PRESS RELEASE

Carbon Minimal pressurised Metered Dose Inhalers (pMDIs) could save up to 619,000 tonnes of emissions each year,[1] representing up to 7%-10% of NHS Net Zero targets[2]

- At a national level, seamless transitioning to a range of carbon minimal pMDIs could save between 415,000 and 619,000 tCO_2e annually, reducing carbon emissions to the equivalent financial value of £112 to £167 million each year in the UK alone.[1]
- This represents 7%-10% of the reductions needed to achieve the NHS's goal of reducing its carbon footprint from 6.1 million tCO_2e to Net Zero by 2040, without impacting clinical effectiveness for patients.[1,2]
- Currently 42 million pMDIs are prescribed to people with lung diseases every year in the UK, meaning millions of people in the UK could be eligible to receive a Carbon Minimal device.[1,3,4]

Manchester, UK, 19th March 2025 – The Office of Health Economics (OHE), in partnership with Chiesi, have announced findings from a new report, revealing that Carbon Minimal pMDIs for lung conditions such asthma could save up to 619,000 tonnes of emissions each year, compared to existing pMDIs.[1] These next generation inhalers have been reformulated with gases with low global warming potential (GWP) to reduce overall climate impact, and are being tested in clinical studies to assess that a seamless transition can be implemented preserving clinical effectiveness.[1,5,6,7,8]

Data from the report reveals that, in the UK, seamless transition to carbon minimal pMDIs could save up to 415,000 - 619,000 tCO_2e (tonnes of carbon equivalent) annually (with the analysis performed at per patient level and extrapolated to national level).[1] Additionally, a move to Carbon Minimal pMDIs could reduce emissions by 1,720-2,513 $kgCO_2e$ per patient with asthma over their lifetime.[1]

The economic value of these carbon emission reductions is estimated at £463 to £676 per patient with asthma over their lifetime.[1] At a national level, if everyone in the UK with respiratory conditions were to receive a Carbon Minimal pMDI instead of the current pMDI, it would save carbon emissions up to the value of £112 to £167 million annually.[1] This could represent 7% to 10% of the total reductions needed to achieve the NHS's goal of reducing its carbon footprint from 6.1 million tCO_2e to net zero by 2040.[1,2]

Grace Hampson, Health Economist and Associate Director at the OHE, commented that: *"Climate change threatens human health and adds pressure to already overburdened health systems. It is therefore critical that health systems consider how emissions can be reduced. Our report demonstrates that it is possible to value the incremental greenhouse gas emissions of different pMDIs, particularly where clinical equivalence can be assumed. We also set out a compelling case for a transition to carbon minimal pMDIs, demonstrating the substantial reduction in emissions which could be achieved."*

Climate change poses a direct threat to human health,[9] and health systems contribute around 5% of worldwide greenhouse gas emissions.[10] Extreme weather events such as

floods and droughts threaten to exacerbate respiratory diseases, which are linked to pollution.[11] Respiratory exacerbations in turn pose additional pressure to already overburdened health systems.[11] NHS England estimates that around 25% of its own carbon emissions come from medicines, with inhalers and anaesthetic gases contributing two and three percentage points of total NHS greenhouse gas emissions respectively.[12]

Professor Dave Singh, Professor of Respiratory Pharmacology at the University of Manchester, added: *"Carbon Minimal pMDIs are an exciting innovation for the NHS as they provide clinicians and patients currently being treated with pMDIs with the ability to remain on the treatment device that is best for them while using a formulation that is also significantly less impactful to the environment. These reformulated pMDIs, once available, will enable clinicians to remain focused on achieving disease control which is crucial in asthma and COPD care. Uncontrolled patients experience significantly poorer quality of life and have a much higher cost and environmental impact on the NHS."*

Currently 42 million pMDIs are prescribed to people with lung diseases every year in the UK, meaning millions of people in the UK could be eligible to receive a Carbon Minimal Inhaler.[1,3,4]

As part of its Net Zero 2035 commitment, in 2019 Chiesi was the first pharmaceutical company to announce a €350 million investment into the development of a low GWP propellant for its pMDI devices, aligned with UK and NHS Net Zero targets.[13] The company is on track to complete the clinical development of its Carbon Minimal pMDIs by the end of 2025. Subsequent introduction to the UK market will take place following regulatory approval.

Harriet Lewis, Senior Director, Public Affairs and Communications, Chiesi UK and Ireland, commented: *"We are pleased to have partnered with the Office of Health Economics on this research, which highlights the vast potential for Carbon Minimal pMDIs to significantly reduce emissions – both for us as a company and for the NHS – while guaranteeing a seamless transition for patients. Our technology is expected to slash the carbon footprint of our inhalers by around 90%. Our commitment to responsible innovation reflects our ambition to create a healthier, more sustainable future for the people, patients and the planet."*

For more information, please visit www.chiesi.uk.com.

About Chiesi Group

Chiesi is a research-oriented international biopharmaceutical group that develops and markets innovative therapeutic solutions in respiratory health, rare diseases, and specialty care. The company's mission is to improve people's quality of life and act responsibly towards both the community and the environment.

By changing its legal status to a Benefit Corporation in Italy, the US, and France, Chiesi's commitment to create shared value for society as a whole is legally binding and central to company-wide decision-making. As a certified B Corp since 2019, we're part of a global community of businesses that meet high standards of social and

environmental impact. The company aims to reach Net-Zero greenhouse gases (GHG) emissions by 2035.

With over 85 years of experience, Chiesi is headquartered in Parma (Italy), with 31 affiliates worldwide, and counts more than 7,000 employees. The Group's research and development centre in Parma works alongside 6 other important R&D hubs in France, the US, Canada, China, the UK, and Sweden.

For further information please visit www.chiesi.uk.com.

Media contacts

Yasmin Ghariani, Chiesi UK
Head of External Communications
Phone: (+44) 161 488 5555
Email: y.ghariani@chiesi.com

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