

16 May 2023

Llyr Gruffydd MS  
Chair, Climate change, Environment and Infrastructure  
Committee  
Welsh Parliament  
Cardiff Bay  
Cardiff CF99 1SN

Dear Chair

I am writing to you regarding the Environmental (Air Quality and Soundscape) (Wales) Bill.

The Royal College of Nursing (RCN) Wales welcomes the introduction of the Environmental (Air Quality and Soundscape) (Wales) Bill and supports the overall aim. The ambition of the Bill to reduce the impact of air pollution on human health, biodiversity, the natural environment, and the economy could have a significant positive impact on future generations, and their health.

However, RCN Wales would welcome your support, and the support of the Climate Change, Environment, and Infrastructure Committee, in exploring if it's possible to include a duty on health boards within the Bill to improve indoor air quality, to protect vulnerable patients and staff.

There is a need to adapt and change our internal healthcare environments to improve air quality. COVID-19 highlighted the susceptibility of the NHS estate to respiratory illnesses and the importance of ventilation, and good air quality.

Continued....

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The RCN represents nurses and nursing, promotes excellence in practice and shapes health policies

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Mae'r Coleg Nyrsio Brenhinol yn Goleg Brenhinol a sefydlwyd drwy Siarter Frenhinol ac Undeb Llafur Cofestr Arbennig a sefydlwyd a dan Ddeddf Undebau Llafur (Cydgrynhoi) 1992.

The RCN is a Royal College set up by Royal Charter and a Special Register Trade Union established under the Trade Union and Labour Relations (Consolidation) Act 1992.

RCN Wales published a parliamentary briefing, *Open the Window*, last year regarding the importance of ventilation which I have attached for your information.

COVID-19 has highlighted the need for improvement in air quality within the NHS estate, but it is not the only example. Another example comes from a number of NHS England Trusts that temporarily halted the use of Nitrous Oxide, 'laughing gas' earlier this year, following concerns that clinical staff were being exposed to harmful levels while treating patients.<sup>1</sup> This is largely due to poor ventilation within delivery suits. Before Watford General Hospital installed air purifiers, it reportedly experienced levels 50 times above Nitrous Oxide safety caps last year. This caused unwarranted harm and concern for both patients and staff. While there has been no indication that this is a problem in Wales, it is a contemporary example of the real concerns regarding a lack of efficient ventilation.

There is existing guidance in place for ventilation within the NHS, but there is no statutory duty to ensure 'good' air quality within indoor settings. The current guidance should be strengthened through legislative requirements. The NHS capital estate budget has been reduced year after year and the NHS estate is suffering as a result. There are millions of pounds worth of repairs needed, on top of an investment in ventilation and air quality system to ensure Wales is protected from future respiratory illnesses and pandemics. The guidance and NHS Wales Shared Services need support and investment, a keyway to do this is through a legislative duty.

The Bill, as introduced, details it will be 'an Act of Senedd Cymru to make provision for improving air quality in Wales'. This should not be limited to outdoor air quality but should seek to improve indoor air quality.

I would welcome your support in exploring if it's possible to include a duty on health boards within the Bill to improve indoor air quality, to protect vulnerable patients and staff.

I look forward to your response.

Kind regard

Your sincerely



**HELEN WHYLEY, RN, MA**  
**DIRECTOR, RCN WALES**

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<sup>1</sup> Evening Standard, 2023. Available at: <https://www.standard.co.uk/news/uk/hospitals-suspend-gas-and-air-for-mothersto-be-over-midwife-safety-b1063188.html>



Coleg Nyrsio Brenhinol  
Cymru  
Royal College of Nursing  
Wales

## Open the window

### Why the Welsh Government needs to invest in ventilation for the Welsh NHS Estate



The Welsh Government acknowledges COVID-19 is spread by airborne transmission, close contact via droplets and via surfaces. Airborne transmission is a very significant way that the virus circulates.<sup>12</sup> There is evidence to suggest the spread of COVID-19 is higher in areas of poor ventilation.

