Aggregation versus value based procurement in public healthcare procurement

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Introduction

Procurement in the UKs National Health Service (NHS) is facing its most significant financial challenge. Government rhetoric sees procurement as either the NHS's biggest inefficiency or its greatest opportunity. Despite the complexities, diversity and sheer scale of the NHS, the solutions offered are all too often packaged as "collaborate more", "standardise products" and "leverage spend". Unfortunately, these overly simplistic solutions often take a myopic view of market drivers and impacts, conflate spend with potential savings, and can ask the wrong questions of NHS professionals and suppliers alike. Most importantly, many contracts have already been commercially optimised yet the funding crisis continues to deepen. In this paper we provide a hermeneutic analysis of recent Government commissioned reports to show how these have set the tone, culture and priorities for NHS procurement. The analysis provides a backdrop to an empirical case study focused on a regional cluster of six NHS Trusts in England. The case study illustrates how the reports, and the wider reform agenda, have led to, and legitimised the dominance of narrow price-based approaches in NHS procurement and as a consequence, creates difficulties in moving towards holistic value-based procurement approaches.

Literature review

Healthcare supply chains are highly complex with myriad distribution channels (Miah, Ahsan and Msimangira, 2013) and a large number of stakeholders who must work collaboratively to create value (Boyer and Pronovost, 2010). To illustrate the scale and complexity of the NHS, in England alone (2014 figures) it deals with over 1 million patients every 36 hours and employs circa 150k doctors, 377k nursing staff, 37k managers, and 156k scientific, therapeutic and technical staff (NHS Confederation, 2015). The frontline professional staff provide diverse services and take procurement decisions through the referrals made, tests ordered, procedures performed, processes followed and drugs prescribed (Allen, Wade and Dickinson, 2009). Healthcare procurement covers the purchasing of care (commissioning) and purchasing for care (NHS procurement). The context of this research is purchasing for care and spanned a range of spend categories (Lichtenberger, Neal and Ungerman, 2010), including basic indirects (printing), low-preference clinical items and capital equipment (pressure care) and high-preference clinical goods and services (orthopaedic implants). Despite the numerous high profile procurement policies, the financial challenge on the NHS continues to grow and the net deficit for the 2014/15 financial year totalled £671 million (NHS Confederation, 2015). Public procurement's role is to ensure regulatory compliance, prudent use of the public purse, and third-party delivery of contracted goods and services (Russell and Meehan, 2014). The organisational complexities and scale provide a major challenge for the effectiveness of public procurement (Lawther and Martin, 2005; Grudinschi, Sintonen and Hallikas, 2014) and the single-faceted pursuit of annual price-oriented savings

in healthcare is not sustainable (Pritchard, 2012).

The management of public service effectiveness is conceptually rooted in New Public Management (NPM) that draws on functionalist, private sector management techniques (Hood, 1991). Under NPM, service entities are disaggregated into their consistent parts to analyse unit costs, performance management and output control while markets and competition are used as a means to allocate resources (Radnor and Noke, 2013). The inherent problems in adopting NPM for public healthcare environments is a manufacturing or product based bias that is arguably inappropriate for service environments (Radnor and Osborne, 2013). Drawing instead on a service-dominant logic (Vargo and Lusch, 2004), scholars argue that procurement challenges in healthcare require contemporary views of value creation (Walker, Harland, Knight, Uden and Forrest, 2008).

Cooperative procurement

There is a strong trend across the European Union to aggregate demand through framework agreements within cooperative public procurement groups, with the aim of achieving economies of scale and reducing transaction costs (Albano and Sparro, 2010; Walker, Schotanus, Bakker and Harland, 2013; European Parliament and Council of the European Union, 2014). Aggregated cooperative procurement is also seen in healthcare across the United States, Latin American countries, India and New Zealand (Barbosa and Fiuza, 2011). Cooperative procurement involves two or more organisations combining their purchase volume, information, and/or resource (Schotanus and Telgen, 2007). Academic studies identify a range of benefits (Joyce, 2006; Schotanus and Telgen, 2007; Trautmann, Bals and Hartmann, 2009; Gobbi and Hsuan, 2015) and barriers of cooperative procurement (Amirkhanyan, 2009; Walker et al., 2013; Meehan, Ludbrook and Mason, 2015). Although there are a range of benefits the dominant focus is often savings (Nollet and Beaulieu, 2003). It has been argued that cooperative procurement groups perform well in relation to pricing and contracting but are less successful in other procurement activities (Burns and Lee, 2008). The dominant product-based view suggests that volume reduces prices; however, it is the variety of procurement approaches (Pedersen, 1996), supplier management and overseeing key supply activities (Johnson, Leenders and McCue, 2003) in cooperative procurement that creates value, not just leveraged economies of scale.

