



What is value-based procurement (VBP) and why should you care about it?

Full Paper

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What is value-based procurement (VBP) and why should you care about it?

Value-based approaches in purchasing and supply management have been presented in the literature as a silver bullet to significantly improve decisions and strengthen the role of procurement in the organization. There are a few examples in the literature about the successful implementation of this approach, but very few guidelines for practitioners about how to integrate value in their decisions. Yet value-based approaches have been applied in healthcare procurement for more than a decade. In this paper, we review academic and grey literature on value-based procurement in the healthcare sector to understand the fundamentals of this approach and to identify the lessons learned from its implementation. Our purpose is to document this innovative procurement practice, mostly unknown in the purchasing and supply management literature, and to discuss its relevance to other sectors.

Keywords: Value-based procurement, healthcare purchasing, scoping review, grey literature

Introduction

The idea of making procurement decisions based on value instead of cost is both extremely appealing and difficult to put into practice (Malacina et al., 2023). Value-based approaches in purchasing and supply management (PSM) have been presented in the literature as a silver bullet to significantly improve PSM decisions and strengthen the role of procurement in the organization (Dumond, 1994; Knoppen and Saenz, 2015). The literature has also pointed out several important barriers to its implementation, starting from the absence of an adequate definition of value (Francis et al., 2014) and the complexity that the consideration of value adds to already difficult PSM decisions (Gray et al., 2020). There are a few examples in the literature about the successful implementation of this approach, but very few guidelines for practitioners about how to integrate value in their decisions.

Yet in the healthcare sector, the idea of replacing the sourcing strategy based on the selection of the lowest bidder with an approach focussed on value has been around for a while (Gransberg and Ellicott, 1996). In fact, value-based approaches have been applied in healthcare procurement for more than a decade. Value-Based Procurement (VBP) in the healthcare industry is a procurement approach focused on how a product or solution can best deliver desired outcomes to the patients. VBP aims to move away from the logic of cost reduction largely dominant in healthcare procurement (Meenhan et al., 2017). As such, the assessment of the clinical benefits associated with the utilization of the product or solution is incorporated into the purchasing decision. The objective is to maximize value for patients, taking a long-term holistic perspective of the notion of total costs. VBP represents a profound paradigm shift that has been actively encouraged by governments in several countries, mainly in Europe, driven by the need for improving outcomes while controlling costs. The use of VBP is also expected to foster innovation and promote sustainability, both vital to the healthcare sector (Pedroso et al., 2022).

In this paper, we review academic and grey literature on VBP in the healthcare sector to understand the fundamentals of this approach and to identify the lessons learned from its implementation. Our purpose is to document this innovative procurement practice, mostly unknown in the purchasing and supply management literature, and to discuss its relevance to other sectors. This paper's contribution lies in opening pathways to value-based procurement adoption by illustrating its principles and best practices.

Methodology

To document the current state of knowledge and practice of value-based procurement, a scoping review was performed using the six-stage methodological framework from Arksey

and O'Malley (2005). Since the focus of the research is on the current state of evidence in the field, the scoping review was considered most fitting. Scoping reviews are useful for examining emerging evidence when it is still unclear what other, more specific questions can be posed and valuably addressed by a more precise systematic review (Peters et al., 2020). Scoping reviews are also suitable when the academic literature on the topic is scarce (Mak and Thomas, 2022). Currently, scoping reviews are mostly published in healthcare-focused journals and its utilization in other disciplines, such as management, is scarce (Peters et al., 2021). Although conducted for different purposes compared to systematic reviews, scoping reviews still require rigorous and transparent methods in their conduct to ensure that the results are trustworthy (Munn et al., 2018).

