

Establishing the Link Between Value Based Procurement and the Delivery of a Sustainable NHS

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Introduction

NHS Supply Chain initiated a project to explore if a value-based approach to procuring goods and services could help the NHS meet the challenges of improving patient outcomes. Initially, the project primarily focused on increasing efficiency in the patient pathway and reducing costs. This approach, referred to as Value Based Procurement (VBP) focuses on delivering a reduction in the whole life costs of healthcare. At that time the delivery of environmental and sustainability benefits was not a focus of the project. This report looks at the evolution of the programme and how important sustainability or environmental value has become in that value equation and provides some insight into where more work might be required.

Alignment to Sustainability and the Net Zero Agenda of the NHS

At the same time as NHS Supply Chain was embarking on its VBP project, NHS England was conducting a carbon footprint analysis to establish and refine its environmental impact.¹

Fast forward from 2019 the NHS has outlined its commitment to Net Zero and set out a roadmap that demonstrates ambition and momentum to deliver. “Delivering a Net Zero NHS” was published in 2020², the Greener NHS programme was established the same year and the commitment to a Net Zero health system was set out as legislation in the Health and Care Act (2022).

Uncovering sustainable and environmental benefits of VBP

The framework for phase one of the VBP project established a series of small-scale proof of concept pilots. These were identified by a process of engagement with medical device suppliers and assessed by a multi-disciplinary NHS Supply Chain team consisting of clinical, finance, and procurement experts. The outcomes were documented as a set of case studies and shared on NHS Supply Chain’s website³.

Running the pilot programme enabled NHS Supply Chain to gain an understanding of the challenges and opportunities in creating value through procurement as detailed in the Value Based Procurement (VBP) Project Report and Findings⁴.

¹ [Health care's response to climate change: a carbon footprint assessment of the NHS in England \(thelancet.com\)](https://www.thelancet.com)

² <https://www.england.nhs.uk/greenernhs/wp-content/uploads/sites/51/2020/10/delivering-a-net-zero-national-health-service.pdf>

³ <https://www.supplychain.nhs.uk/programmes/value-based-procurement/vbp-case-studies/>

⁴ <https://www.supplychain.nhs.uk/programmes/value-based-procurement/#reports>

In addition to clear patient efficiency and financial benefits seen during the initial pilots, it also became clear that by focusing on improving patient pathways and engaging with suppliers on reduction of total costs, a number of environmental and sustainability benefits were also delivered.

The following table demonstrates how the value-based approach created a whole raft of sustainability co-benefits. These ranged from scope 1 and 2 reductions associated with the delivery of care (the scope 1 and scope 2 emissions being the direct emissions that the NHS controls) through to reduction in product usage (the harder to manage indirect emissions from the supply chain) which when consumption is reduced has a scope 3 benefit. There are also examples of reductions in patient and visitor travel and associated emissions from the VBP pilots. Whilst these emissions sit outside of the greenhouse gas protocol, they are an impact on the NHS carbon footprint and an area the health system can influence.

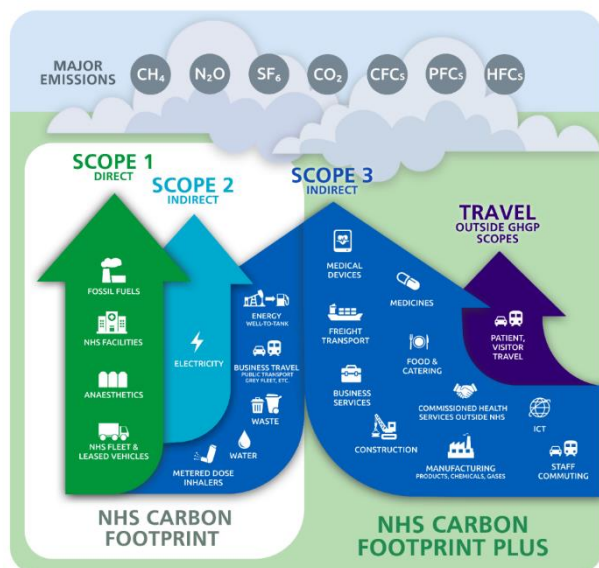
- **Reduction in patient travel** - The benefit of the solution means that the patient either does not have to have an in person / outpatient appointment or reduces the number of in person attendances required.
- **Reduction in clinical/theatre time** - The solution enables the procedure to be undertaken more efficiently thereby reducing clinical time and or time spent in theatre.
- **Reduction in length of stay** - The solution reduces the time patients spend in hospital.
- **Reduction of infections** - Patients that have hospital acquired infections require longer patient stays, drugs and associated consumables.
- **Reduction in re-admissions** - The solution enables a reduction in patients having to be re-admitted.
- **Reduction in product usage** - Less products used with the procedure this can include medical consumables, pharmaceuticals.
- **Reduction in waste disposal** - Lower levels of products through waste streams.

