4ND	Portsmouth	South East	14,167	14.29
Kirklands Surgery	PO3 5AF	Portsmouth	South East	8,717	14.29

Table 3: Ten local authorities with most numbers of GP patients registered at surgeries that exceed PM2.5 air pollution WHO limits (England only)

Local Authority	Don't Exceed	Exceed	Grand Total	Percentage
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1. Birmingham	814,961	494,698	1,309,659	37.8%
2. Lambeth	0	416,824	416,824	100.0%
3. Newham	0	393,340	393,340	100.0%
4. Wandsworth	19,334	381,403	400,737	95.2%
5. Brent	39,398	381,293	420,691	90.6%
6. Ealing	79,468	358,264	437,732	81.8%
7. Tower Hamlets	346,830	346,830	346,830	100.0%
8. Southwark	0	339,075	339,075	100.0%
9. Sandwell	17,286	321,169	338,455	94.9%
10. Haringey	0	317,233	317,233	100.0%

10 worst areas in London by number of patients registered at surgeries exceeding WHO limit for PM2.5 air pollution:

Area	Numbers of NHS patients registered at surgeries exceeding pollution limits	Percentage of total patients
1. Lambeth	416,824	100%
2. Newham	393,340	100%
3. Wandsworth	381,403	95.2%
4. Brent	381,293	90.6%
5. Ealing	358,264	81.8%
6. Tower Hamlets	346,830	100.0%
7. Southwark	339,075	100.0%
8. Haringey	317,233	100.0%
9. Waltham Forest	314,218	100.0%
10. Redbridge	301,598	90.3%

10 worst areas in London by % of patients registered at surgeries exceeding WHO limit for PM2.5 air pollution:

Area	Numbers of NHS patients registered at surgeries exceeding pollution limits	Percentage of total patients
1. Lambeth	416,824	100.0%
2. Newham	393,340	100.0%
3. Tower Hamlets	346,830	100.0%
4. Southwark	339,075	100.0%
5. Haringey	317,233	100.0%
6. Waltham Forest	314,218	100.0%
7. Hackney	296,835	100.0%
8. Westminster	282,698	100.0%
9. Camden	275,279	100.0%
10. Islington	263,061	100.0%

10 worst areas in East of England by number of patients registered at surgeries exceeding WHO limit for PM2.5 air pollution:

Area	Numbers of NHS patients registered at surgeries exceeding pollution limits	Percentage of total patients
1. Ipswich	177,392	100%
2. Chelmsford	167,985	82.6%
3. Basildon	159,850	80.1%
4. Southend-on-Sea	158,424	86.8%

5. Thurrock	153,741	86.2%
6. Colchester	135,279	66.9%
7. Norwich	110,074	62.6%
8. Huntingdonshire	101,825	56.4%
9. Tendring	91,945	60.1%
10. Epping Forest	90,342	78.2%

10 worst areas in East of England by % of patients registered at surgeries exceeding WHO limit for PM2.5 air pollution:

Area	Numbers of NHS patients registered at surgeries exceeding pollution limits	Percentage of total patients
1. Ipswich	177,392	100.0%
2. Southend-on-Sea	158,424	86.8%
3. Thurrock	153,741	86.2%
4. Castle Point	72,158	85.1%
5. Chelmsford	167,985	82.6%
6. Basildon	159,850	80.1%
7. Epping Forest	90,342	78.2%
8. Maldon	42,949	76.7%
9. Harlow	53,157	66.9%
10. Colchester	135,279	66.9%

10 worst areas in South East by number of patients registered at surgeries exceeding WHO limit for PM2.5 air pollution:

Area	Numbers of NHS patients registered at surgeries exceeding pollution limits	Percentage of total patients
1. Medway	229,838	80.5%
2. Southampton	185,085	65.1%
3. Brighton and Hove	167,372	52.2%
4. Portsmouth	132,771	70.3%
5. Swale	122,977	84.1%
6. Maidstone	110,282	67.6%
7. Cherwell	84,004	50.1%
8. Gravesham	75,383	58.3%
9. Ashford	73,287	53.3%
10. Dartford	70,236	54.9%

10 worst areas in South East by % of patients registered at surgeries exceeding WHO limit for PM2.5 air pollution:

Area	Numbers of NHS patients registered at surgeries exceeding pollution limits	Percentage of total patients
1. Swale	122,977	84.1%
2. Medway	229,838	80.5%
3. Gosport	63,476	75.4%
4. Portsmouth	132,771	70.3%
5. Maidstone	110,282	67.6%
6. Southampton	185,085	65.1%
7. Hastings	43,552	59.0%
8. Gravesham	75,383	58.3%

9. Dartford	70,236	54.9%
10. Worthing	61,857	53.4%

10 worst areas in East Midlands by number of patients:

Area	Numbers of NHS patients registered at surgeries exceeding pollution limits	Percentage of total patients
1. Leicester	303,123	73.6%
2. Northampton	210,506	85.8%
3. Nottingham	189,009	49.4%
4. Charnwood	164,204	84.3%
5. Derby	142,109	48.5%
6. North West Leicestershire	108,825	100.0%
7. Boston	83,392	100.0%
8. Hinckley and Bosworth	82,927	77.5%
9. Blaby	73,144	74.6%
10. Wellingborough	71,085	73.1%

10 worst areas in East Midlands by % of patients registered at surgeries exceeding WHO limit for PM2.5 air pollution:

Area	Numbers of NHS patients registered at surgeries exceeding pollution limits	Percentage of total patients
1. North West Leicestershire	108,825	100.0%
2. Boston	83,392	100.0%
3. Northampton	210,506	85.8%
4. Charnwood	164,204	84.3%
5. Hinckley and Bosworth	82,927	77.5%
6. Blaby	73,144	74.6%
7. Leicester	303,123	73.6%
8. Wellingborough	71,085	73.1%
9. North Kesteven	70,352	72.3%
10. Melton	35,591	66.4%

10 worst areas in West Midlands by number of patients registered at surgeries exceeding WHO limit for PM2.5 air pollution:

Area	Numbers of NHS patients registered at surgeries exceeding pollution limits	Percentage of total patients
1. Birmingham	494,698	37.8%
2. Sandwell	321,169	94.9%
3. Walsall	176,942	61.1%
4. Wolverhampton	146,417	51.6%
5. Herefordshire	82,652	44.0%
6. Wyre Forest	65,418	60.1%
7. Coventry	54,246	13.7%
8. South Staffordshire	28,273	28.9%
9. East Staffordshire	22,284	17.3%
10. Solihull	20,491	8.9%

10 worst areas in West Midlands by % of patients registered at surgeries exceeding WHO limit for PM2.5 air pollution:

Area	Numbers of NHS patients registered at surgeries exceeding pollution limits	Percentage of total patients
1. Sandwell	321,169	94.9%
2. Walsall	176,942	61.1%
3. Wyre Forest	65,418	60.1%
4. Wolverhampton	146,417	51.6%
5. Herefordshire	82,652	44.0%
6. Birmingham	494,698	37.8%
7. South Staffordshire	28,273	28.9%
8. East Staffordshire	22,284	17.3%
9. Coventry	54,246	13.7%
10. Solihull	20,491	8.9%

10 worst areas in the South West by number of patients registered at surgeries exceeding WHO limit for PM2.5 air pollution:

Area	Numbers of NHS patients registered at surgeries exceeding pollution limits	Percentage of total patients
1. Cornwall	174,955	30.4%
2. Plymouth	170,428	58.1%
3. Swindon	93,320	40.0%
4. Wiltshire	75,031	15.4%
5. Bournemouth	54,886	26.1%
6. Sedgemoor	51,108	39.9%
7. Torbay	45,936	31.1%
8. Teignbridge	43,817	36.2%
9. Bristol, City of	31,992	6.1%
10. Taunton Deane	29,931	25.4%

10 worst areas in South West by % of patients registered at surgeries exceeding WHO limit for PM2.5 air pollution:

Area	Numbers of NHS patients registered at surgeries exceeding pollution limits	Percentage of total patients
1. Plymouth	170,428	58.1%
2. Swindon	93,320	40.0%
3. Sedgemoor	51,108	39.9%
4. Teignbridge	43,817	36.2%
5. Torbay	45,936	31.1%
6. Cornwall	174,955	30.4%
7. Bournemouth	54,886	26.1%
8. Taunton Deane	29,931	25.4%
9. Wiltshire	75,031	15.4%
10. Torridge	8,812	12.3%