Like systematic reviews, the first stage for conducting a scoping study is identifying the research question. The review question guiding a scoping review is typically broader than that of a traditional systematic review and it generally involves exploring, identifying, mapping, reporting, or discussing characteristics or concepts across a breadth of evidence sources (Adams et al., 2017). Thereby, the research question of this study was: *What are the lessons learned from the implementation of value-based procurement in the healthcare care sector including its definition, challenges, and recommendations?*

The second stage of the review is to identify relevant documents. Since the whole point of a scoping review is to be as comprehensive as possible, our review included academic and grey literature. Documents produced on all levels of government, academics, business, and industry in print and electronic formats, but not controlled by commercial publishers are considered grey material (Adams et al., 2017). Grey literature differs from academic literature in the absence of control over content by an editor or a peer-review process

(Svandberg, 2020). These documents are not formally published in academic sources (i.e., books or journals) and include diverse items such as commercial organizations reports, white papers, business press, case studies, consultancy reports, theses, conference proceedings, economic impact studies, teaching cases, think-tank reports, fact sheets, websites, and policy documents (Godin et al., 2015; Adams et al., 2017). As grey literature documents often contain policy- and research-relevant information from authoritative sources and tend to be widely accessible, they are valuable resources for practitioners and decision-makers across disciplines (Godin et al., 2015). Their inclusion in literature reviews allows incorporating relevant contemporary material in applied topics where scholarship lags (Adams et al., 2017; Paez, 2017; Yoshida et al., 2022). In a systematic literature review that included both academic articles and grey literature, Hussey et al. (2009) found that information sources tended to adopt different perspectives. Grey literature can therefore offer distinctive points of view, opening up new opportunities for the researcher. The diversity of sources and formats of grey literature represent a significant challenge in a systematic search for evidence. Furthermore, the coverage of grey literature is inconsistent across mainstream databases (Yoshida et al., 2022). We then decided to incorporate different searching strategies (Godin et al., 2015), including a variety of databases and search engines for both academic and grey documents (ABI/Inform, EBSCO, ScienceDirect, Proquest Dissertations & thesis, SpringerLink, Emerald, Web of Science, GreyNet, OpenGrey, OAIster, Canadian Institute for Health Information, Custom Google Searches) and targeted web-based searches (consulting companies, research groups). To maximize the relevance of results, only two key words were used: “Value-based procurement” and healthcare (or health, or health care). Since Value-Based

Procurement is an innovative practice, we limited the search to recent documents (most current version available at or after 2014) available in English. Ten years is a generally accepted period for a literature review (Pratt et al.,2023). Following Adams et al. (2017) and Svanberg (2020), only sources with significant to moderate retrievability and credibility were included. Anonymous publications, newsletters, news releases, opinion pieces, short practitioner articles, posters, blogs, PowerPoint files, and newspaper articles were excluded. The search strategies yielded 196 potentially relevant items for screening.

The third stage of the review is to select the documents. The first screening of documents potentially relevant is normally done based on the abstract of documents initially identified, after excluding duplicates (Arksey and O'Malley, 2005). Because abstracts are often unavailable in grey literature documents, the abstracts, executive summaries, or tables of contents (whichever were available) of items were reviewed. The first screening resulted in the exclusion of 114 documents judged not relevant to the research question or with not enough retrievability or credibility. Next, the full text of all items that moved to the second stage of screening was reviewed. When it was unclear whether an item met the eligibility criteria during screening, we erred on the side of caution and the item continued for further screening. In this second screening, the theme “value-based purchasing” was identified as central to 14 documents. Since procurement and purchasing are often considered synonyms in the PSM literature, we decided to keep them in the first screening. After reading the full text of these documents, we realized that “value-based purchasing” in healthcare is a much larger concept and refers to a strategy of payment for healthcare services in the US (Tanenbaum, 2016; Spaulding et al., 2018), without direct implications for PSM processes or strategies. These papers were therefore excluded despite

their potential relevance to some specific questions regarding VBP approaches (i.e., the definition of value in healthcare). Documents focused on value-based healthcare with only a few mentions of procurement were also excluded. Besides the 14 documents on “value-based purchasing”, 42 documents were excluded during the full-text screening because of their limited relevance to the research question or doubts concerning their credibility. Finally, 26 publications were retained.

