



UK HOTSPOTS WITH HIGHEST EMERGENCY ADMISSION AND DEATH RATES FOR LUNG CONDITIONS REVEALED

Blackpool, Liverpool and Inverclyde have some of the highest emergency admission and death rates for lung conditions in the UK, according to analysis by Asthma + Lung UK, as it urges UK governments to end the lung health lottery by investing in earlier diagnosis, improved care, and respiratory research and innovation

People in places such as Blackpool, Liverpool and Inverclyde are amongst the most likely to be admitted to hospital in an emergency and die from their lung condition in the UK, according to new analysis from leading lung charity Asthma + Lung UK.¹

The charity is urging UK governments to ensure everyone gets an early diagnosis for their lung condition and once diagnosed receives support and information, as well as tackle unacceptably high rates of air pollution and smoking, which lead to lung conditions developing and worsening.

The charity, which has launched its [End the Lung Health Lottery](#) campaign, analysed and ranked the latest rates of emergency hospital admissions and deaths from lung conditions including asthma, chronic obstructive pulmonary disease (COPD) and respiratory infections like flu and pneumonia, for 216 local authorities throughout the UK.

Asthma + Lung UK says that despite the tireless work of NHS doctors and nurses across the whole of the UK, basic levels of care for people with lung conditions is patchy. The reasons for such high rates of emergency admissions and deaths in some areas is likely due to health inequalities.²

Many of the areas with poor lung health are areas where people experience higher levels of deprivation, which can lead to problems like having no choice but to live in poor quality housing, where cold, damp and mould can all be triggers for asthma attacks or cause lung conditions to worsen.

They are also areas with historically higher smoking rates. These factors mean that even if people were able to move to areas with lower emergency admissions and death rates, they wouldn't necessarily experience better outcomes for their lung condition if underlying causes such as smoking, poor housing and exposure to air pollution aren't addressed.

In addition, across the UK, an historic lack of investment into lung research and innovation has also contributed to poor lung health.



Asthma + Lung UK's analysis found:

- Knowsley, Inverclyde, Salford, North Ayrshire and Blackburn with Darwen topped the rankings as having the highest rates of emergency hospital admissions and deaths for lung conditions in the UK
- York, Bracknell Forest, Barnet, Kensington and Chelsea, and West Sussex had the lowest rates of emergency admissions and deaths for lung conditions in the UK
- Within England there is a North-South divide when it comes to poor lung health. Places in the North-West of England make up over half (6/10) of the areas ranked highest for emergency admissions and deaths across the UK. These places were Knowsley, Salford, Blackburn with Darwen, Liverpool, Blackpool and Manchester. Many of these areas where people experience poor lung health such as Blackpool, Manchester, Knowsley and Liverpool are also areas where people experience higher levels of deprivation
- Some of the areas facing high death and emergency admission rates also have increased levels of air pollution. Levels of PM 2.5, the most dangerous type of air pollution to human health, in Blackpool (ranking at number 210) are four times higher than levels in the Shetland Islands in Scotland, which has one of the lowest emergency admission and death rates (ranking at number 13)
- High smoking rates in some areas also play a part in the high rates of emergency admissions and deaths seen, for example, in Blackpool, where an estimated fifth of the adult population smoke.³

Government recently announced it would be scrapping its health inequalities white paper. However, with the analysis showing areas with high rates of deprivation like Blackpool having death rates from lung conditions over two times higher than more affluent areas such as The London Borough of Richmond, and Rutland in the East Midlands, Asthma + Lung UK says health inequalities must be urgently addressed.

Asthma + Lung UK, who last year offered a listening ear to more than 17,000 people with asthma or another lung condition through its Helpline team, had 12 million views via its website and has 150 support groups UK-wide, is now urging Government to prioritise lung conditions in its upcoming Major Conditions Strategy.

This should include ensuring everyone with a lung condition gets diagnosed early so they are better able to manage their condition and are more likely to get treatment before it worsens, which would help reduce emergency hospital admissions. The charity is also concerned that vital diagnostic testing for lung conditions was suspended during the pandemic and in many areas is not fully back up and running again.