Economies of scale are rooted in a product-dominant logic. Scale economies can be achieved when the costs of production comprise a large percentage of fixed costs independent of the levels of production. Costs are lowered by increasing manufacturing volumes to share fixed costs across more units of output, thus reducing unit costs. Manufacturers have the potential to induce higher volume orders through passing on some, or all, of this cost saving. The problem arises when the relationship between volume and unit cost is assumed to be linear. A linear relationship means that for every x number of units purchased the price reduces by y pounds. Following this logic, there would come a point where if you bought enough you would pay nothing. Knowing the minimum and maximum pricing differentials that can be obtained singularly, or collaboratively is important (Schotanus, Telgen and de Boer, 2009), as is understanding the shape of the volume/price curve, the level of steepness, whether the relationship is continuous or discrete and when diseconomies of scale emerge.

The success of aggregated procurement is inherently linked to the characteristics of each spend category: the more similar products are, the easier aggregation should be. Product standardisation is taken as a core assumption of scale economies and rationalisation of specifications is common procurement practice, yet there is surprisingly little empirical

evidence of its relevance to cooperative procurement (Gobbi and Hsuan, 2015). A complicating factor is that standardisation should go beyond sourcing and also consider how contracts are serviced. Framework agreements can allow different authorities to call off orders in different quantities, delivered to different locations, with varying levels of contract management. In aggregated procurement how individual organisations use frameworks can create conflicts that sub-optimise the value at an aggregated level raising issues of standardisation, control, and satisfaction (Yukins, 2010). To achieve its full potential, economies of scale require standardised products, standardised contracts and a low heterogeneity of demand (Albano and Sparro, 2010), characteristics that are rare in healthcare (Lega, Marsilio and Villa, 2013).

Empirical studies show that centralised public procurement frameworks provide net financial and resource savings over decentralised models (Karjalainen, 2011) and protection from corruption practices (Baldi and Vannoni, 2014). In healthcare contexts pooled procurement can reduce costs in pharmaceutical markets (Huff-Rousselle and Burnett, 1996; Tordoff, Norris and Reith, 2005; Ombaka, 2009; Barbosa and Fiuza, 2011), although the evidence is not universal (Waning, Kaplan, King, Lawrence, Leufkens and Fox, 2009). Furthering the complexity, clustered regional healthcare organisations can often secure the same prices as nationally aggregated contracts as suppliers set their prices to achieve wider benefits from locally-managed relationships (Pritchard, 2012). The suggestion here is that the price/volume relationship is not linear and that volume is not the only variable at play in optimising broader value outcomes for buyers and suppliers. Understanding particular market drivers, critically from a supplier's perspective, can be the key to unlock mutual sustainable value, beyond attritional price savings and aggregation.

Determining optimal prices and volumes is complex. Studies comparing against retail prices (Karjalainen, 2011) have limitations as rarely would an individual authority pay a full retail price (Barbosa and Fiuza, 2011). It is also difficult to assess economic savings achieved as the pre-pooled prices are often unknown (Schotanus et al., 2009) so no relative comparisons are available. Other studies have analysed the simultaneous adoption of collaborative procurement and e-auctions (Singer, Konstantinidis, Roubik and Beffermann, 2009) without separating out individual effects on price (Barbosa and Fiuza, 2011). The temporal dimension creates complexities in assessing impacts of aggregated procurement. Short-term gains may be at the expense of longer-term costs owing to changes in market structures and competition. Aggregation potentially lowers profit margins for suppliers and tends to see larger but less frequent contracts (Sànchez Graells and Herrera Anchustegui, 2014) that have increased economic and financial requisites (Albano and Sparro, 2010). Small and medium enterprises (SMEs) in particular can face difficulties in accessing these contracts (Albano and Sparro, 2010). The exclusionary effects on suppliers can over time potentially reduce competition and innovation and could see a further increase in the already rising number of supplier challenges (Arrowsmith and Craven, 2013).