Results

Following a full review of each included publication, data were extracted pertaining to the source organization, year published, authors, country or region of interest, goal/objectives of document, sources of evidence/resources cited, definition of VBP approaches, key results, barriers or challenges identified and recommendations for VBP implementation. It is important to note that not all the selected documents contained information for all these themes. Table 1 presents the summary of the selected items.

Table 1. Presentation of selected documents

Author(s)	Year	Country/region	Goal/objectives	Type of document
AdvaMed	2014	Europe & Canada	Discuss good practices for the procurement of innovative medical technology	White paper
Gerecke et al.	2015	Europe	Develop a framework for VBP aligning value-based healthcare with procurement	Consultancy report
Prada	2016	Canada	Overview of value within healthcare systems and how healthcare value-based procurement is being implemented across various jurisdictions	Practitioner paper
van Raaij	2016		Reflection on PSM’s contribution to health service performance	Inaugural address
Meehan et al.	2017	UK	Investigate the antecedents of the dominant adoption of price-based aggregation over value-based procurement approaches in the UK	Research paper

Messori and Trippoli	2017	UK data	Explore how pharmacoeconomic models can inform the procurement of total knee arthroplasty devices to improve their value for money	Research paper
Nordic Medical Device Industry Associations	2017	Denmark, Finland, Norway, Sweden	Give companies and other stakeholders help to understand how the Nordic countries are working with VBP in the health sector	Industry report
Stilger et al.	2017		Compare formulas for choosing the economically most advantageous tender	Research paper
Cavlan et al.	2018	Europe	Identify challenges and recommendations for medtechs companies willing to adapt their marketing and selling strategies to VBP	Consultancy Report
Deloitte Belgium	2018	UK, the Netherlands, Belgium, Spain, Germany	Provide guidelines on the implementation of VBP	Consultancy report
Trippoli et al.	2018	UK and US data	Explore how complex pharmacoeconomic models that evaluate effectiveness and cost can be incorporated into the in-hospital procurement of thrombectomy devices	Research paper
Zelmer	2018	Canada	Provide a Canadian perspective on VBHC and how these concepts are being applied across the country	Executive brief
Mangan and Ludbrook	2018	UK	Propose a framework enabling organizations to recognize and apply the benefits and principles of VBP	White paper
Wadmann and Kjellberg	2018	Denmark	Overview of Danish experiences with the inclusion of other evaluation criteria than price in the procurement of hospital medicines	Research report
Pennestri et al.	2019		Introduce VBP from a theoretical and an empirical level, referring to relevant practices and challenges	Review article
Gerecke et al.	2020	Europe	Describe the ongoing collaboration on VBP between BCG and MedTech Europe	Consultancy report
Rahmani et al.	2021		Delineate the definition of value-based procurement for medical devices and its characteristics using a scoping review	Literature review of academic papers.
Réseau des Acheteurs Hospitaliers	2021	France	Present an outline of VBP, its aims, and its benefits	Guidebook

Stanberry et al.	2021	Europe	Demonstrate how the European MEAT VBP framework can be adapted and applied to generate insights into the value of a specific medical device, technology or consumable.	Research paper
Mangan	2021	UK	Present the existing challenges and opportunities for VBP and potential solutions to support its mainstream adoption	White paper
Gagnon-Arpin et al.	2022a	Canada	Showcase best in-class methodologies for VBP implementation	Research report
Gagnon-Arpin et al.	2022b	Canada	Illustrate the current landscape of VBP in Canada	Research report
The Conference Board of Canada	2022	Canada	Set the foundation for effective and scalable adoption of VBP policies, regulations, and practices in Canada.	Issue Briefing
Laing and McHale	2022		Depict areas that MedTech must activate to engage successfully with health systems in Value-Based Partnerships	White Paper. Industry report
Nathealth and APACMed	2022	India	Present definitions and recommendations to enable the implementation of VBP in India	White paper. Association report
Tarricone	2023	Europe	Provide insights and definitions that clarify the complexity and specificity of VBP in the health sector	Book chapter

The scoping review resulted in a diversity of documents, including traditional research papers, review papers, book chapters, guidebooks, white papers, and consultancy and industry reports. More than half of them (17/26) can be classified as grey literature (in grey in Table 1). Selected academic papers were mostly published in healthcare journals (management, economics, or medical). Only two of them appeared in PSM journals (Meehan et al., 2017 and Stilger, 2017). All the documents for which a country or region was relevant referred to Europe or Canada, except for one from India. There are papers from every year of the ten considered for the literature review.

