

RESPONSE TO HEALTH & SPORT COMMITTEE

Prevention Inquiry: Air Quality

Submission from Chest Heart & Stroke Scotland

Background

Chest Heart and Stroke Scotland represents the significant proportion of Scotland's population – around one in ten – who are affected by stroke, or by heart or lung disease. These are frequently diseases of inequality, with key risk factors such as poverty, air quality, obesity, inactivity, smoking and drinking all more prevalent in less affluent areas where there are correspondingly higher rates of these long-term conditions, greater co-morbidity, and reduced life expectancy.

In particular, Scotland has a poor record on lung disease, with both prevalence and mortality rates amongst the highest in Europe. This is partly a legacy of industry, partly the effects of smoking, and the corresponding links to inequalities and deprivation. Air pollution contributes to increased risk of hospital admissions and premature mortality for people with lung conditions. Scotland (like the rest of the UK) has a high prevalence of asthma compared to the rest of the world, and long-term exposure to air pollution can also both cause and trigger asthma, requiring people to take avoidance measures.

Chest Heart & Stroke Scotland has an Air Quality and Weather Text Alert Service which monitors the air quality, wind speed, temperature and pollen count every day. Text messages are sent to those who have signed up, about bad weather or poor air quality in local areas, to inform people living with chest or heart conditions who may find adverse weather conditions and air quality affects breathing.

In 2012 the World Health Organisation included urban air pollution among the top 10 risk factors for mortality in the UK. Air pollution is harmful to everyone, however some people suffer more than others because they:

- live in deprived areas, which often have higher levels of air pollution
- live, learn or work near busy roads
- are more vulnerable because of their age or existing medical conditions

The Royal College of Physicians describes vulnerable people as being 'prisoners of air pollution' – having to stay indoors and limit their activity when pollution levels are high.

"This is not only unjust; it carries a cost to these individuals and the community from missed

work and school, from more health problems due to lack of exercise, and from social isolation.”¹

The increased impact of poor air quality on disadvantaged groups can be described by the ‘triple jeopardy’ where poor socio-economic conditions interact with both poor health, and with poor living environments. They are both at greater risk of living in areas of pollution, and of suffering disproportionately large health effects from that pollution in comparison with advantaged groups. The right to health is a fundamental human right and the impact of poor air quality should be treated as an infringement of those rights – both a cause of and an effect of health inequalities.

There is now of course evidence too of the wider impact of airborne pollution on not only lung health, but cardiovascular health, with a causal link between fine particles and cardiovascular disease, particularly exposure to PM 2.5 and ultrafine particles from diesel vehicles. Long-term exposure to PM 2.5 is strongly linked to heart attacks and angina due to the fine and ultrafine particular matter from vehicles that are able to enter the body through both the lungs and bloodstream.

The proportion of people living with multi-morbidities such as lung disease, cardiovascular disease or a stroke continues to increase, which are evidenced in deprived areas some 10-15 years earlier. People with multi-morbidities experience poorer health outcomes, are more likely to die prematurely, and be admitted to hospital more frequently.

Whilst there is no ‘safe’ level of air pollution, the disproportionate impact of environmental factors such as poor air quality on Scotland’s more disadvantaged communities makes air quality a health inequality issue – and it needs to be tackled as such. There must be a corresponding shift of focus away from seeing it as purely an environmental issue. And in making that shift we need to urgently address poor air quality as a priority in targeted areas where more vulnerable people are at greater risk.

Inquiry questions:

- 1. To what extent do you believe the Scottish Government's Cleaner Air for Scotland – The Road to a Healthier Future - and the approach by Integration Authorities and NHS Boards towards clean air is preventative?***

The Scottish Government’s national strategy ‘Cleaner Air for Scotland’ is preventative inasmuch as it seeks to reduce levels of air pollution and thus positively impact on public health. The strategy intends to provide a national framework for Scottish Government and its partner organisations to take action, and rightly identifies air quality as a health inequalities issue because of the disproportionate impact on the most vulnerable in our society – young, elderly, and those with cardiovascular and respiratory conditions.

¹ <https://www.rcplondon.ac.uk/projects/outputs/every-breath-we-take-lifelong-impact-air-pollution>

Chest Heart & Stroke Scotland welcomes the policies it contains to help prevent damage from pollution, including the creation of Clean Air Zones, investment in ultra-low emissions vehicles, and the promotion of Active Travel. The strategy identifies that traffic-related pollution can be addressed through local and national action, and also highlights that public awareness needs to be raised so that people can take personal action.