Currently, in the UK lung conditions are the third biggest killer yet they only receive 2% of public investment into research. The charity is therefore urging the Government to increase funding for research and innovation into lung conditions that could save and transform millions of lives.

Sarah Woolnough, Chief Executive at Asthma + Lung UK, said:

“It’s appalling that people across the UK are struggling to breathe, are being rushed to hospital in an emergency and that so many are dying avoidably from their lung conditions. We know that people in more deprived areas are more likely to have worse lung health, often with no choice but to live in poorer quality housing, more polluted areas with higher smoking rates. We need to tackle the lung health lottery head on.

“To do better, UK governments must address stark inequality in lung health and ensure the NHS has the resources to support its dedicated staff. People at risk of or living with lung conditions can’t simply move to improve their lung health, it is health inequality we must battle. Governments must ensure people living with a lung condition get an early diagnosis, have help quitting smoking, can breathe good quality air and receive the right support and treatment to manage their lung condition well. We’re here to help everyone with a lung condition, wherever they are, and we want to urge everyone to take lung conditions seriously by joining our *End the Lung Health Lottery* campaign.”

Joanne, 49, a teaching assistant from near Liverpool, lost her daughter Amy, 22, to an asthma attack in October 2022. Amy, who spent years struggling with severe asthma, left two young children behind.

Joanne said: “Amy was frequently rushed to hospital with life-threatening asthma attacks. One minute she was completely fine and the next she was fighting for breath. She lived in constant fear, waiting for the next asthma attack to strike. She did everything she could to manage her symptoms, but it was impossible to predict what triggered her asthma, although stress, winter bugs, and pollen all played a part. Recently we also started to wonder if air pollution played a part. Her son’s school was only a six-minute walk away, but she struggled to walk there, as it was on a busy road with lots of traffic.

“One day last year, in the early hours, I had call from Amy’s partner Keagan. Amy had collapsed after an asthma attack and was rushed to hospital. Doctors did everything they could to save her, but she died in hospital two days later. There isn’t any pain comparable to losing your child. Amy’s death has left a gaping hole in our family. I’m determined to keep her memory alive and to raise awareness about how serious asthma is, to prevent other families going through what we have. Amy was



often told 'it's just asthma, you need to get on with it,' it wasn't just asthma for Amy – it controlled every aspect of her life."

Asthma + Lung UK wants to reassure the millions of people in the UK living with lung conditions that it can provide help and support wherever they live. If you are worried about any lung symptoms or your lung condition you can give our Helpline team a call on 0300 222 5800 (Monday-Friday, 9am-5pm) and visit our website, which has vital health information on topics such as managing your COPD and health advice about asthma. The charity also has more than 150 support groups up and down the country offering support and advice.⁴

Asthma + Lung UK previously found that [people with a lung condition are more likely to die in the UK than anywhere else in Europe](#).

Find out more and get involved in our [End the Lung Health Lottery](#) campaign.

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Notes to Editors

1. Emergency admissions for respiratory diseases latest data is from Inhale for England (2020-2021 latest available) <https://fingertips.phe.org.uk/profile/inhale/data#page/1>. Health Maps Wales (2020-2021 latest available) https://www.healthmapswales.wales.nhs.uk/data-catalog-explorer/?tag=TDiseasesoftheRespiratorySystem_HospitalAdmissionsduetoRespiratoryDiseases. Public Health Scotland (2020-2021) <https://publichealthscotland.scot/publications/acute-hospital-activity-and-nhs-beds-information-annual/acute-hospital-activity-and-nhs-beds-information-annual-year-ending-31-march-2022/>. With data requested from NI Department of Health Statistics (2020-2021 latest available), data not available online. All data is age standardised.

Age-standardised mortality rate data is via NOMIS for England and Wales using the following query: selected geography local authority district, 2021, total all ages, age standardised mortality rate, sex total, underlying causes of disease respiratory system J00-J99 (2021 latest available) <https://www.nomisweb.co.uk/query/construct/summary.asp?mode=construct&version=0&dataset=161>. Death rate per 100,000 for Scotland is via National Records of Scotland, Vital Events – Deaths: section 6 deaths - causes, table 6.03 deaths by sex, cause and administrative area (2021) <https://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/vital-events/general-publications/vital-events-reference-tables/2021>. Number of deaths per Health and Social Care trust population were requested from NI Department of Health statistics (2021 latest available), data not available online.