5 worst areas in the North West by number of patients:

Area	Numbers of NHS patients registered at surgeries exceeding pollution limits	Percentage of total patients
1. Blackpool	113,228	65.1%

2. Sefton	109,193	39.4%
3. Carlisle	89,212	80.9%
4. Burnley	67,253	68.1%
5. Cheshire East	61,480	15.3%
6. Lancaster	60,872	38.7%
7. Barrow-in-Furness	60,617	85.5%
8. Cheshire West and Chester	49,075	12.4%
9. Chorley	44,592	39.7%
10. Knowsley	12,068	7.5%

10 worst areas in North West by % of patients registered at surgeries exceeding WHO limit for PM2.5 air pollution:

Area	Numbers of NHS patients registered at surgeries exceeding pollution limits	Percentage of total patients
1. Barrow-in-Furness	60,617	85.5%
2. Carlisle	89,212	80.9%
3. Burnley	67,253	68.1%
4. Blackpool	113,228	65.1%
5. Chorley	44,592	39.7%
6. Sefton	109,193	39.4%
7. Lancaster	60,872	38.7%
8. Cheshire East	61,480	15.3%
9. Cheshire West and Chester	49,075	12.4%
10. Wyre	11,876	11.2%

10 worst areas in Yorkshire & Humber by number of patients registered at surgeries exceeding WHO limit for PM2.5 air pollution:

Area	Numbers of NHS patients registered at surgeries exceeding pollution limits	Percentage of total patients
1. North East Lincolnshire	129,860	77.8%
2. East Riding of Yorkshire	93,947	29.2%
3. Scarborough	52,228	44.3%
4. Leeds	32,918	3.7%
5. Kingston upon Hull, City of	21,635	7.2%
6. Bradford	18,769	3.3%
7. North Lincolnshire	17,875	9.7%
8. Sheffield	6,842	1.1%
9. Kirklees	0	0.0%
10. Craven	0	0.0%

10 worst areas in Yorkshire & Humber by % of patients registered at surgeries exceeding WHO limit for PM2.5 air pollution:

Area	Numbers of NHS patients registered at surgeries exceeding pollution limits	Percentage of total patients
1. North East Lincolnshire	129,860	77.8%
2. Scarborough	52,228	44.3%
3. East Riding of Yorkshire	93,947	29.2%

4. North Lincolnshire	17,875	9.7%
5. Kingston upon Hull, City of	21,635	7.2%
6. Leeds	32,918	3.7%
7. Bradford	18,769	3.3%
8. Sheffield	6,842	1.1%
9. Kirklees	0	0.0%
10. Craven	0	0.0%

Editor's Notes

1. For further information or interview bids, contact alex.bigham@uk100.org or 07830 195 812
2. Data from this research is available at www.uk100.org
3. Toxic air at the door of the NHS – Report from British Lung Foundation
<https://www.blf.org.uk/take-action/campaign/nhs-toxic-air-report>
4. Royal College of Physicians - Every breath we take: the lifelong impact of air pollution
<https://www.rcplondon.ac.uk/projects/outputs/every-breath-we-take-lifelong-impact-air-pollution>
5. NHS digital database - Patients Registered at a GP Practice - December 2018
<https://digital.nhs.uk/data-and-information/publications/statistical/patients-registered-at-a-gp-practice/december-2018>
6. COMEAP / Kings College London: UK air pollution could cause 36,000 deaths a year
<https://www.kcl.ac.uk/lsm/schools/population-health-and-environmental-sciences/newsrecords/air-pollution-could-cause-36000-deaths-a-year-in-the-uk.aspx>
7. UK100 is a highly ambitious network of local government leaders, which seeks to devise and implement plans for the transition to clean energy that are ambitious, cost effective and take the public and business with them. It supports decision-makers in UK towns, cities and rural areas in their transition to 100% clean energy by 2050. It is the only network for UK local authorities focused solely on climate and clean energy policy. The leaders made the commitment as part of the momentum around the Paris Agreement in 2015, reflecting the leadership shown by mayors globally on climate change and clean energy. Turning those commitments into reality is the goal of the network. UK100 connects local leaders to each other, to business and to national government, enabling them to showcase their achievements and learn from each other. It enables them to speak collectively on how to accelerate the transition to clean energy locally and nationally.
www.Uk100.org