There is a need to adapt and change our internal healthcare environments to reduce the impact of COVID-19 and other airborne diseases. The Welsh Government have put in place systems for education settings to improve ventilation and monitor air quality<sup>3</sup>. The Welsh Government now needs to commit to doing this for health settings.

<sup>1</sup> [Coronavirus: how to stay safe and help prevent the spread - GOV.UK \(www.gov.uk\)](https://www.gov.uk)

<sup>2</sup> <https://gov.wales/together-well-keep-wales-safe>

<sup>3</sup> <https://gov.wales/fresh-start-new-term-investment-help-improve-air-quality-schools-colleges-and-universities>



This document will focus on ventilation within the NHS estate. However we recognise ventilation in social care settings is equally as important and needs investment and action.

### Recommendations for the Welsh Government

1. Establish a long term investment plan for improving ventilation across the NHS estate. As an initial step this should include assessment of current air quality through the provisional funding for CO2 monitors.
2. Invest in consultant nurses in Wales to support the updating of the estate and supporting infection prevention and control.

### What is ventilation and why is it important?

Ventilation is the process of replacing stale air with fresh air. This can be done naturally, by opening a window, or mechanically, through a ventilation system using fans and ducts.

Ventilation is used in health and care settings to provide a safe and comfortable environment for patients. More specialised ventilation is provided to help reduce infection risks via air in areas such as operating departments, critical care facilities, isolation rooms and primary patient treatment areas.<sup>4</sup>

Healthcare buildings are continuously occupied by patients and staff, intensively used and because of the specialised nature of the facilities it may be extremely difficult to provide the service elsewhere.

Ventilation is important in controlling the spread of airborne diseases, such as COVID-19. As a Group 3 biological hazard, SARS-CoV-2 (the virus that causes COVID-19) NHS employers are accountable under health and safety law, specifically the Control of Substances hazardous to health (COSHH) to assess and manage the risk of exposure to healthcare staff. The RCN has developed a Risk Assessment toolkit to support employers and staff manage the risk of COVID-19 in the workplace.<sup>5</sup>

As an airborne pathogen, the risk of infection also exists for patients, which when acquired as a direct result of care is classified as a healthcare associated infection. The importance of ventilation as one aspect of managing airborne infection risk has been recognised by the Welsh Government

<sup>4</sup> <https://www.england.nhs.uk/wp-content/uploads/2021/05/HTM0301-PartA-accessible-F6.pdf>

<sup>5</sup> <https://www.rcn.org.uk/clinical-topics/infection-prevention-and-control/covid-19-workplace-risk-assessment-toolkit>



### What is the current ventilation system?

Many NHS buildings have narrow hallways, small rooms and windows that cannot be opened, this eliminates the possibility of natural ventilation. The NHS is therefore reliant on mechanical ventilation that, if present, may not have been updated in a number of years.

The Specialist Estate Service have provided a document with a suite of guidance regarding ventilation published during the COVID-19 pandemic<sup>6</sup>. This includes the Health and Safety Executive who have issued guidance to help organisations identify poorly ventilated areas, decide on the steps to take to improve ventilation and assess the risk from breathing in virus particles (aerosol transmission) in enclosed areas.<sup>7</sup>

The guidance gives Health Boards a clear standard to strive towards and support in assessing and managing ventilation. However, to our knowledge there is no national framework to monitor if assessments are being completed and what actions are being taken to improve the situation in Wales. The Welsh Government should ensure mechanisms are in place to act upon information regarding poor ventilation and provide investment if needed.

To understand if the ventilation systems in the NHS estate are adequate in reducing the transmissibility of airborne illnesses and reducing poor air quality it is important that data is gathered through the use of CO2 monitors in the first instance.

### Why are CO2 monitors important?

People exhale carbon dioxide (CO<sub>2</sub>) when they breathe out. A build-up of CO<sub>2</sub> in an area can indicate poor ventilation. CO<sub>2</sub> monitors provide a helpful proxy indication of whether natural and/or mechanical ventilation needs to be improved.

