Engagement with the NHS on Net Zero Carbon Agenda

Organisation Name: de Smit Medical

NHS Entity Engaged: NHS Supply Chain, SBS and all NI, England, Scotland & Wales Trusts

Time Period of Engagement: 2002 - Present

Future Leap has partnered with de Smit Medical to achieve their net zero goals.

The following case study has been compiled by Future Leap to demonstrate the environmental impact of de Smit Medical's bladder scanner range.

Bladder Scanners

de Smit Medical provide the NHS with bladder scanning technology, offering a non-invasive method to measure bladder volume without the need for catheterisation. Alongside improving patient comfortability, the supply of this technology significantly contributes to the NHS's Net Zero Carbon Agenda ultimately through reducing infection and time spent in hospital.

Background

Reducing HealthCare Associated Infections (HCAI) is a major priority for the NHS. Urinary Tract Infections (UTIs) are the second most common HCAI, with the use of urinary catheters a key cause.

Short term catheterisation of patients is required to measure post void bladder volume and detect retention, while longer term catheterisation it used when patients have acute medical needs. Catheterising patients is invasive, time-consuming and commonly causes pain and discomfort. The development of UTIs is common and often results in the contraction of secondary infections and sepsis, leading to prolonged hospitalisation and avoidable use of antibiotics. On average a surgical patient contracting a UTI will have their hospital stay extended by up to six days, with the cost of treating a UTI estimated at £2,000. Not only does this result in an increase in hospital costs, but it also reduces capacity and productivity.

Because of the consequences associated with catheter use, both to the patient and the NHS, inappropriate and unnecessary catheterisation should be avoided. Bladder scanners use ultrasound to determine residual bladder volume, avoiding the need to catheterise patients. This is a non-invasive and quick process

significantly increases patient comfortability while reducing HCAIs and unnecessary hospitalisation.

Contribution to Net Zero Agenda

Product innovation and use of preventative technologies will be key drivers of NHS decarbonisation.

The bladder scanners provided by de Smit Medical contribute to the decarbonisation of emissions both directly and indirectly controlled by the NHS. Community services and a reduction in the contraction of HCAIs, minimise unnecessary hospital admissions and increase productivity. With patients spending less time in hospital, this reduces the resources required to care for individuals (energy, food, medicine etc.) and therefore the carbon intensity of hospitalisation.

The equipment itself has a 'low power' mode, drawing less energy when not in use. Training is also offered by de Smit Medical to increase capabilities of out of hospital care, reducing the travel emissions of patients and visitors to hospital. Training sessions can be held virtually, further reducing the requirement to travel.

Use of de Smit Medical's equipment supports circular economy principles, reducing the use of single-use catheters. They also offer repair services to prolong the life of their products and prevent unnecessary waste. Their facility in South Gloucestershire is fitted with energy efficient LED lighting alongside solar PV and battery storage, providing low carbon electricity to undertake repairs. Training is also available to improve hospital repair capabilities inhouse, providing time efficient solutions while reducing the need to transport equipment.

de Smit Medical are committed to decarbonising their own operations, engaging with their supply chain to improve product traceability. Conscious decisions are made when selecting delivery partners, opting for third party providers with sustainable credentials, committed to emission reduction.

Outcomes Achieved

de Smit Medical have supplied over 5,700 devices to the UK health services, primarily for use by the NHS. With an average life of seven years, this has greatly reduced the number of catheters required and the associated infections, waste and patient discomfort. The power features of the scanners are continually improved to ensure the highest energy efficiencies and reducing in-use energy consumption.

The newer range of de Smit Medical's scanners no longer require routine, annual calibration. Their 'BioCon' scanner range is extremely reliable, greatly reducing the need for repair or maintenance with Glenn Purkiss from Hampshire Hospital Foundation Trust stating:

"Since replacing our Scanners a few years ago, we as a trust have noticed a big decline in service and maintenance issues that we had with our previous supplier, well in excess of 60% more reliable".

de Smit Medical have also seen a significant increase in the number of customers who have taken their bladder scanner technical training course. This enables NHS Trusts to service their own equipment, eliminating the need to transport equipment and avoiding associated emissions. Any repairs undertaken by de Smit Medical take place in their UK service department, meaning the equipment does not need to be sent abroad as is the case with other suppliers.

Next Steps

Bladders scanners provided by de Smit Medical will continue to contribute towards the NHS's future goals, both from an environmental and social value perspective. The social impact of their products is undeniable, significantly improving patient comfortability. de Smit Medical's future plans centre strongly on the development of more training programmes to increase capability of community nursing and out of hospital care, reducing time spent in hospitals and increasing productivity.

Alongside continuing to advocate the use of their bladder scanning technology in the medical care sector, de Smit Medical are also evolving their product range. New equipment and devices are currently in development, aiming to come to market in the next few years. By introducing new products, de Smit Medical can continue to positively impact the NHS and patient outcomes.

de Smit Medical's commitment to reducing their environmental impact goes beyond the products they offer, sitting at the heart of business development. Internally, they are striving for more sustainable business practices, committed to measuring and reducing operational carbon emissions. Alongside this, the influence they can have on others is also being explored through increased engagement with their supply chain and joining Future Leap's Sustainable Business Network.