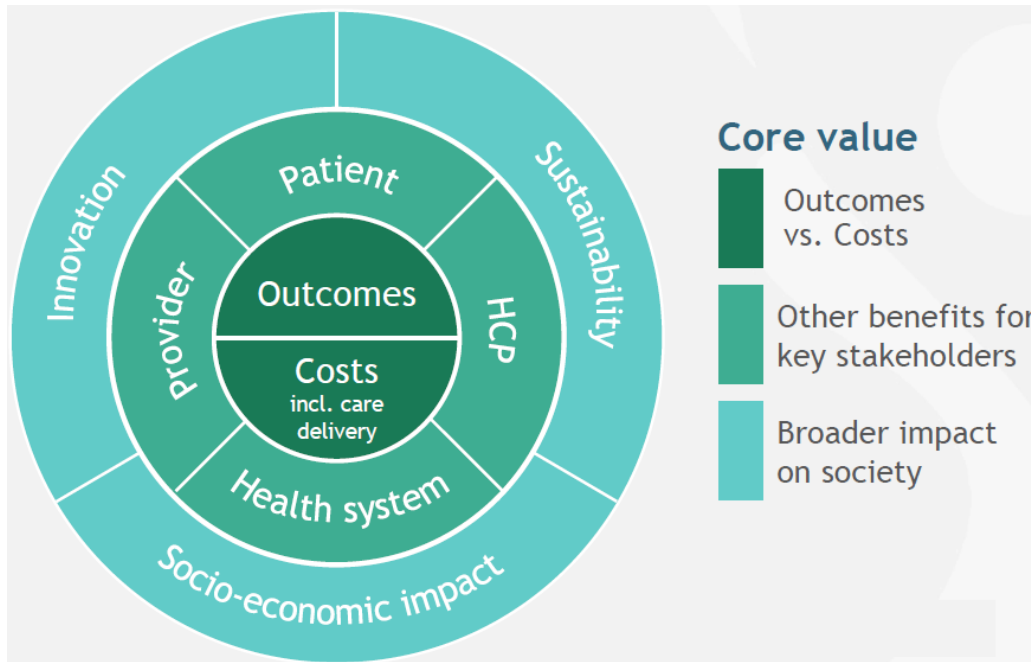
The fundamentals of VBP

All the selected documents present, to some extent, the fundamentals and the definition of VBP. There is considerable consensus on the presentation of VBP as a procurement approach that incorporates the principles of value-based healthcare. In their seminal book, Porter and Teisberg (2006) propose a redefinition of the nature of competition in healthcare in the US based on organizations that provide the best value for patients. Value is defined as the health outcomes achieved that matter to patients relative to the cost of achieving those outcomes (Porter, 2010). Transposing value thinking to PSM processes and decisions, VBP approaches focus on acquiring products, services and solutions that bring the best outcomes for the patient with the least total cost of care (Tarricone, 2023). VBP shifts the focus from the lowest acquisition price to the overall value in terms of outcomes for patients and health systems. The ultimate goal of VBP is to look beyond the total cost of care to capture system efficiencies and optimizations across the continuum of care (Gagnon-Arpin et al., 2022b). A more strategic definition is provided by Meehan et al. (2017), signaling that value-based procurement is a collaborative approach by aligning suppliers' resources, products, and services in a strategic way to achieve improved outcomes which are aligned with the organizational objectives.