Value-based procurement

Value is a net concept as it represents the benefits created minus the sacrifices endured in obtaining those benefits (Walter, Ritter and Germünden, 2001; Blois, 2004) and it can be created, captured, consumed and destroyed throughout the supply chain. Value in public services is defined not by who produces it, but by who consumes it (Alford and Hughes, 2008). Value in healthcare is broadly defined as the patient health outcomes achieved per pound spent (Porter and Teisberg, 2006), and while the research agenda typically covers commissioning of care, the principles equally apply to procurement for healthcare. Outcomes

can be complex involving both physiological results and patients' perceptions of care. Healthcare activities are interdependent and value relates to longer-term outcomes such as sustainable recovery, on-going interventions, or treatment-induced problems. Value based procurement for healthcare therefore has a longer term focus and is diverse, including product costs, product durability, infection control, length of time of hospital, re-admissions, clinical outcomes, surgical/treatment time, waste, associated process costs (cleaning, administration, etc.) - all of which need to be assessed relative to other alternatives. Defining value-based procurement against patients' health outcomes is a critical departure from traditional approaches that assess procurement 'success' only against previous prices paid for products and services.

Creating value through procurement is evolutionary and requires longitudinal collaboration (Walker et al., 2008). Value-based procurement attempts to strategically align suppliers' resources, products, and services to broad outcomes-based goals and it explores the full remit of cost/benefit across the range of interdependent activities. The approach engages in pre-market engagement to drive market innovation that is focused on delivering life-cycle value across patient services, reducing cost (as opposed to just price), and evidencing impact of value-in-use of products and services. Value-in-use is conceptually rooted in Service Dominant Logic, which changes the concept of value from one founded on an exchange of goods, enhanced by services, to one based on the exchange of intangibles, specialised skills and knowledge, and processes (Vargo and Lusch, 2004; Vargo and Lusch, 2008). Value-in-use requires multiple internal perspectives (Geraerdts, 2012), covering commercial, clinical and patient evaluations moving considerations not just on the price and quality of products, but how they are used and the associated services and outcomes. Value-based approaches do not have a fixed assumption that volume always reduces prices, a position that can wed procurement to solely focusing on reducing suppliers' profit margins, often at the expense of longer-term product development and relational capital investments. From a value perspective, results not inputs are the critical component. Shifting the focus from volume and processes delivered to value of outcomes is a central challenge in healthcare (Porter, 2010).

The aim of this research was to explore the feasibility for value-based approaches in NHS procurement across a regional cluster of hospital Trusts. The dominant approach promoted by government remains procurement aggregation based on iterative price reductions stemming from collaborative scale economies, rather than a broader value-based agenda focused on reducing life-cycle costs, not just price. Repositioning of a value-based procurement agenda is likely to be timely given the need for healthcare financial reform. The literature review however provides a mixed picture. There is evidence of the benefits of collaborative public procurement to deliver a range of leveraged efficiencies (scale, scope and knowledge), yet the evidence is not universal. At the heart of the problem is the lack of challenge of the assumptions of the dominant approach of aggregation. Understanding when (and why) aggregation works, and when (and why) it doesn't, alongside the unintended consequences is important to explore the potential of value-based approaches that centre on improving whole life health outcomes per pound spent.

Methods

A value-based approach in procurement was identified as a possible opportunity to respond to the significant pressures on NHS funding. The University of Liverpool granted full ethical approval for the study. The research project was conducted across six NHS trusts in England that collectively comprise a regional cluster to share best practice and support procurement development. Frameworks are the primary vehicles used by the individual organisations at

Trust and regional/national levels. Access to organisations, staff and suppliers was provided and facilitated through a regional procurement development hub to anchor the results in practice (Yin, 1994).

The research design has two parts. The first provides a context-rich interpretation of the current situation of procurement in the NHS, and its potential to transform its direction. Hermeneutics is a systematic approach to the interpretation of language, whether portrayed in a broad variety of texts, human action and institutions (Diesing, 1991) to extract the symbolic meaning (Ricoeur, 1981). Owing to space restrictions, we confine the texts to three critical documents commissioned by the UK government that report on NHS procurement and provide policy recommendations. A hermeneutic approach provides an understanding of how these reports, and their implied legitimacy, have shaped NHS procurement with respect to power and language (Kinsella, 2006) to expose how the hidden meaning (and not so hidden) of politically powerful sources impact behaviour (Ricoeur, 1981). Hermeneutics is appropriate for public administration research (Balfour and Mesaros, 1994) but its use is rare in public procurement research (Russell and Meehan, 2014).

The three documents are deemed high profile in the NHS as they are government-commissioned and written by the Department for Health, NHS England and Lord Carter of Coles, In the hermeneutic analysis we interpret the literal and figurative interpretations of the texts (Ricoeur, 1981). Language is considered and understanding of the power and context is drawn from alternating between considering healthcare as a whole activity, and between layers composed of individual parts including procurement activity (Gadamer, 1975). Circling between the empirical case data generated and the context set by the reports allows challenge to socially-constructed norms of procurement practice that are deemed legitimate (Suchman, 1995) and to reports taken as fact (Lowe, Ellis and Purchase, 2008).