Local authority areas were used to represent the data. Not all the data was originally presented in this format and the data from health geographies (such as historic Clinical Commissioning Groups) had to be converted, the ONS's Open Geography Portal <https://geoportal.statistics.gov.uk/> was used. Some health geographies mapped exactly or covered all a local authority. Others were split across several and where one health



geography's population represented the majority of a local authority this was used. Where multiple health geographies constituted a local authority or county area, the median value was used.

In Northern Ireland, respiratory admissions data was provided by Health and Social Care (HSC) trust. To calculate the rate, the local government districts were mapped onto HSC trusts to determine what percentage of the HSC trust population each local government district was responsible for. This proportion was used to determine how many respiratory deaths occurred in each local government district which could then be divided by the population to provide a rate.

Data was looked at for emergency hospital admissions and mortality rates for all lung conditions. Rates per 100,000 were used to account for the different population sizes of local authorities, data was age-standardised, but wasn't standardised against the UK population. The two different rates were ranked in order. The figures were then combined, taking the average of the two rankings and then this was ranked from the areas with the highest combined total of emergency admissions and death rates, to areas with the lowest combined total of emergency admissions and death rates. Ranking 1 is for the area that had the lowest rate of deaths and emergency admission rate and ranking 216 is the area with the highest.

The data for the levels of PM2.5 is from Department for Environment, Food & Rural Affairs (2021 latest available) <https://uk-air.defra.gov.uk/data/pcm-data>. These data are population-weighted annual mean concentrations ($\mu\text{g}/\text{m}^3$) for each local authority. The air that you breathe contains a mixture of solids and liquids, including carbon, chemicals, sulphates, nitrates, mineral dust, and water. This is known as particulate matter. Some particles are more dangerous than others. Particles such as dust, soot, dirt or smoke, are large or dark enough to be visible. But the most damaging particles are minuscule particles, known as PM10 and PM2.5. PM2.5 particles are invisible to the naked eye and small enough to pass through the lungs, into the bloodstream, and into your organs. Generally, they come from the combustion of solid and liquid fuels, through power generation, domestic heating and in-vehicle engines. Exposure to PM2.5 can cause illnesses like asthma, COPD, coronary heart disease, stroke, and lung cancer. The World Health Organisation recommended $5 \mu\text{g}/\text{m}^3$ of PM2.5 in 2021. <https://www.who.int/news-room/feature-stories/detail/what-are-the-who-air-quality-guidelines#:~:text=The%20WHO%20Air%20quality%20guidelines%20are%20a%20set%20of%20evidence,quality%20that%20protects%20public%20health>.

The percentage of current smokers is from the Office for National Statistics (2021 latest available). Data from Annual Population Survey & Opinions, Lifestyle Survey occurs fortnightly (2000-2500 people, the annual population survey is approximately 320,000), Northern Ireland Health Survey (3000 people), National Survey for Wales (12000 people), Scottish Health Survey (4500 people).

https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthandlifeexpectancies/bulletins/adultsmokinghabitsingreatbritain/2021?utm_source=The%20King%27s%20Fund%20newsletters%20%28main%20account%29&utm_medium=email&utm_campaign=13645615_NEWSL_HMP%202022-12-06&dm_i=21A8,84H0V,CUBFQX,X9VWT,1



Indices of deprivation (IMD) were used, which is precalculated data to estimate the level of deprivation. Each Nation has its own specific version. It is important to be aware that not all the factors considered in IMD have an impact on lung conditions and each Nation puts weightings on different factors in the index differently:

The English Indices of Deprivation (2019 latest available) provides a set of relative measures of deprivation for small geographical areas across England and is a rank of averages. It contains 7 different domains – 22.5% income deprivation, 22.5% employment deprivation, 13.5% health deprivation and disability, 13.5% education, skills and training deprivation, 9.3% crime, 9.3% barriers to housing and services and 9.3% living environment deprivation. <https://www.gov.uk/government/statistics/english-indices-of-deprivation-2019>

