

## BPR Medical and Medclair support UK's first climate-friendly gas and air labour



### A collaborative approach in working towards a Net Zero NHS

NEWCASTLE mum Kaja Gersinska has become the first person in the UK to use climate-friendly pain relief during labour after giving birth at Newcastle's Royal Victoria Infirmary. Kaja used BPR Medical's Ultraflow analgesic demand valve, which was connected to a nitrous oxide capture and destruction system provided by Medclair.

"I didn't expect this when I came here today – I just came to have my baby – but I started on the traditional machine and then swapped over. It was quieter and much more comfortable to hold"

Entonox, also known as gas and air, is a mixture of nitrous oxide and oxygen and has been used to provide pain relief for women in labour for over a hundred years. However, nitrous oxide is a powerful greenhouse gas, almost 300 times more potent than carbon dioxide, and escapes into the atmosphere after being exhaled by a patient.

Kaja gave birth to her beautiful daughter, Rosie Martha O'Sullivan, who weighed 6lb 6oz, in the Newcastle Birthing Centre on September 9. She breathed gas and air via BPR's Ultraflow device, which is used by over 40 percent of NHS Trusts in England and all regional Trusts in Wales. An Anaesthetic Gas Scavenging System (AGSS) attached to the Ultraflow directed the gas she exhaled into a Mobile Destruction Unit (MDU), which collects and destroys exhaled gas and air, converting it to room air.

Kaja said: "I feel very privileged and proud actually – it's the little things you don't often think about and it's nice that someone thought about making these changes which will be better for the environment and for midwives who are working here all the time."

Speaking about her experience of the Ultraflow, Kaja added: "I didn't expect this when I came here today – I just came to have my baby – but I started on the traditional machine and then swapped over. It was quieter and much more comfortable to hold."

"It's nice to make a little bit of history!" she added.

The nitrous oxide capture and destruction technology, developed by Medclair, is widely used in Sweden. It collects the exhaled gas and breaks it down into nitrogen and oxygen, which are harmless.

The MDU purifies 99.6% of the nitrous oxide entering the unit. As well having a huge benefit to the environment, it reduces the amount of nitrous oxide staff are exposed to while they work.

In order to capture the nitrous oxide in exhaled breath, the demand valve – in this case BPR's Ultraflow - needs to be fitted with an AGSS tube that redirects exhaled gas into the MDU.

Managing Director of BPR Medical, Richard Radford, said: "Nitrous oxide is a concern not only for the environment, but also for the safety of maternity unit staff. Minimising exposure to the gas is a top priority, so we're delighted to have played a part in this ground-breaking development."

Chief Executive of Medclair, Jonas Lundh said: "Working in the green medtech area I'm extremely impressed by the NHS Newcastle team, I've never seen such a display of action on the fact that there is a global climate crisis as we saw in Newcastle. We are delighted to be a supplier to the trust and we look forward to Rosie's generation being born in a climate friendly way."

Newcastle Hospitals is well known for its award-winning Shine (Sustainable Healthcare in Newcastle) programme and was the first healthcare organisation in the world to declare a climate emergency, in recognition that the climate emergency is a health emergency. The Trust is also committed to the ambitious goal of becoming a net-zero carbon organisation by 2030.



#### About BPR Medical

Established in 1990, BPR Medical is an international leader in the design and manufacture of medical gas therapy solutions. We are one of the UK's leading independent manufacturers of medical gas products with a reputation for innovation, quality, integrity and value.