The second part of the research design is a case study generated from primary, qualitative data from focus groups, interviews, and discussions at regional events. Sessions explored stakeholders' perceptions of procurement, buyer-seller approaches, value-based procurement opportunities, collaboration, innovation in procurement, and the future strategic priorities for procurement. Dialogical approaches were employed to uncover and understand multiple stakeholder views, particularly as costs and value are emotive issues in healthcare. Data were generated from stakeholders consisting of buyers, heads of procurement, finance directors, suppliers, consultants, clinicians, healthcare professionals and operational managers. A total of 47 stakeholders took part in the research. The multi-stakeholder approach reduces homogeneous responses to provide broader representation of perceptions (Walker et al., 2013). Each session lasted approximately one hour, audio recorded and transcribed verbatim. Procurement Heads provided additional documentary evidence (strategy documents, internal communications and policy documents). The data generated was assessed against the context of the Government commissioned reports to assess the feasibility of value-based procurement in the NHS. The paper forms part of a larger research study. Given the space restrictions, only three key documents are presented here and the primary data is reported as a summative case study of the region.

Results and discussion

In this section we report the findings from the hermeneutic analysis of the Government commissioned reports that set the tone, culture and priorities for NHS procurement. The hermeneutic interpretation is situated against the timeline of recent key NHS reforms to illuminate how the stakeholders' are embedded in the history and culture that shaped them.

Background to the texts and context

In 2013 regional procurement development hubs were established in response to National Audit Office (NAO) (2011) and Public Accounts Committee (PAC) (2011) criticisms of inadequate procurement capabilities to deliver, and evidence, value for money. The NAO and the PAC are audit institutions; the NAO is a parliamentary agency focused on generating financial savings and the PAC assesses the economy, efficiency and effectiveness of government departments' spend (Russell and Meehan, 2014). The regional hub focused on in this research provides procurement support and development to Trusts across the region and facilitates (but does not run) aggregated framework agreements. Procurement in the NHS at a national level has received unprecedented attention from the media and government departments in recent years. Successive governments have commissioned various reports and reviews to outline actions to be taken to improve the efficiency of NHS procurement. The NHS context creates conflicting pressures of delivering cost-savings, ensuring patient safety and complying with EU procurement regulations.

To ground the three selected reports in the wider, contemporary context, table 1 outlines the key NHS reforms from 2000-2015. The reforms illustrate the political and ideological undertones of the reform agenda from successive Labour, Conservative-Liberal Democrat Coalition and Conservative governments. Social reality is historically constituted and hermeneutic understanding sheds light on how cultural messages are concealed and revealed, distorted and dominated by particular groups or ideologies (Roberge, 2011).

Table 1: Timeline of NHS reform 2000-2015

Year	Key reforms
2000	The NHS Plan is published. Outlines a strategy for increased resource by 2010 into the NHS and a move towards performance management. New model of financing agreed through the Private Finance Initiative
2001	Tony Blair begins second term as UK Prime Minister (Labour). Commission for Healthcare improvement is created to formally assess NHS hospitals' performance. The Health and Social Care Act formalises the NHS Plan.
2002	District Health Authorities replaced by Strategic Health Authorities (SHA) and Primary Care Trusts (PCT), legislated in the NHS Reform and Health Care Professions Act
2003	New contracts for GPs and consultants. Standardisation of pay and conditions as part of the Agenda for Change
2004	The first 10 Foundation Trusts are established with more control over budgets and services
2005	Tony Blair begins third term as Prime Minister (Labour). "Commissioning a patient-led NHS" report published recommending a step change with the introduction of practice-based commissioning. Budgets all set to 'indicative only' with PCTs continuing to hold the funds.
2006	SHAs reduced from 28 to 10. PCTs fall from 303 to 152 through regional mergers to reduce overheads costs. Payment by results National Tariff introduced
2009	NHS Chief Executive Sir David Nicholson's annual report warns the NHS to prepare for unprecedented efficiency savings of between £15bn-£20bn between 2011-2014
2010	New UK Coalition government formed between Conservatives and Liberal Democrats. David Cameron becomes Prime Minister. Following concerns, The Robert Francis Inquiry report into standard of care at Mid-

