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# Parliamentary and Scientific Committee

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## Creating Healthy, Safe and Sustainable Indoor Environments

Despite traditionally not getting a lot of popular attention, indoor air quality has a large impact on our health. This evening, we heard from five expert speakers about the importance of air quality in our indoor spaces. Dr Alexandra Smyth, Head of Policy for Physical and digital infrastructure, health and resilience at the Royal Academy of Engineering, spoke to us the importance of engineering in maintaining good air quality. Prof. Nicola Carslaw, Professor in Indoor Air Chemistry at the University of York, explained how harmful airborne chemicals can build up in indoor spaces. Michael Ralph, Principal Engineer at NHS Scotland Assure, spoke to us about the importance of ventilation in health settings. Prof. Sani Dimitroulopoulou, Principal Environmental Public Health Scientist on Indoor Environments, Air Quality and Public Health at the UK Health Security Agency, described what measures have historically been taken to improve air quality. Lastly, Chris Rush MSc CEnv, Director at Hoare Lea, explained what must be done in the future to improve indoor air quality. We had a varied Q&A session, mostly focusing on what steps government must take to reduce the harm caused by low quality air.

A lot of attention has been given to outdoor air pollution, but most of us spend the majority of the day indoors. Therefore, the quality of the air indoors has a create effect on our health. Prof. Carslaw explained that a great deal of research has been done into how harmful chemicals build-up in the air from everyday tasks. Mr Ralph emphasised the effect of poorly ventilated during the pandemic, with many infections coming from cross-infection in indoor spaces.

We already know simple steps can be made to reduce the health impacts. Prof. Carslaw gave the example of people cooking using the back hobs with the extractor fan on to reduce the exposure to potentially harmful chemicals from cooking. She emphasised that regulators should be encouraged

to educate people about these simple steps. This will only become all the more important as kitchens become more of a social space in most house.

Ventilation is also key. Mr Ralph emphasised the importance of ventilation in hospital settings to reduce cross-infection, with this being one of many examples Dr Smyth gave to demonstrate the importance of engineering in improving indoor air quality. Dr Smyth explained that more needs to be done to raise awareness of the importance of ventilation to overall health, as well as one of the simplest interventions. The Royal Academy of Engineering created a Ventilation Matters explainer to help with this, but others need to be encouraged to do so also.

Prof. Dimitroulopoulou explained that there had been a slowdown of progress over the past 25 years since there was a widespread belief that we had dealt with the issue of poor indoor air quality. However, the new awareness of certain airborne chemicals has resulted renewed interest in this area. Mr Rush gave many details of what steps can be taken to improve air quality, but one he emphasised was making indoor chemical levels visible through the use of monitors. New developments have made this technology more accessible, and the public should be encouraged to adopt such tools.

The moral importance of healthy indoor spaces may be clear, but the speakers also emphasised the cost effectiveness of improving these spaces. High pollutant levels can lead to chronic diseases, and seasonal diseases is known to cost £8 billion per year. Improved indoor air quality reduces the impact of both of these, therefore it's an investment in health.

*Alfie Hoar*

*P&SC Discussion Meeting, 'Creating Healthy, Safe and Sustainable Indoor Environments'*

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