



# British Lung Foundation response to the prevention green paper (2019)

The British Lung Foundation (BLF) is pleased to respond to the open consultation on the green paper *Advancing our health: prevention in the 2020s*.

The British Lung Foundation is the only charity looking after the nation's lungs. We provide hope, help and a voice for people with all lung conditions through our research, our helpline and local groups, and our local and national campaigns. Our aim is to make sure that one day everyone breathes clean air with healthy lungs.

Lung disease is one of the three biggest killer disease areas in the UK. It kills 115,000 people each year, the equivalent of one person every five minutes, and approximately 12 million people in the UK (around 1 in 5) have a history of asthma, chronic obstructive pulmonary disease (COPD) or another long-term respiratory illness.

Our response covers a number of questions from the consultation document which are relevant to preventing lung disease or improving lung health more generally. The key recommendations from our submission are to:

- Improve the NHS Health Checks programme by including a new question on breathlessness to improve early diagnosis of lung disease
- Implement a 'polluter pays' charge on the tobacco industry to improve the sustainability of funding for tobacco control work, as well as increasing funding for public health
- Develop the role of community pharmacists by increasing the level of training in very brief advice for smoking cessation, and formalising the role they have in spotting undiagnosed lung disease and ongoing management of the disease in patients
- Utilise cross-government action and thinking to create healthy spaces which protect vulnerable people from air pollution

Please note that we have also facilitated responses to the consultation from members of the public and people affected by lung disease. These submissions will be sent separately.

## Chapter 1: Opportunities

### ‘Do you have any ideas for how the NHS Health Checks programme could be improved?’

The NHS Health Check is designed as a preventative programme to spot early signs of some of the main causes of premature mortality in England: stroke, kidney disease, heart disease, type 2 diabetes and dementia.

Yet it misses the ideal opportunity to spot early signs of respiratory diseases such as chronic obstructive pulmonary disease (COPD).

Respiratory disease remains the third biggest cause of death in the UK, with over a million people living with undiagnosed COPD.<sup>i</sup> It was a significant contributor to health inequalities, with the most deprived communities being around 2.5 times more likely to die from COPD than the least deprived.<sup>ii</sup>

Early diagnosis is so important in lung disease because damage to the lungs cannot be reversed. Delayed diagnosis results in delayed treatment and intervention, so early and accurate diagnosis is a window of opportunity to make a real difference to a patient’s life. Currently we know that one of the most dispiriting issues for people with lung disease and their families is knowing that better treatment might have been possible if they had been diagnosed sooner.

The health check could do more to mitigate this risk. As such, we recommend the NHS Health Check is improved in the following two ways:

1. By including a specific question on breathlessness to spot early signs of respiratory disease
2. That where digital Health Checks are available locally and completely by patients independently, the BLF’s online Breath Test is included (<https://breathtest.blf.org.uk/>)

#### 1. Question on breathlessness

Asking about breathlessness levels in the Health Check has the potential to reduce premature mortality associated with these diseases. This is because early diagnosis allows access to the best available treatment and interventions such as smoking cessation, and in many cases will slow down disease progression. It also allows patients with a diagnosed condition such as asthma but who are struggling to manage it to be identified and supported to self-manage and keep well.

The vast majority of COPD cases are preventable: smoking is the most significant risk factor, followed by occupational exposure and air pollution.<sup>iii</sup> Lung disease symptoms such as breathlessness and chronic cough can go under the radar for years, leading to late diagnosis. Because of this around a third of people with their first hospital admission for a COPD exacerbation have not been previously diagnosed.<sup>iv</sup>

We recommend that the best way to integrate respiratory prevention into the NHS Health Checks programme is to include the breathlessness scale from the [Medical Research Council’s Dyspnoea scale](#) as a single question.