	Staffordshire NHS Foundation Trust is published. The Department of Health accept all 18 recommendations. A full public enquiry is launched. Government published "Equity and Excellence: Liberating the NHS" report and pledges to stop the top-down reorganisation of the NHS
2011	Health and Social Care Bill is introduced. Networks of GP commissioning groups to buy care on behalf of communities. SHAs and PCTs to be abolished. Public Health England, a new body, to lead on public health nationally, with local authorities to lead locally. Healthcare market to be opened up to private and voluntary sector providers
2012	Establishment of Clinical Commissioning Groups and the NHS Commissioning Board. Doctors take industrial action over changes to NHS pensions – the first doctors' strike for the first time in almost 40 years
2013	Agreement between the Department of Health and the Association of the British Pharmaceutical Industry to provide assurance that prices on most of the branded medicines for the NHS would stay flat over the next two years
2014	"The Five Year Forward View" published outlines its 5 year strategy to reduce health inequalities, improve care quality and meet an estimated £30bn gap in funding by 2020/21
2015	Greater Manchester announces plans to become the first English region to get full control of its health spending, as part of an extension of devolved powers. The Conservative party form a majority government. Health pledges include the implementation of the Five Year Forward View, seven-day GP access, 5k more GPs and additional NHS funding by 2020

(Adapted from: Nuffield Trust, 2015)

The reforms in the NHS, from 2000, are many and extensive. The year 2007 is the first since 1993 without major reform highlighting the complex and dynamic environment, which can create challenges for developing longer-term procurement strategies. Under the 'New Labour' government the ideological themes emerging from the reform agenda shows an initial predominance of efficiency and internal markets based on competition between parts of the NHS. Interestingly, the language used in the various reform documents tends towards 'efficiency savings' rather than revenue cuts, presumably as this is deemed less emotive. The dominance of NPM language is evidenced in the efficiency and targets agenda. The internal market promoted moves away from whole-system effectiveness of the health system, and despite the rhetoric of patient choice the power and dominance of individual hospitals was strengthened through structural change (Hands, 2010). The top-down sustained structural changes in the NHS suggest a preoccupation by successive governments with control, particularly budget control, rather than a focus on service quality to patients, preventative health and holistic care. It should be acknowledged that the most significant reorganisation of the NHS come after 2010, despite the coalition government's public pledge to stop the top-down reorganisation of the NHS.

Finance and costs are the mainstays of successive reform agendas in the NHS. The associated language in government policy shifts from public-private partnerships, efficiency and competition, to choice; yet the political drivers arguably remain constant – costs are levers of control. Costs (and procurement) are also portrayed in an overly simplistic manner, belying the inherent structural complexity of the NHS and its service provision.

NHS service providers were historically paid annual lump sums (block contracts) but from 2003 funding moved towards a payment by results model that reimburses providers for work

carried out. National rates apply with tariff-adjusted premiums allocated for provision of specialised care and clinical best practice (Department of Health, 2012b). Many other countries in Europe, North America and Australasia operate similar payment systems. In the US under the Patient Protection and Affordable Care Act (PPACA), commonly called the Affordable Care Act (ACA), and colloquially called Obamacare, hospital revenues have moved from a reimbursement model based on numbers of procedures completed to value-oriented payments based on patient outcomes including quicker recoveries, fewer admissions and lower infection rates. The payment-by-results scheme rewards activities rather than outcomes and is arguably indicative of a product-based logic, rather than a service-based logic, and provides further centralised control mechanisms. More recent moves have seen a shift from internal markets towards an opening up of healthcare to external market providers and commissioning.

Hermeneutic analysis of the texts

Document 1: Department of Health (2012a), NHS procurement: Raising our game

This report details how criticisms of procurement from the NAO (2011) and the PAC (2011) reports are to be addressed. In summary, the report sets a target procurement saving of £1.2billion (from over £18billion per annum spend in England's NHS Trusts 2010-11). No detail is provided for how this figure is arrived at, in which categories of spend savings should be targeted, how the target might be achieved, or how markets and suppliers might be affected. What is clear is the message - procurement is inefficient and pricing across all markets is volume driven. This limited economic perspective presents four solutions to achieve the leap from inefficiency to 'world class' procurement: aggregation, collaboration between trusts, standardisation of tender processes and internal price benchmarking. The four solutions have partial merit although it makes many unqualified assumptions and fails to consider some potentially contradictory policies; for example it encourages buying from SMEs although this is likely to be incompatible with national-level aggregation. Despite the report noting that suppliers reported the desire to focus on long-term value, and a recognition that procurement should be outcome focused and responsive to creative ideas from their supply chain, the solutions offered are predominantly inward-facing (as opposed to market engaged) and price focused (as opposed to total cost focused).