The Welsh Index of Multiple Deprivation (2019 latest available) is the Welsh Government's measure of relative deprivation, which identifies 20% of areas with the highest concentrations of several different types of deprivation. It comprises 8 different domains weighted differently – 22% income, 22% employment, 14% health, 14% education, 10% access to services, 7% housing, 5% community safety and 5% physical environment. <https://stats.wales.gov.wales/Catalogue/Community-Safety-and-Social-Inclusion/Welsh-Index-of-Multiple-Deprivation/WIMD-2019/localauthorityanalysis#:~:text=WIMD%20is%20the%20Welsh%20Government%27s,several%20different%20types%20of%20deprivation.>

The Scottish Index of Multiple Deprivation (2020 latest available) is a relative measure of deprivation. It contains 7 domains – 28% income, 28% employment, 14% health, 14% education, skills and training, 9% geographic access to services, 5% crime and 2% housing. <https://www.gov.scot/publications/scottish-index-of-multiple-deprivation-2020v2-local-and-national-share-calculator-2/>

The Northern Ireland Multiple Deprivation Measure (2017 latest available) identifies small area concentrations of deprivation across Northern Ireland. It contains 7 different domains – 25% income, 25% employment, 15% health, 15% education, 10% access, 5% living environment and 5% crime. <https://www.nisra.gov.uk/publications/nimdm17-soa-level-results>

Combining the emergency admissions rate and death rate sees the following places in the UK rank as having the lowest combined rate of emergency admissions and deaths.

Local Authority	Region	Country	Rank
York	Yorkshire and The Humber	England	1
Bracknell Forest	Southeast	England	2
Barnet	London	England	3
Kensington and Chelsea	London	England	4
West Sussex	Southeast	England	5
Hounslow	London	England	6
Westminster	London	England	7



Windsor and Maidenhead	Southeast	England	8
Richmond upon Thames	London	England	9
Camden	London	England	10

Combining the emergency admissions rate and death rate sees the following places in the UK rank as having the highest combined rate of emergency admissions and deaths.

N.B. Due to the Isles of Scilly not having data on respiratory mortality, it has been omitted from the rankings.

Local Authority	Region	Country	Rank
Armagh City, Banbridge & Craigavon	Northern Ireland	Northern Ireland	207
Manchester	Northwest	England	208
East Ayrshire	Scotland	Scotland	209
Blackpool	Northwest	England	210
Liverpool	Northwest	England	211
Blackburn with Darwen	Northwest	England	212
North Ayrshire	Scotland	Scotland	213
Salford	Northwest	England	214
Inverclyde	Scotland	Scotland	215
Knowsley	Northwest	England	216 (worst place)

2. The charity says even people living in places that have lower death and emergency admission rates for lung conditions are still facing avoidable risk factors such as dangerously high levels of air pollution, high smoking rates and poor basic asthma and COPD care. Basic asthma care includes getting a written asthma action plan, being taught inhaler technique and having an annual asthma review. COPD care includes access to services to help quit smoking, referral to pulmonary rehabilitation, receiving flu and pneumonia vaccinations, having a co-created written self-management plan and optimising care for other conditions they suffer from such as heart disease and cancer.

3. The percentage of current smokers in Blackpool is based on ONS survey data.



4. The charity's support groups meet regularly throughout the UK and runs online sessions. Find out if there is a support group in your area:

<https://www.asthmaandlung.org.uk/help/support-network>

For more information or for interview requests, please contact the press team on 0207 786 4949 or press@asthmaandlung.org.uk.

Asthma + Lung UK

Asthma + Lung UK is the only charity in the UK fighting for everyone with a lung condition, aiming for a world where everyone can breathe with healthy lungs. We fund cutting-edge research and provide advice and support for the 12 million people who will get a lung condition during their lifetime. We also campaign for clean air and for better NHS diagnosis and treatment. For further information visit asthmaandlung.org.uk.