The 1-5 scale measures perceived respiratory disability and grades the effect that breathlessness has on a person’s daily activities. The patient is asked to rate where they score on the scale against the following five statements, and generally grades 2 or 3 and above indicate there is a problem:

1. I’m not troubled by being out of breath except on strenuous exercise
2. I’m short of breath when hurrying on the level or walking up a slight hill
3. I walk slower than most people on the level, stop after a mile or so, or stop after 15 minutes of walking at my own pace
4. I stop for breath after walking about 100 yards or after a few minutes on level ground

## 5. I'm too breathless to leave the house, or breathless when dressing and undressing

We suggest that if the patient exceeds grades 2 the person should be referred into primary care for diagnostic tests to further explore their breathlessness. Moreover, if the patient smokes they should be given smoking cessation advice and a referral for cessation support - which should already be part of the health check programme.

## 2. BLF's Breath Test

The NHS is moving towards being digital-first. The [BLF's online Breath Test](#) is a simple, quick and effective way of self-identifying whether symptoms of breathlessness require further investigation by a doctor.

The test asks about a person's level of exercise, smoking status and experience of breathlessness, using the MRC scale outlined above. It takes about five minutes to complete. People with a score of 2 or above and/or with additional risk factors such as smoking, obesity or a poorly controlled existing lung condition, are advised to approach their GP for further help.

A recent published analysis of 356,799 responses to the Breath Test found 20% (71,634 responses) reported limiting breathlessness at MRC grade 3 and above.<sup>v</sup> The majority of these were worried about their breathing but 29% had not sought medical advice. Of those who had sought advice, over half reported that the advice received had not helped their breathlessness.

Overall, analysis of respondents to the Breath Test shows that there is substantial unmet need related to breathlessness, with individual who have limiting breathlessness not seeking healthcare. With 20% of the sample reporting breathlessness, this suggests levels of breathlessness in the population are higher than previously reported prevalence. Limiting breathlessness is a common problem which requires further attention with the aim to timely diagnose and treat patients.

We are in conversations with councils about piloting inclusion of the Breath Test in their digital NHS health check service. We recommend NHS England look at the outcomes of this pilot in light of the benefits it could bring.

As above, if a patient reports experiencing breathlessness at grade 2 or above, the digital service should suggest the individual follows this up in primary care for further diagnostic tests.

## Chapter 2: Challenges

### 'What ideas should the government consider to raise funds for helping people stop smoking?'

The BLF fully supports a 'polluter pays' charge on the tobacco industry. The industry should be made to pay for the damage it's done and continues to do by producing and selling the only legal product which kills when used as intended.

The polluter pays charge, as proposed by the Smokefree Action Coalition, should be structured as a charge on each tobacco manufacturer. It could produce a fixed sum of money each year to the government between £150 - £500 million. Each tobacco company would pay a share of this sum based on the volume of cigarettes they sell in the UK.

The money raised should be used to fund a suite of essential tobacco control measures which are currently underfunded, such as local stop smoking services and quit smoking campaigns in the media.

The polluter pays approach is a commonly accepted practice in which those who produce pollution bear the costs of the damage to human health or the environment.<sup>vi</sup> There is a clear opportunity for the tobacco industry to pay a charge to government which will supplement existing government funding. A polluter pays charge meets the UK's legal requirement to protect from the vested interests of the tobacco industry (article 5.3 of the FCTC), by ensuring this is in no way a partnership with the industry.

This will allow support for smokers to be provided more sustainably. It was positive to see a real-terms uplift to the public health grant in the recent spending round. Yet for a number of years the grant has faced year-on-year cuts which do not appear to be addressed by the suggested 1% increase in the 2020-21 budget. Funding in 2019/20 was £850m lower in real-terms than initial allocations in 2015/16, and the Health Foundation estimates £1bn a year is needed to reverse this cut to public health funding.<sup>vii</sup>

The current funding gap threatens not only specialist stop smoking services, but all tobacco control work under the remit of local authorities including local public health campaigns and addressing illicit tobacco. It also jeopardises the successful delivery of other vital health services supported by the fund such as sexual health services and children's health visitors.

The polluter pays will contribute to the sustainable funding of tobacco control work. But it cannot and will not replace the public health grant entirely. It is essential the government reviews funding for the public health grant and ensures it's delivered at a sustainable level so that local authorities can plan services to improve population health with longevity.

Moreover, the proposed ambition to become smokefree by 2030 is bold and the right thing to do, and is to be celebrated. But it will only be achieved if we help current smokers to quit smoking as well as prevent others from becoming addicted to tobacco in the first place.