Document 2: Department of Health and NHS England (2013), Better Procurement, Better Value, Better Care: A Procurement Development Programme for the NHS

This provides additional detail from the 2012 report but the message and language is largely unchanged. It sets a target of £1.5billion of procurement savings but it is unclear if this is an additional target or a stretch of the previous one. Potential for multiple targets and lack of clarity of baselines on which these are based creates confusion. Examples are provided where savings could be made through product standardisation or price sharing across trusts. However, the example of the potential to save £230million on procuring non-permanent staff are indicative of other policy failings not procurement inefficiencies. Similar language from the first document is evidenced as again four initiatives are presented to move procurement from a position of inefficiency and ineffectiveness to 'world class': interventions for immediate productivity gains, data transparency across trusts, clinical procurement review partnerships, and improvements to leadership and procurement capability. The focus is again on "relentless focus on costs" (p3) through refusing any inflationary rises from suppliers, aggregation, and benchmarking of prices between trusts. How the optimal price/value life cycle decisions are to be evaluated through the benchmarking is unclear.

Within this 'relentless' cost pressure environment, suppliers are also expected to be

innovative, growing, vibrant and healthy – potentially incompatible aspirations. Data sharing implicitly creates inter-organisational competition and the data is centred on 'what was purchased' rather than future-orientated market intelligence, shared learning, or value drivers across product/patient pathways. Engagement with suppliers is limited to 'top' suppliers – 'top' defined only by levels of contract spend rather than a supplier's quality, criticality, innovation or value initiatives. This report had implicit legitimacy as it had ministerial support of the Parliamentary Under-Secretary of State for Health and led to the appointment of Lord Carter to review the productivity of NHS hospitals.

Document 3: Lord Carter of Coles (2015), Review of Operational Productivity in NHS providers (interim report)
Lord Carter was appointed in June 2014 by the Health Secretary to chair the NHS Procurement and Efficiency Board. Working with 22 NHS providers across England, Carter's report reviews the opportunities for efficiency savings across the NHS. The report suggests savings of up to £5bn per annum by 2019/20 could be delivered: £2 billion from improved workflow and better utilisation of the workforce; £1 billion from optimisation of hospital pharmacy and medicines; £1 billion from estates management; and £1 billion from improvements in procurement. The report recognises the complexity of NHS costs and the need to change how procurement (and wider stakeholders including clinicians) works with suppliers. Despite a steer towards a value-based approach, the report reverts to aggregation and standardisation as the primary solution for procurement, predominantly through the aim of a single national catalogue for NHS products and sharing of procurement services.

Analysis of primary data
The primary data collected show that procurement is price-focused and buyers feel real pressure to deliver savings in line with high-level NHS targets. The government commissioned reports negatively impact procurement's profile as they are associated with inefficiency. When, where, and how, value is created and captured is currently ill defined in tenders and contracts. There is a lack of consideration of value across the full spectrum of procurement mechanisms, including pre-market engagement, tender notices, contract terms, service level agreements, supplier evaluations, and other supplier engagement events. Procurement teams manage tender processes but lack engagement and influence beyond this part of the procurement cycle. The perception from stakeholders is that the failure to understand and define value results in sub-optimisation of outcomes, opportunism by suppliers, inability to measure good practice, short-term surface-level extras that pay lip service to complex issues, and additional costs.

Myths and misconceptions are prevalent in NHS relationships that prevent the transition to value-based procurement. The deep-rooted historical legacy of low-level procurement activity has allowed myths to establish. Legacy issues also limit the motivation for change of all stakeholders. Suppliers, procurement staff, clinicians and other stakeholders shared similar stories and experiences that displayed elements of mistrust, and a lack of understanding and empathy of others' roles. The government reports reinforce attitudes that procurement is ineffective and inefficient.

Procurement perceives that internal stakeholders and financial structures limit life cycle value approaches. Driven by the funding changes, the NHS adopts annual budgets from which Finance Directors derive annual procurement savings targets, devoid of underpinning market intelligence around suppliers' cost structures, risks or opportunities. The high value savings quoted in the reports suggest that suppliers are opportunistic and procurement is ineffective.