But given the significant harm caused by air pollution the national strategy is not being delivered with sufficient urgency. Air quality standards are not being met – and we have not seen improvements since the publication of the national strategy. There are currently 38 Air Quality Management Areas in place across Scotland where air pollution exceeds statutory levels, an increase from 32 in 2015.

The Programme for Government committed to the introduction of Low Emission Zones into Scotland's four biggest cities between 2018 and 2020, and into all other Air Quality Management Areas (AQMAs) by 2023. However the Scottish Government has only recently confirmed Glasgow will be the first site of a Low Emission Zone in Scotland, which is likely to be implemented towards the end of the year.

There is no proven 'safe' limit for particulate matter, and the vast majority of deaths relating to PM_{2.5} exposure are in areas within the legal limits². Tools such as Scottishairquality.com – the online air quality reporting tool which has been developed - is of course only useful as a preventative tool insofar as individuals can take action to avoid polluting areas – it does not of itself reduce the levels of pollution. People also need to be made aware of the risks of long-term exposure, and information needs to be more easily accessible to all, rather than putting the onus on individuals.

Responsibility for air pollution lies with local authorities rather than IJBs and Health Boards, however as the Chief Medical Officer in England has recently highlighted in her annual report³, the NHS itself is a high polluter and should take action. On average, 5% of all vehicle traffic is estimated to be on NHS business, and steps could be taken to reduce the impact of this, with the phasing out of high polluting vehicles and more efficient planning of journeys.

2. Is the approach adequate or is more action needed?

As described in our response to question 1 above, the action needed to tackle air pollution is making slow progress, with just one Low Emission Zone to be in place by the end of this year, which will make a marginal difference to the national problem. Air pollution should be

² Committee on the Medical Effects of Air Pollutants 2009 'The mortality effects of long-term exposure to particular air pollution in the UK

³ Chief Medical Officer annual report 2017: health impacts of all pollution – what do we know?

treated as a health emergency and not constrained by the current slow pace of negotiation and action.

Whilst the Scottish Government has been the first EU country to put the World Health Organisation's guideline values for levels of particulate matter (PM2.5) onto a statutory footing, there are as yet few monitors in local authorities to assess PM levels (compared to those which assess nitrogen dioxide levels). Whilst Cleaner Air for Scotland commits to introducing more PM2.5 monitors, the monitoring of air quality should be routine in all areas of poor air quality and at sites where more vulnerable groups are situated such as schools.

Cleaner Air for Scotland addresses only pollution outdoors; the Chief Medical Officer in England's recent annual report recommends that tackling air pollution should be extended to addressing indoor air quality, where products emit volatile organic compounds (VOCs) and the improvements to building standards mean that concentration levels in homes are increasing. Research in the US also shows a positive association between deprivation and poor indoor air quality.

3. Is the Scottish Government's Cleaner Air for Scotland – The Road to a Healthier Future being measured and evaluated in terms of cost and benefit?

Again, progress seems slow. We understand from the 2017 progress report on delivery of Cleaner Air for Scotland that a National Modelling Framework is under development by SEPA which will provide quantitative evidence at a local level. The Scottish Government has commissioned academics to develop a set of Scottish Air Quality Indicators which will 'aim to provide evaluation and reporting improvements across local authority data zones' and will inform the development of Key Performance Indicators.

These are focused though on the environmental impact of the strategy, not on the improvement to health outcomes which are a key driver for improving air quality. Given the imperative to tackle air pollution as a health emergency this is a significant gap and should be addressed by the Scottish Government.

4. To what extent do NHS Boards and local authorities reference air quality and health in their Joint Health Protection Plans?

Cleaner Air for Scotland requires NHS Health Boards and local authorities to 'include reference to air quality and health' in the next revision of their Joint Health Protection Plans. The intention is to 'raise awareness' of the public health issues in respect of air pollution and 'encourage increased dialogue'. The Scottish Government's 2017 progress report on delivery of the strategy notes that an Air Pollution and Health Group has now been established, again as an awareness raising mechanism.

We have not carried out a detailed evaluation of the Joint Health Protection Plans to confirm whether they are now referencing air quality and health; however would argue that the national strategy's ambitions in using these as a means to tackle health outcomes are limited.

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