National and local mass media campaigns are an essential part of achieving this. Within the Tobacco Control Plan for England (2017) the government commits to continuing mass media campaigns through Public Health England (PHE) which promote cessation and raise awareness of the harms of smoking<sup>viii</sup>. It also outlines that it would like to see local areas working together to explore regional and cross-regional approaches for mass media campaigns.

We know that the PHE's budget for delivering Stoptober was reduced in 2019/20 so that it no longer has reach on television. We also believe that the annual 'health harms' stop smoking campaign delivered by PHE in January has been cut as a result of central budget. This is very concerning and we urge that a solution is found for sustainably funding these campaigns which PHE analysis shows has greater reach when visible on broadcast media.

Because of this we recommend the government implements a polluter pays charge on the tobacco industry and reinstates sustainable levels of funding to the public health grant.

We also urge for clear lines of accountability for achieving this ambition. Due to the nature of tobacco control work sitting across local authorities, Public Health England, NHS England and the Department of Health and Social Care, the ambition could be undermined by a lack of ownership. Further examples of these difficulties are outlined in our response to the question 'What more can we do to help local authorities and NHS bodies work well together?'. We hope the government is able to be clear on accountability within their forthcoming response to the green paper.

### **‘Have you got examples or ideas that would help people to do more strength and balance exercises?’**

One of the most effective and cost-effective treatments for people living with lung disease is pulmonary rehabilitation. <sup>ix</sup> This is an exercise and education programme run over 6-8 weeks, in classes which are largely led by physiotherapists. These classes are designed for people who are affected by their breathlessness and aims to improve their self-management and exercise ability, including lower and upper body muscle building and strength training. Currently just 15% of people with COPD at MRC grade 3 and above are referred to pulmonary rehabilitation. <sup>x</sup> Waiting lists can be long and access varies across the country.

NHS England’s Long Term Plan aims to expand pulmonary rehabilitation services and increase referrals. However, this is limited to patients with COPD with an MRC grade of 3 and above. Other lung disease patients, such as those with severe asthma and interstitial lung disease, will also benefit from pulmonary rehabilitation. To improve access to pulmonary rehabilitation and help more people with lung disease do strength and balance exercises, we need to encourage the government to ensure that all patients with lung disease have the opportunity to complete a programme. It is also vital that after a patient completes a programme, service providers are able to refer them onto exercise classes or local gyms to ensure they can maintain their muscle strength and increased activity.

### **‘There are many factors affecting people’s mental health. How can we support the things that are good for mental health and prevent the things that are bad for mental health, in addition to the mental health actions in the green paper?’**

People with mental health conditions are far more likely to smoke than the general population. <sup>xi</sup> This makes a very significant contribution to the estimate that people with poor mental health are likely to die somewhere between 10 and 20 years earlier than the general population. <sup>xii</sup>

Smoking prevalence is at 40% amongst adults with a serious mental illness. <sup>xiii</sup> Despite being just as likely to say they want to quit as the general population, they are less likely to be successful in doing so. <sup>xiv</sup> We urgently require dedicated, targeted support in specialist mental health settings, with all staff trained in treating tobacco dependency and very brief advice as a core competency. As a priority we also need clear guidance for mental health trusts on meeting ambitions of the Long Term Plan, which covers requirements for training, access to treatments - including e-cigarette use.

People with pre-existing mental health conditions are more likely to develop a preventable lung disease due to historically high smoking rates outlined above which continue to this day. <sup>xv</sup> As such, respiratory disease is often correlated with poor mental health. The treatment of tobacco dependency is vital to improving the health of people living with poor mental health.

Living with a lung disease can greatly impact on a person’s mental health, and the development of conditions such as anxiety or depression is linked to the life-changing and often life-limiting symptoms of the disease. Mental health support must therefore be embedded within the care pathway for respiratory patients, to flag that patients should be assessed for any support they need. This should include access to community support, particularly peer support groups.