The pursuit of annual targets drives behaviours focused on the delivery of short-term cash releasing savings at the expense of longer-term financial benefits. The various government reports are perceived to provide high-level pressure to deliver savings, without consideration of how these are to achieved or the longer-term consequences, and thus work counter to the longer-term perspective of value-based approaches. Similarly, suppliers and clinicians view procurement as predominantly price focused, a view that obscures other cost and value measures. Procurement activity and government rhetoric fuel the price-based assumptions as they pay little recognition to the value associated with contract management or pre-market engagement. The dominant view is that procurement power stems solely from its size and cost reductions are considered only at the tender or re-negotiation stage.

Interviews and focus groups identify gaps in downstream contract management once contracts are let. There is a failure to recognise how contract management is a core process to ensure potential negotiated savings are actually delivered, and to identify value opportunities through close supplier and cross-functional working; instead contract management is perceived as taking up time and capacity. As a consequence of these views, and exacerbated by perceptions of a price only focus restricted to the tender process, suppliers frequently circumvent procurement to discuss development issues, choosing to deal with stakeholders with perceived shared views. Some suppliers have on-going, close working relationships with internal stakeholders, particularly in clinical areas, but procurement provide little commercial management of suppliers covering overall performance, value initiatives, cost improvement targets, risk profiles, financial viability, administrative efficiency, and corporate responsibility.

While there is evidence of a dominant price orientation from procurement focused on reduced supplier profit margins to meet short term cost saving targets, some counter examples were evidenced of procurement promoting non-price based metrics to drive better value for money. A notable example delivered a total bed management contract in one Trust. This project used value-based thinking to mark a step change in procuring pressure care mattresses and all associated products and services to reduce costs and incidents of pressure ulcers for patients. Close market engagement identified opportunities for standardisation, leasing rather than buying to future proof products, and restructuring local supply chains into agile co-operative networks. Suppliers working closely with nursing staff led to improved staff training, changes to product specifications and preventative cost avoidance actions. Procurement, clinicians and suppliers meet quarterly to ensure contractual compliance, iteratively review product/service innovations and identify other on-going areas of value. The social capital created from suppliers working with procurement, clinicians and healthcare professionals forms the cornerstone of value-based thinking. The approach was attributed to opportunistic combinations of like-minded decision makers coming together and was deemed to be in spite of the culture, rather than because of it. The sense of competition between Trusts was implicit and the learning is not shared across the region and is indicative of an insular culture and the long shadow of internal markets developed under successive government reforms.

Another myth evidenced is that aggregation and standardisation are the keys to solving the funding crisis. This myth is fuelled by government rhetoric, commissioned reports, NPM, and logic rooted in a singular view that all markets are volume driven. While there are scale-based efficiencies to be achieved, this alone cannot achieve the cost reductions required. Although there is a clear need to continue work on reducing duplication and waste there are arguably many more areas of procurement that require attention and have a greater potential for sustainable value-for-money results beyond volume-based, standardised products.

Procurement strategies driven only on principles of reducing costs of existing supplies face the challenge of diminishing returns over time. While it creates the illusion of change, 'less bad' does not equate to being 'good'.

Narrow procurement approaches, financial targets, government rhetoric and reform fuel the price-based assumptions as they pay little recognition to procurement's potential contribution through market intelligence and contract management. Aggregation, framework agreements and standardisation remain the primary routes to market and are heavily grounded in the assumption that the NHS are "big players" so should attract competitive prices. Parallel, yet contradictory to this view, is the perception that suppliers are making excessive profits from NHS contracts and are largely able to control market pricing owing to their dominant positions. Neither of these positions is evidenced systematically by procurement, and the government reports sustain and encourage power-based win-lose perceptions of buyer-seller relationships. Legitimacy is a cognitive process that embeds assumptions and norms (Suddaby and Greenwood, 2005), shaping perceptions and setting boundaries of what is acceptable for people/groups to do or not do (Berger and Luckmann, 1992). The legitimacy of the government reports makes it difficult for alternative approaches to gain traction.

Suppliers reported that value-based approaches can be damaged through an overly aggressive stance on pricing that discourages innovation, erodes profit margins, excludes new/smaller suppliers and to a large extent supports the status quo for large, dominant suppliers. Aggregation creates the baseline for prices but doesn't necessarily provide a sustainable search for further improvement. The dominant myth of aggregation runs the risk of creating a myopic reductionist position to procurement, iteratively seeking reductions in supplier margins year-on-year. Moving towards a value-based approach broadens the view of costs and outcomes and provides a more comprehensive challenge to delivering efficiencies.