Figure 1

Summary of sustainability benefits from VBP pilots

Sustainability Benefits	Clinical Area	Minimally Invasive Treatment for Benign Prostatic Hyperplasia (A)	Transnasal Endoscopy Procedure	Radiofrequency Catheter Ablation	Cardiac Rhythm Devices - Remote Monitoring	All in One System for Urinary Catheterisation	New Technique for Parotid Surgery Cases	Fresh Fill Elastomeric Pumps for Administering IV Antibiotics	Minimally Invasive Treatment for Benign Prostatic Hyperplasia (B)
	Reduction in patient travel								
	Reduction in clinical/theatre time								
	Reduction in length of stay								
	Reduction of infections								
	Reduction in re-admissions								
	Reduction in product usage								
	Reduction in waste disposal								
Case Study Title	Innovative Technology Reduces Operating And Recovery Time	Transnasal Endoscopy Improves Patient Outcomes and Productivity	Radiofrequency Ablation Reduces the Rate of Reintervention Procedures	Innovative Cardiac Remote Monitoring Technology Improves Patient Pathway	Bard Tray Reduces CAUTI Infections and Variations in Clinical Practice	Collaborative Working Reduces Overnight Stays for Parotid Surgeries	Value Based Procurement Pilot Reduces Length of Stay and Improves Patient Experience	Value Based Procurement Pilot Releases Theatre Time and Inpatient Bed Capacity	

Figure 2



The conclusion from the pilot projects is that a value-based approach can support the delivery of NHS sustainability objectives as there is a direct correlation between financial savings, pathway efficiencies and sustainability benefit.

The VBP approach brings significant opportunity for de-carbonisation across the NHS; in 2019 62% of the NHS carbon footprint was estimated to come from the supply chain, 24% from delivery of care and 10% from staff, visitor and patient travel.⁵

⁵ [Health care's response to climate change: a carbon footprint assessment of the NHS in England \(thelancet.com\)](https://www.thelancet.com/health-care-response-to-climate-change-a-carbon-footprint-assessment-of-the-nhs-in-england)

Challenges and Opportunities

From the experience and outputs of the pilot programme, it is clear that a value-based approach to procurement can support the delivery of sustainability and net zero targets in the NHS. However, there are a number of challenges and opportunities that should be considered if VBP is to be widely adopted in the NHS and the benefits optimised.

Creating a common language of value

Through the VBP programme, we discovered that financial validation of operational benefits varied significantly across different NHS organisations. Notably, there was a lack of consistent measures or standardised values—for instance, when assessing the cost of a bed day. For more detail on this, please view the VBP Report and Findings.⁶

To address this inconsistency and promote better recognition of efficiency value savings, NHS Supply Chain collaborated with key partners. These partners included senior finance representatives from organisations including NHS England and The National Institute for Health and Care Excellence (NICE). Together, we developed a standardised list of value-based outputs and introduced a proxy figure. This proxy figure serves as a benchmark, allowing us to compare the benefits of VBP-related solutions and savings reporting consistently.

For further details, please refer to Appendix 3⁷ of the VBP Project Report and Findings document.

This initiative aims to create a common language of value, ensuring that sustainability considerations align seamlessly with procurement practices.

On analysis of the pilots through a sustainability lens, we identified an opportunity to enhance sustainability data quality. Whilst existing data provides a foundation, improving data and the breadth of what's captured will allow us to fully baseline and better quantify the environmental benefits of a VBP.

