Numerous programme and policy initiatives have been introduced in England since the late 1990s to support the effective use of National Health Service (NHS) funding in providing accessible and innovative health care. As the 2002 Wanless Report highlighted, investments in innovative medical technology are an important component of NHS planning to maintain an efficient and high-quality health service and drive socioeconomic benefits. Consequently, the process by which the NHS purchases and introduces innovation into its system of hospitals and GP practices is crucial to realising the numerous benefits afforded by medical technologies.

In particular, several actions have been recently instituted into the procurement landscape for medical devices in the NHS. Such change was arguably first initiated by the development of the Supply Chain Excellence Programme (SCEP), which sought to improve methods of both national and regional procurement through various mechanisms, such as collaborative ‘procurement hubs’, National Contracts Procurement (NCP), and reorganisation of the role of the NHS Purchasing and Supply Agency (PaSA). The latter now has responsibility for device evaluation and outsourcing of NHS Logistics – a ‘joined-up’ effort deemed the NHS Supply Chain, which serves as the primary purchasing agent for the NHS. Other changes to the governance structure were realised, with the multi-national company, DHL, and US-based purchasing organisation, Novation, overseeing operation of the Supply Chain, in collaboration with the NHS Business Services Authority (NHBSA). The SCEP was recently succeeded by the NHS Sourcing and Supply Chain Improvement Programme (NSSCIP), which aims to continue many of the SCEP’s key objectives (for example, use of purchasing hubs).

The legacy of SCEP and associated developments on NHS procurement is uncertain. With a greater commercial orientation, the Programme increased the focus on bulk purchasing and a competitive tendering process. While such practices can have positive implications for efficiency gains and reduced prices, this has lead, in some cases, to the purchase of cheaper and often older equipment from large suppliers, who can more easily accommodate NHS demands for low prices and high volume. This can provide disincentives for innovative products to be developed and available to patients and providers, in addition to disproportionately orienting objectives towards short-term cost-savings, rather than long-term benefits and costs. While cost containment is certainly a key objective of any health care system, procurement decisions and practices should be grounded in providing greatest benefits to patients and providing the best value for money for the £15 billion spent each year by the NHS on goods and services.

**Summary:** The process by which the English National Health Service (NHS) purchases and introduces innovation into its system of hospitals and general practitioner practices is crucial to realising the numerous benefits afforded by medical technologies. Several actions have recently been instituted into the procurement landscape for medical devices in England, including development of collaborative ‘procurement hubs’, National Contracts Procurement and reorganisation of the roles of key purchasing bodies, all principally under the auspices of the Supply Chain Excellence Programme. While most of these initiatives generally focus(ed) on short-term cost containment and efficacy gains, it has been argued that procurement decisions and practices should be increasingly grounded in providing greatest benefits to patients and providing the best value for money for the £15 billion spent each year by the NHS on goods and services.

**Key words:** Health Care Financing, Medical Devices, England, Wound Care

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**Evidence-based purchasing**

To help meet this objective, recent changes encompassed the development of a new device evaluation service, the Centre for Evidence-Based Purchasing (CEP), within NHS PaSA. The Centre was established to provide evidence to underpin purchasing decisions and, more broadly, to support the uptake of effective, safe and innovative products and related procedures in health care. While evaluation of medical technology has historically rested on evidence...
of performance and safety, the CEP and its programmes, such as the Multidisciplinary Assessment of Technology Centre for Healthcare (MATCH)*, aim to incorporate considerations of costs, patient outcomes and clinical opinion into a procurement framework. As promulgated by these initiatives, such evidence could be used to inform procurement contract agreements and determine appropriate pricing bands for applicable tariffs.

While the principal objectives of evidence-based purchasing (EBP) are laudable and increasingly needed to support value for money in the NHS, it is still in an embryonic stage of development. Moreover, similar to other procurement developments, EBP presents challenges for highly innovative or new technologies in the early stages of commercialisation. In particular, the data or evidence required for the evaluation of medical devices are often unavailable, as unlike pharmaceuticals, randomised controlled trials are not required for market approval. Even in cases where data are available for early evaluation, evidence is unlikely to appropriately account for the incremental development of most medical technologies. Indeed, devices are typically developed through a dynamic, iterative process, whereby their functionality is constantly improved upon by user feedback and further research. This results in the evolution of new generations of the initial device, leading to different characteristics, outcomes and cost estimates with each progressive iteration. To this point, evaluation prior to procurement, either at first generation or before user feedback can be assessed, may not fully or accurately capture the true value of a given technology.

Application to wound care

Recent innovations in wound care, particularly Vacuum-Assisted Closure (VAC) therapy**, provide a helpful example to illustrate some of the opportunities and challenges associated with application of EBP in the NHS. VAC therapy is a relatively immature and highly innovative intervention that applies negative pressure to accelerate wound healing. It employs electrically-powered vacuum pumps, collection canisters, connection tubes and specialised dressings to drain wounds of exudate (i.e. excess fluid and cells) and influence growth of surface tissues. To date, VAC therapy is primarily used for acute (e.g. skin grafts) and chronic (e.g. leg ulcers) wounds of variable size and complexity, and is employed in both hospital and community care settings. While still an early product, the benefits of VAC therapy for wound care patients are considered high, in terms of wound healing, cost-effectiveness, and reduced length of stay. Currently in the NHS, purchasing activity for VAC therapy is predominated by NHS Trusts (devices) and the NHS Supply Chain (consumables). Procurement decisions are primarily comprised of two main choices, purchase or rent, which is mainly determined by specialist nurses and clinicians. Figure 1 maps the procurement landscape related to VAC therapy.