A failure to address both smoking and mental health where they occur is a huge burden on the NHS. For instance, people with COPD and mental health problems are more likely to be admitted to hospital with an exacerbation of their condition and likely to stay in hospital for about twice as long as those with good mental health. <sup>xvi</sup>

### **‘Have you got examples or ideas about using technology to prevent mental ill-health, and promote good mental health and wellbeing?’**

As indicated above, e-cigarettes have been shown to be a helpful contributor to reducing smoking prevalence amongst mental health in-patients.

Beyond this, a number of digital technologies including apps are being developed to promote good mental health and wellbeing. Amongst patients with lung disease, we know of a number of technologies to support self-management which are being piloted amongst patients. These include digital alternatives for pulmonary rehabilitation; as well as appearing to supplement face-to-face pulmonary rehabilitation classes for people with lung disease they could also help increase reach for homebound patients who cannot attend classes in the community.

It is really important that these types of technologies are properly evaluated for clinical effectiveness and then integrated across the system appropriately. Patient engagement is also key, and work should be done to ensure that these types of developments and sometimes alternatives are meeting patient need and are supporting patients how they want to be supported.

### **‘Have you got examples or ideas for services or advice that could be delivered by community pharmacies to promote health?’**

Pharmacies are often ideally placed to advise on quitting smoking and provide treatment for doing so. Because of this all community pharmacists should receive mandatory training in delivering very brief advice (VBA) for smoking cessation.

VBA is a 30-second intervention that can be delivered by all health care professionals. VBA follows the ‘AAA’ framework: ask smoking status; advise on the best way to quit smoking; act on the smoker’s motivation to quit. It is quick to learn and deliver and is shown to increase motivation to quit and can double a patient’s chance of success.

Although data collection is poor, it’s believed that VBA is underused in primary care and that there is scope to increase training of health care staff.<sup>xvii</sup> A number of community pharmacies are already commissioned to deliver comprehensive stop smoking support by the local authority. But VBA is a basic competency all front-line health care professionals should be comfortable with and able to deliver. The key to success is in the repeated, routine delivery of VBA.

Community pharmacists are also very well placed to identify people who may have an undiagnosed illness or be struggling to manage their condition. This is because of their location on high streets, as part of the community, which means people can access them more easily than GP surgeries.

There is scope to develop the role of pharmacies, as part of primary care networks, in diagnosing illness. This is one of the key recommendations from the Taskforce for Lung Health, a coalition of 30 organisations and individuals with an interest in respiratory. The Taskforce believe that community pharmacists should have access to a formal route to refer people who may have a respiratory condition - such as people who buy large amounts of cough syrup or who have repeated chest infections - to general practice for further investigation. Currently there is capability for GPs to refer people to community pharmacy for help with minor ailments, so it is logical for this to work in both directions.

Pharmacists can also help people manage their medication, such as by carrying out inhaler checks and ensuring people with asthma and COPD are adhering to their medicines. This in turn reduces attacks or exacerbations and relieves pressure on local health services. In upcoming discussions on

pharmacy contracts as part of the NHS Long Term Plan, we recommend that this forms part of the service pharmacists are asked to provide.

## Chapter 3: Strong foundations

### **‘What could the government do to help people live more healthily: in homes and neighbourhoods; when going somewhere; in workplaces; in communities’**

Crucially, it’s important to remember that healthy spaces are those with clean air that is safe to breathe. Air pollution is the top environmental risk to human health in the UK. <sup>xviii</sup> It contributes to tens of thousands of early deaths and can severely damage the quality of life of people with a long-term lung condition like asthma or COPD. <sup>xix</sup>

Tackling air pollution is one area which specifically requires cross-government holistic action and thinking. There are a number of actions urgently needed to be taken by the Department of Health and Social Care and other government departments to create healthy spaces which protect vulnerable people from air pollution.

These actions include:

#### 1. Public health campaign on air pollution

Air pollution is bad for everyone, but for the 12 million people in the UK who live with a lung condition, such as asthma, COPD or IPF, it poses a real and immediate threat to their health. A spike in air pollution levels can lead to symptoms getting worse, flare-ups and even the risk of going to hospital.

We know that the provision of accurate, timely and localised data on air pollution is critical for enabling people to protect their own health. Therefore, the government should fund a public health campaign to provide this information.