As a starting point to address this issue, there is an opportunity to augment the national savings guidance methodology to include carbon and environmental impact e.g., greenhouse gas emissions in Kg of CO₂e for each activity thereby embedding sustainability and carbon in the decision-making.

⁶ [Value Based Procurement For Healthcare - NHS Supply Chain](https://azuksappnpdsa01.blob.core.windows.net/datashare/NHS-Supply-Chain-VBP-Report-February-2021.pdf)
<https://azuksappnpdsa01.blob.core.windows.net/datashare/NHS-Supply-Chain-VBP-Report-February-2021.pdf>

⁷ <https://azuksappnpdsa01.blob.core.windows.net/datashare/NHS-Supply-Chain-VBP-Report-February-2021.pdf>

Contract management

Another area that was identified through NHS Supply Chain's pilot studies and subsequent projects, was both the need and challenge of embedding robust contract management processes to fully realise the range of benefits of the contracted solution, with variations in approach across NHS organisations.

Unlike tracking simple product price reductions, a VBP approach requires rigor in contract management that include standard approaches to gathering data, clear measures and deliverables. This is needed to ensure the stated supplier claims are achieved and benefits recognised in a consistent way. This applies equally to patient, efficiency, financial and environmental and sustainability value.

If the standard set of measures as proposed were to be adopted, it could enhance regular supplier performance reviews and greatly assist organisations in baselining existing carbon impact and reporting on subsequent carbon reductions in a consistent way across the NHS.

Creating a Wider Evidence Base of Delivery

VBP is gaining significant traction in the NHS. Proof of concept has been established through the published projects referred to above but there are also a growing number of projects in the pipeline. To date VBP activity has been largely driven by industry-led innovations, the "push" factor. However, there is an opportunity for the NHS to adopt solutions through the system by identifying pathways that are highly carbon intensive, the "pull factor," assessing the quantum of benefit required to make a tangible difference and then engaging with suppliers who can deliver solutions against NHS priorities.

Value based healthcare

The generally accepted definition of Value Based Healthcare is the delivery of improved patient outcomes at a lower cost. There is value for the patient in re-designing how healthcare is delivered to them and value for the system. We've established that this value extends beyond patient and financial benefits to incorporate wider and environmental benefits.

VBP and its ability to deliver system savings will be significant on the journey to net zero. As these approaches gain wider adoption, they can contribute to the overall decarbonisation of the whole system.

We already know that carbon emissions effect health and that climate change and human health are inextricably linked⁸. Increased CO₂e emissions has a detrimental impact on population health and health inequalities. In the UK, the combustion of fossil fuels and associated greenhouse gas emissions is the primary contributor to deaths from air pollution. As air pollution worsens, there is greater risk from heart and lung disease. We can see the drivers of climate change are also contributing to poor health and the treatment of those health conditions has an associated cost to the NHS. The NHS is not only part of the solution but part of the problem.

VBP has the potential to tip the scales by reducing the impact the system has environmentally. The reduced environmental impact delivered through VBP also contributes to the wider health co-benefits of a decarbonised system e.g., reduced air pollution and cleaner air enhancing health and wellbeing for all, not just patients in the system. In this way, there is improved value for all – one of the key determinants of value-based healthcare.

Conclusion

Based on theory and practice of the VBP approach in international health systems there was a view on project inception that efficiency and patient outcomes could be improved, and total costs of care reduced. However, contributing to sustainability goals and net zero targets was only evident as the pilot projects were implemented. Whilst not all of the pilots explicitly measured the environmental impact of the products/solutions adopted, it has been possible through a retrospective analysis to draw the conclusion that there is a direct correlation between implementing VBP and the delivery of environmental and sustainability co-benefits.

Across NHS Supply Chain's internal VBP project validation process, sustainability now forms a key element of the review and is considered a significant part of the value equation alongside cost reduction, efficiency gains and patient outcome improvements.

Work is currently ongoing led by the Department for Health and Social Care (DHSC) to establish a VBP National Standard Evaluation Methodology (NSEM). To maximise the potential of VBP in supporting the delivery of sustainability and net zero goals, further work is needed to incorporate carbon reduction metrics linked to patient and procedure impact. It is only by establishing these metrics that the full potential of VBP on the journey to net zero will be realised.

⁸ <https://www.lancetcountdown.org/>