There is a lack of recognition of value drivers within product categories and assumptions are made on the primacy of volume. Interestingly, despite the dominance of aggregation and standardisation, procurement teams have reservations of its efficacy that conflict with their perceptions that "it is supposed to be cheaper". Issues identified include, the time taken as they only progress at the rate of the slowest Trust, inability to agree specifications leading to "a bit of everything" on contract lists, heavy resource costs, and importantly the cost savings frequently do not materialise. However, many teams felt significant pressure and expectation to comply with moves to push a standardised, leveraged approach. The enthusiasm for value-based approaches was substantial across all stakeholders yet the general feel was that it would be difficult to achieve given the pressure to deliver immediate price reductions regardless of the sub-optimisation impacts in the medium/longer term on cost and service. Issues were raised of how life cycle based value approaches could be financially evidenced; an issue deemed critical to satisfy savings targets, senior managers and politicians. The irony however is that existing volume-based approaches are invariably not evidenced and the lack of contract management leads to unrealised potential savings.

A critical point here is that aggregation approaches carry an assumption of 'once and for all' solutions, yet healthcare and health policy in comparison is complex, dynamic and in constant flux. Value-based procurement is predicated on iterative continuous improvement and sustainable impacts for all parties. The creation of social capital in the bed management contract, internally and externally continues to reap benefits as the team works collaboratively on the current problem of bed storage and deployment created by a new

hospital building. A procurement strategy based purely on cost reduction and aggregation would be unlikely to deliver the breadth of benefits evidenced in this contract.

Conclusions

The sheer scale of the NHS funding crisis highlights the need to make savings in excess of what aggregation alone can achieve. Aggregation certainly has a role to play in improving procurement, but it must be considered in parallel to life cycle value-based approaches aligned to health outcomes. At a time when holistic views to sustainable cost savings and value improvements are needed, procurement need to broaden their field of vision and work actively with their supply base and internal stakeholders. Aggregation, relentless pressure on prices, price comparisons and singular product solutions force procurement into a myopic, internally focused function. Price-based views tend look backward asking 'what have we spent' rather than a forward-looking value-based approach that asks 'what could we do differently?' Price comparisons are beneficial but the principal purpose should not be on comparing Trusts *per se*, but on enabling and driving improvements in care and value. This requires detailed commercial intelligence from procurement professionals.

The benefits of collaborative procurement (Joyce, 2006; Schotanus and Telgen, 2007; Trautmann et al., 2009; Gobbi and Hsuan, 2015) can be persuasive but NHS financial structures create barriers for centralisation. Specifically, scale economies can be demonstrated at an aggregated corporate level but the proportional benefits for individual units and budgets can appear small, are less transparent, and pro-rated working-time efficiencies often do not transfer easily to financial benefits. Without clear demonstration of where, and how, aggregated scale economies can be achieved at a local budget/Trust level there can be cultural resistance to group buying approaches. The potential impacts on the supply markets also require consideration to ensure pricing strategies are sustainable and do not eliminate competition (Caldwell, Walker, Harland, Knight, Zheng and Wakeley, 2005; Nollet and Beaulieu, 2005).

Saving money through economies of scale is necessary but not sufficient to address the NHS funding crisis. New rules must apply to how costs are considered and managed. Value-based approaches have a fundamentally different worldview of the role of procurement based on wider time, cost and scope considerations. Critically, cost reduction is still at the centre of value-based procurement but it is contextualised, temporal and multifaceted. Cost reduction without regard to the patient outcomes and service contexts can obscure value leading to dangerous, self-defeating consequences (Porter, 2010). Procurement plays a key role in navigating the EU Procurement regulation landscape, but can equally contribute through commercial skill. Purchase decisions in healthcare can be enormously consequential with irreversible effects that make them qualitatively different from bad purchases in other markets (Blumenthal and Stremikis, 2013).

The growing financial challenges underpin the criticality for a revitalised NHS procurement function. Value-based procurement is feasible in the NHS however much needs to change before the benefits are realised. Procurement teams need to be equipped to better manage contracts and sharing information. Breaking down the barriers between procurement and other stakeholders lays the foundations for a multi-dimensional value-based approach to procurement in the NHS. This sounds simplistic but represents a sizable cultural shift for NHS procurement. As illustrated through the hermeneutical analysis, the impact of government policy, explicit and implied, weighs heavy into the very psyche of healthcare and procurement professionals in the NHS. At the heart of this challenge is recognising the

legitimating role of the broader reform agenda, political ideology and myriad commissioned reports that provide one-dimensional 'solutions' to 'fixing' procurement. Procurement, like the NHS, is, and will continue to be in a state of flux. Developing an agile, flexible culture that embraces value-based procurement is essential in this challenging environment.

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