Any air pollution data must always be accompanied with robust health advice to ensure people are empowered to make decisions on how to protect themselves and to push local and national government to take action. This work should be targeted to areas where vulnerable people live, work and play.

#### 2. Changes to transport policy

We are calling for a national network of charging clean air zones (CAZs), properly funded and supported by central government; diesel vehicle scrappage scheme; improved active and public transport.

Transport policy plays a major role in health, with the majority of roadside air pollution coming from vehicle emissions. <sup>xx</sup> DEFRA’s own research shows that the most effective way to reduce the majority of NO<sub>2</sub> exceedances is the implementation of charging CAZs across the UK. <sup>xxi</sup> Therefore, we need to see the rapid implementation of an effective network of charging CAZs. These should charge the use of the dirtiest vehicles - including private cars - but include exemptions for people with reduced mobility.

For these zones to be effective, proper support is needed for local authorities to put the infrastructure and funding schemes in place to encourage public transport use, upgrade public sector fleets, and to support individuals with long-term health conditions to upgrade to electric vehicles.

We also need to see the introduction of a diesel vehicle scrappage scheme, where the most heavily polluting cars can be traded in for a discount on a cleaner travel option. The scheme should be

targeted at the most polluted urban areas and should focus on helping people with a lung condition and those on low incomes.

This work also needs to be matched with policies and funding to reduce the volume of traffic by encouraging and facilitating active travel and more efficient longer journeys by public transport.

Planning policy also plays an important in ensuring we live in a clean and healthy environment. We want to see changes to the way planning is carried out so no new schools, hospitals and care homes are located in areas with harmful levels of air pollution.

### 3. Clean air school programmes

With over 2,000 schools in areas with toxic air, it's clear a national comprehensive plan to protect children as they travel to school and while they're at school is urgently needed.<sup>xxii</sup> There are numerous examples of good practice across the UK, but these need to be scaled up to ensure all children are protected from harm. This national clean air programme for children should include specific interventions to protect children:

- Comprehensive air quality audits of schools, nurseries and playgrounds in known pollution hotspots to identify all those affected by illegal and harmful levels of air pollution and to further identify and implement policies and actions to protect children's health.
- Banning the creation of new schools, nurseries & playgrounds in pollution hotspots.
- Introducing traffic exclusion zones around schools, nurseries and playgrounds where this will help to reduce children's exposure.
- Promoting and enabling walking, cycling and public transport as key options for journeys to and from schools, nurseries and playgrounds.
- Providing schools and nurseries with a proactive alert system for high pollution events and guidance and support on how to protect children from air pollution throughout the year.

### 4. Adopt WHO limits

Currently the UK's legal limits for fine particulate matter (PM2.5), a harmful type of pollution, are set far too high to protect our health. The UK government needs to introduce new limits for PM2.5 into the upcoming Environment Bill that are in line with those recommended by the World Health Organization and commit to meeting these by 2030.

#### Vaccination:

In addition to improving air quality we recognise that improving coverage of flu vaccination will help create healthy spaces.

We are therefore pleased to see the commitment for DHSC to publish a new Vaccine Strategy before the end of the year, and to have the opportunity to input into the development of the strategy this autumn.

We recommend the new strategy reviews current insight about uptake of the flu vaccination and contains a plan for improving uptake of the flu vaccine. We are particularly concerned with uptake among clinical at-risk groups, including those with chronic respiratory disease, and among frontline health and social care workers.



Flu is highly transmissible and continues to place a serious burden on the NHS during winter period. Flu cases resulted in around 400,000 bed days in 2017-18 and results in a high number of deaths each year.<sup>xxiii</sup> In 2017-18 there were nearly 16,000 deaths associated with flu in England alone.<sup>xxiv</sup>

Flu vaccination is one of the most cost-effective interventions for COPD and is supported in various clinical guidelines for lung diseases.<sup>xxv</sup> People with lung disease who catch the flu can suffer from severe exacerbations of their existing condition and are at an increased risk of developing more serious illnesses, such as pneumonia and acute bronchitis as a result.