Increased demand and its innovative nature have placed VAC therapy on the procurement agenda in the NHS. However, decision-makers are often

*The MATCH programme constitutes a research collaboration between various UK academic institutions and a group of industry partners. Beyond its scientific aims, MATCH seeks to strengthen key networks and engagement between regulators, industry, and patients – all with their own important perspectives regarding medical technologies.

** Included in general category of Negative Pressure Therapy for wound care.
grounding purchasing activity on mixed or limited evidence. This is principally due to considerations regarding data availability for new and notably innovative therapies and, perhaps, as a result of insufficient resources allocated to adequately assess the existing evidence on the costs and benefits of VAC therapy. Wound care itself also introduces challenges that can impact on their evaluation and, subsequently, EBP. For instance, wound care is highly variable across wound type and characteristics, frequency of dressing changes and duration of treatment. Moreover, there are few ‘standard’ or ‘conventional’ products in this therapeutic area, as evidenced by the variety of innovative wound treatments on the market and the presence of inconsistent local clinical guidelines on use in patient care.

**Outstanding issues**

In order to address some of the issues related to VAC therapy and facilitate the effective use of EBP, especially in highly innovative therapies, there are a number of outstanding issues that need to be addressed. Firstly, systematic review of available evidence and/or economic analyses, including modelling, needs to be pursued. Given it is a fairly immature therapy, there may be limited data and, where evidence is available, methodological issues (for example, small sample sizes, variation in outcome measurement) may be present. This may be exacerbated by the lack of clarification as to what constitutes standard wound care. Such challenges must be acknowledged and addressed through additional evidence and consideration of new data as it becomes available. MATCH is addressing some of these methodological issues by incorporating different analytical approaches, for example, Bayesian techniques, into value-assessment methods for the purposes of procurement.

Secondly, as demonstrated by the example of VAC therapy, there are a vast range of actors involved in the procurement process. To ensure national and local relevance and cross-stakeholder engagement, collaboration is needed amongst key stakeholders, including industry, the Association of British Healthcare Industries (ABHI), the Department of Health (including the National Institute for Health and Clinical Excellence – NICE), procurement actors (for example, collaborative procurement hubs, Trust Managers, Directors of Nursing) and users of the technology. These key stakeholders should be involved in lending valuable multiple perspectives, in addition to pure cost-minimisation considerations, which currently tend to dominate purchasing decision-making. In particular, stakeholders both inside and outside the NHS could contribute input regarding how:

(a) different elements of procurement interact,
(b) patient needs can be achieved,
(c) innovation can be better integrated into the NHS, and
(d) industry can be rewarded for high-value products.

In terms of NICE in particular, it will prove important to carefully assess how evidence-based purchasing decisions (and, evaluative processes) may coincide with the Institute’s decisions and guidance. The information provided through interactive and iterative communication routes facilitates parallel benefits for improved purchasing decisions, continuous device development and enhanced management of wound care in the NHS.

Thirdly, as the concept and use of EBP develops in England, the unique considerations of innovative devices must be taken into account, many of which have been highlighted throughout this article. These include, but are not limited to, the methodological challenges associated with early evidence and technologies intended for small patient populations; the iterative development curve; and the high cost and resource needs of distribution and user training and education. To that end, devices, as compared to pharmaceuticals, require a significant level of user involvement, which ultimately has implications for the performance (i.e. effectiveness, safety) of the product. The medical technology industry is typified by small companies, who may lack the necessary resources to amass the information required by CEP or other relevant EBP bodies. Fourthly, similar to any evaluative process for determining the value of new health technologies, the transparency of EBP-based procurement decisions must be upheld. As NHS procurement assumes a commercial element and often involves a vast array of transactions, an open process is necessitated.

The procurement landscape in England has undergone notable transformations, introducing various policies and mechanisms to enhance the value for money achieved in NHS purchasing. EBP, marked by the establishment of the CEP, is one particular strategy to meet this aim. While EBP may help shift focus from short-term gains to sustainable cost and outcomes in NHS purchasing, adequately accounting for innovation and differences between technologies (i.e. devices vs. pharmaceuticals) in its practices and methods is crucial. Furthermore, requisite resources should be invested in the CEP to ensure an effective and robust process and, importantly, one with an impact on procurement. Indeed, purchasing practices and policies should ultimately support the founding principles of the NHS – providing patients with high-quality, effective, and affordable health care.

**REFERENCES**


**Conference: Bridging Knowledge in Long Term Care and Support**

La Pedrera de Caixa Catalunya, Barcelona 5–7 March 2009

In Europe over 15 million people with disabilities will soon enter old age, while a similar number of older people will become disabled. This conference will explore methods and systems for long-term care and support, in particular looking at how to integrate and transfer knowledge and experience between the ageing and disability sectors. Supported by the European Commission, it will feature a mix of keynote speeches by international experts and parallel symposia.