When specifying VBP approaches, the selected documents refer to several frameworks (Nathealth and APACMed, 2022), but mostly to the MEAT VBP framework developed by Boston Consulting Group and MedTech Europe in the spirit of the directive on public procurement passed by the European Parliament and Council in 2014 (Gerecke et al., 2015). This directive made the use of Most Economically Advantageous Tender (MEAT) mandatory to encourage contracting authorities to move away from price-focused

procurement and to consider instead total cost of ownership (TCO) and price-quality ratio (Cavlan et al., 2018).

Figure 1. MEAT VBP framework



Source: MedTech Europe; BCG analysis

The MEAT VBP framework is structured in three layers (Figure 1). The first and most important is the value-based healthcare equation: patient outcomes relative to the cost of delivering these outcomes. It come next the consideration of secondary benefits for key stakeholders (patients, providers, healthcare professionals and health systems). The outer ring considers the broader impact on society in terms of innovation, sustainability, and socio-economic impact.

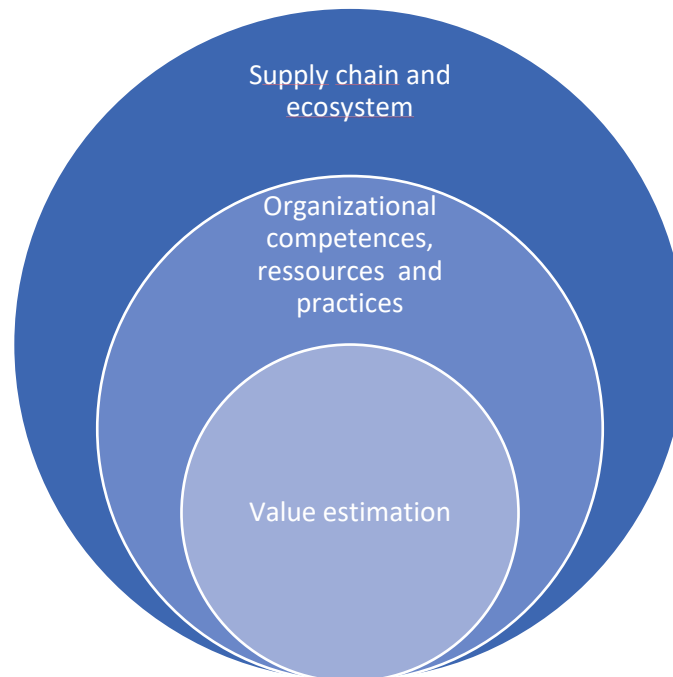
The framework is not a formal algorithm that yields a mathematical solution. It needs to be adapted to individual tenders on a case-by-case basis (Tarricone, 2023). Messiri and Tripoli (2017); Trippoli et al. (2018); Stilger et al. (2017) and Stanberry et al. (2021)

operationalize the MEAT VBP framework (mainly the core layer) using real data for a variety of healthcare products (consumables and medical devices).

Challenges and barriers to the implementation of VBP in healthcare

The selected papers identify challenges and barriers for VBP at different levels. We have regrouped these challenges into three categories (Figure 2).

Figure 2. Categories of challenges and recommendations



Estimation of value

The first category refers to the challenges associated with the estimation of the value of a particular product, service, or solution. Many of the outcome and benefits criteria defined by the MEAT VBP Framework are too broad and not specific enough to be of practical help in describing the benefits of a specific type of medical device or consumable (Stanberry et al., 2021). Identifying the procedures, stakeholders and indicators which define real value is still a challenge (Pennestri, 2019). The estimation requires data, which

is rarely available at the healthcare provider level (Gagon-Arpin et al., 2022b; Nathealth and APACMed, 2022). Decisions are then taken based exclusively through qualitative indexes or, at best, through scores and algorithms developed at the local level (Trippoli et al., 2018). This challenge is more significant when buying innovative products or when there is the intention to consider longer-term efficiencies (Nordic Medical Device Associations, 2017). Furthermore, there is a lack of evidence of situations in which the consideration of other factors than price has led to more value and lower cost in longer terms (Cavlan, 2018).