In spite of this, uptake remains far below national targets:

- only half (49.8%) of all patients with a chronic respiratory condition in the clinical at-risk group receive the flu jab in 2018-19 - well below the 75% target
- 70.3% of all frontline health care workers received the jab in 2018-19. The target is now at 75%, with an ambition to achieve universal coverage

We need health care professionals to be empowered to use every opportunity to raise awareness of and to offer the flu vaccination. There should be improvements to flu programme planning at local or regional level to reduce regional variation in uptake, as well as sustained funding for public health campaigns with tailored messaging for conditions promotes uptake amongst at-risk groups. Condition-specific messaging is likely to be more effective for different lung conditions, such as COPD and asthma.

### **‘What government policies (outside of health and social care) do you think have the biggest impact on people’s mental and physical health? Please describe a top 3’**

Every government department creates policy which impacts people’s mental and physical health. We would therefore support a call for someone in each department to have ministerial responsibilities with health improvement as a way to embed public health across government decision making. We also welcome the Chief Medical Officer’s recommendation to develop a new Composite Health Index which will be tracked alongside GDP. We hope it looks at specific measures including health and wellbeing and where appropriate considers data on key indicators for smoking and air quality.

Air pollution in particular requires cross-government action. We have outlined key government policies above in response to the creating healthy spaces question.

### **‘How can we make better use of existing assets - across both the public and private sectors - to promote the prevention agenda?’**

It is vital that the UK maintains compliance with article 5.3 of the Framework Convention on Tobacco Control and doesn’t engage in any form of partnership working with the tobacco industry at any level. The polluter pays levy provides a good opportunity to promote the prevention agenda whilst complying with the FCTC.

### **‘What more can we do to help local authorities and NHS bodies work well together?’**

It requires very close working between local authorities and NHS bodies to create a smokefree generation by 2030.

One significant challenge in this area is funding. Tobacco control work - including commissioning of community stop smoking services - sits with local authorities, with funding coming through the public

health grant. Prescribing costs, health care professional delivery of very brief advice, and direct cessation support in general practice remains the responsibility of NHS. In the face of sustained cuts to the public health grant, primary care faces increased pressure to provide resource.

One specific impact of this is availability of prescriptions to aid smoking cessation in primary care. The number of prescriptions dispensed through primary care has fallen by 24% in just two years, following a decline in nicotine replacement therapy of 75% in just under a decade.<sup>xxvi</sup> There are now a number of CCGs where they will not fund evidence-based treatments such as varenicline at all, leaving smokers without access to stop smoking treatments. This is largely due to local authorities reducing service provision and the CCG being unable or reluctant to fund treatments themselves.

Local authorities and the NHS need to work in partnership to meet the ambition on smoking. We urge the government to increase the public health grant to allow sustainable delivery of stop smoking services. We also need DHSC to outline NHS responsibilities in smoking cessation, such as that CCGs should fund the full suite of stop smoking treatments.

NHS Lung Health Check pilots also present a specific example where the NHS and local authorities need to join up to deliver the most effective service. The programme provides targeted screening for smokers or ex-smokers between 55-75 years of age and aims to detect lung cancer as well as a range of other diseases including COPD. The programme has a clear necessity to deliver stop smoking support to patients attending the service, so the programme must integrate existing stop smoking service provision commissioned by the local authority with any in-house services within the lung health check itself. All patients being screened must receive cessation advice and support to quit if they smoke. STPs, ICSs and Health and Wellbeing Boards need to be overseeing this and should be held to account.

**For further information please contact:**

Rachael Hodges, senior policy officer

[Rachael.hodges@blf.org.uk](mailto:Rachael.hodges@blf.org.uk)