In 2021 the Welsh Government invested £2.58m in 30,000 CO<sub>2</sub> monitors for education settings to aid the management of ventilation systems (as seen in the picture). There are different types of portable CO<sub>2</sub> devices but the most effective is a non-dispersive infrared (NDIR) CO<sub>2</sub> monitor. This is the type the Welsh Government has funded for education settings.



<sup>6</sup> <https://nwssp.nhs.wales/ourservices/specialist-estates-services/specialist-estates-services-documents/specialist-estates-services-notifications-sesns/sesn-21-16-covid-19-and-mitigating-airborne-transmission-in-healthcare-settings-ventilation-guidance-updates/>

<sup>7</sup> <https://www.hse.gov.uk/coronavirus/equipment-and-machinery/air-conditioning-and-ventilation/index.htm>



Within the guidance regarding the use of CO2 monitors in education settings it explains that it is *'the duty in law [Health and Safety at Work etc Act 1974] to take reasonable measures applies to the person or persons responsible for premises open to the public and on the person responsible for the work being undertaken in any workplace; that is the person responsible for management control of the premises'*.<sup>8</sup> It is the responsibility of those in control of premises (head teachers, chief executives, care home owners, etc) to ensure good levels of ventilation are maintained.

### **Why are consultant nurses important for improving ventilation?**

Consultant nurses hold extremely senior posts. Their role encompasses clinical practice, education, research and clinical leadership. Infection prevention and control consultant nurses provide expert knowledge and guidance for health boards. As 'system' leaders, IPC consultant nurses consider a holistic approach to the prevention of infection, acting as a bridge between public health, health protection and science.

Investing in IPC consultant nurses would ensure Wales has the resources available to provide expert knowledge across systems; it would also ensure that Wales has the resources available to educate the next generation of health professionals. These posts would also facilitate the sharing of expertise at a senior level across national boundaries. This would elevate the status of IPC nursing and the Welsh contribution to it. To invest in IPC nurse consultants is to invest in the whole system and to place infection prevention and control rightfully at the centre of health and social care.

### **What can the Welsh Government do?**

Health Board's require additional investment for improving ventilation.

It is no doubt that the NHS estate is in need of investment. In September 2019 it was reported that NHS buildings needed £261m worth of maintenance work on problems deemed to pose a high or significant risk. There is also a combined total of £560m maintenance backlog.<sup>9</sup>

However, the Welsh Government's draft budget for 2022/2023 has reduced the health and social care capital spend by £52.6m from £381m to £335m.<sup>10</sup> The indicative budget for 2023/2024 will increase the capital spend (to £375m) but it still remains lower than the 2021/2022 spending allocations (£387m). With a shrinking capital budget, health board's need to prioritise immediate venue spend on issues deemed to pose a significant risk.

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<sup>8</sup> <https://gov.wales/sites/default/files/publications/2021-10/carbon-dioxide-monitors-education-settings.pdf>

<sup>9</sup> [NHS hospitals and buildings' £261m backlog of urgent repairs - BBC News](https://www.bbc.com/news/health-51844444)

<sup>10</sup> <https://gov.wales/sites/default/files/publications/2021-12/2022-2023-draft-budget-narrative.pdf.pdf>



The Welsh Government must ensure national leadership on ventilation and support health boards by providing funding for CO2 monitors as an initial step. Following this, and the gathering of data, the Welsh Government must set out a long term plan to improve ventilation across the NHS estate.

### **About the Royal College of Nursing (RCN)**

The Royal College of Nursing is the world's largest professional organisation and trade union for nursing, representing over 465,000 nurses, midwives, health visitors, healthcare support workers and nursing students, including over 27,000 members in Wales. RCN members work in both the independent sector and the NHS. Around two-thirds of our members are based in the community. The RCN is a UK-wide organisation, with National Boards in Wales, Scotland and Northern Ireland.

The RCN represents nurses and nursing, promotes excellence in nursing practice and shapes health and social care policy.