- 
- <sup>i</sup> NICE. 2018. Chronic obstructive pulmonary disease in over 16s: diagnosis and management. Draft for consultation
- <sup>ii</sup> British Lung Foundation, 2016. The Battle for Breath: the impact of lung disease in the UK
- <sup>iii</sup> NHS, 'Overview: chronic obstructive pulmonary disease (COPD)'. 2019. Available at: <https://www.nhs.uk/conditions/chronic-obstructive-pulmonary-disease-copd/>.
- <sup>iv</sup> Bastin, AJ., Starling, L., Ahmed, R., Dinham, A., Hill, N., Stern, M. & Restrict, LJ. (2010) High prevalence of undiagnosed and severe chronic obstructive pulmonary disease at first hospital admission with acute exacerbation. *Chronic Respiratory Disease*. 7(2) 91-97. Available from: <https://doi.org/10.1177/1479972310364587>
- <sup>v</sup> Patterns of breathlessness and associated consulting behaviour: results of an online survey. Elbehairy et al. 2019.
- <sup>vi</sup> London School of Economics and Political Science, 'What is the polluter pays principle?'. 2018. Available from: <http://www.lse.ac.uk/GranthamInstitute/faqs/what-is-the-polluter-pays-principle/>.
- <sup>vii</sup> The Health Foundation and The King's Fund, 'Urgent call for £1bn a year to reverse cuts to public health funding'. 2019. Available at: <https://www.health.org.uk/news-and-comment/news/urgent-call-for-1-billion-a-year-to-reverse-cuts-to-public-health-grant>.
- <sup>viii</sup> Department of Health, Towards a smokefree generation: a tobacco control plan for England. 2017.
- <sup>ix</sup> NICE, 'Chronic obstructive pulmonary disease in over 16s: diagnosis and management (predicting and preventing exacerbations). NICE guideline NG115, evidence reviews. 2018.
- <sup>x</sup> Royal College of Physicians, 'Pulmonary rehabilitation: steps to breathe better'. 2016.
- <sup>xi</sup> ASH, 'Factsheet: smoking and mental health'. 2019.
- <sup>xii</sup> World Health Organisation. Information sheet: premature death among people with severe mental disorders. Available at: [https://www.who.int/mental\\_health/management/info\\_sheet.pdf](https://www.who.int/mental_health/management/info_sheet.pdf).
- <sup>xiii</sup> NHS Digital, 'Smoking rates in people with serious mental illness'. 2016.
- <sup>xiv</sup> The Royal College of Physicians. Smoking and mental health London. 2013.
- <sup>xv</sup> De Hert et al, 'Physical illness in patients with severe mental disorders. I. Prevalence, impact of medications and disparities in health care' *World Psychiatry*. 2011 Feb; 10(1): 52-77.
- <sup>xvi</sup> Laurin, C. et al. 'Chronic obstructive disease patients with psychiatric disorders are at greater risk of exacerbations'. *Psychosom Med*, 2009 (6).
- <sup>xvii</sup> Department of Health, Towards a smokefree generation: a tobacco control plan for England. 2017.
- <sup>xviii</sup> World Health Organisation, 'Ten threats to global health in 2019'. 2019. Available at: <https://www.who.int/emergencies/ten-threats-to-global-health-in-2019>.
- <sup>xix</sup> Royal College of Physicians and Royal College of Paediatrics and Child Health, 'Every breath we take: the lifelong impact of air pollution'. 2016.
- <sup>xx</sup> Department for Environment Food and Rural Affairs and Department for Transport, 'Improving air quality in the UK: tackling nitrogen dioxide in our towns and cities, draft UK air quality plan for tackling nitrogen dioxide'. 2017.
- <sup>xxi</sup> Department for Environment Food and Rural Affairs and Department for Transport, 'Improving air quality in the UK: tackling nitrogen dioxide in our towns and cities, draft UK air quality plan for tackling nitrogen dioxide'. 2017.
- <sup>xxii</sup> The Guardian, 'Thousands of British children exposed to illegal levels of air pollution'. 2017.
- <sup>xxiii</sup> The secondary care burden of influenza disease in England, 2017/18. C Davidson, L Skinner, O Portman, S Carroll. Sanofi Pasteur
- <sup>xxiv</sup> Public Health England. Surveillance of influenza and other respiratory viruses in the UK: Winter 2017 to 2018. London: PHE publications, 2018.
- <sup>xxv</sup> NHS London Respiratory Team. COPD 'Value' Pyramid - What we know so far.... Cost/QALY. 2012.
- <sup>xxvi</sup> British Lung Foundation, Less help to quit: what's happening to stop smoking prescriptions across Britain. July 2018.