Organizational competences, resources and practices

The second category regroups organizational barriers at the hospital level. In this category, several documents pointed out the insufficient procurement competencies, i.e., the capacity to lead, structure, and monitor VBP initiatives (Deloitte, 2017; Cavlan et al., 2018; Gerecke, 2020; Gagnon-Arpin, 2022a, Laing and McHale, 2022). Procurement teams lack the resources to conduct a more comprehensive procurement (Cavlan et al. 2018) and the competences to assess value (Nathealth and APACMed, 2022). The silos within organizations, the conflict of interests, and the physician's major role but low participation in VBP initiatives have also been identified as barriers to the implementation of VBP approaches in healthcare organizations (van Raaij, 2016; Cavlan et al., 2018; Rahmani et al., 2021; Gagnon-Arpin, 2022b). Local budget constraints can also limit the actual demand for innovation and cost-effective solutions (Wadmann and Kjellberg, 2018). This is especially true for healthcare organizations embedded in a public healthcare system. Finally, procurement processes in the healthcare sector are assessed as overly technical,

rigid, and price-focused to adequately assess benefits or economic value (Prada, 2016; Tripoli et al., 2018; Mangan, 2021).

Supply chain and ecosystem

The final category transcends the organizational boundaries and gather the barriers or challenges at the supply chain and at the macro environmental level. The disjointedness of many of the key stakeholders in the healthcare system appears as a main obstacle (Prada, 2016; Nordic Medical Device Industry Association, 2017). For a variety of reasons, healthcare providers are reluctant to establish partnerships with suppliers (Deloitte, 2017; Wadmann and Kjellberg, 2018). Yet this collaboration is necessary to develop products and solutions that increase value for patients (Magnan and Ludbrook, 2018, Laing and McHale, 2022) and to estimate their value (AdvaMed, 2014, Zelmer 2018). Medtech suppliers hold critical data regarding the outcomes of the products or solutions they developed. Suppliers can also contribute to the articulation of tenders that end up with the acquisition of more valuable solutions (Prada, 2016). The legislative framework is likewise identified as an important barrier in several selected documents (Prada, 2016; Meehan et al., 2017; Cavlan, 2018; The Conference Board of Canada, 2022; Nathealth and APACMed, 2022). The search for transparency, competition, and accountability and the complexity of the healthcare regulatory system have resulted in the predominance of price as the most important criterion, despite governmental efforts to introduce other criteria (Meehan et al., 2017).

Recommendations for the implementation of VBP in healthcare

The selected documents propose actions to overcome these barriers, several of which have already been applied in several organizations and regions, but a lot of work needs to be done for a generalized use of VBP approaches in the healthcare sector.

Estimation of value

Regarding the *estimation of value*, there is a need to develop outcome-focused formulas, financial and clinical systems that track activity-based costing, and tools for procurement professionals (Trippoli et al., 2018; Pennestri, 2019, Gagnon-Arpin et al., 2022b). Collaborative efforts between public and private stakeholders, including medical experts and end-users, may contribute to accelerating and escalate the development of widely shared, patient-oriented metrics and standards to evaluate value (AdvaMed, 2014, Nordic Medical Device Industry Associations, 2017; Pennestri, 2019). Costs and outcomes should be evaluated in the short-term and the long-term, for different stakeholders (van Raaij, 2016). Health Technology Assessments (HTA) methods, used to evaluate the properties, effects, and impacts of novel technologies, can also inform procurement decisions (AdvaMed, 2014; Poder, 2017, Messori and Tripoli, 2017, Miller et al., 2019).

Organizational competences, resources and practices

The professionalization of the procurement function in healthcare establishments is key to overcome the *organizational barriers* of the implementation of VBP. More capable procurers are instrumental to make VBP a strategic priority and to create the organizational elements needed to overcome the challenges identified (Gerecke et al. 2020; Laing and McHale, 2022). A high level of purchasing maturity is needed to implement VBP (van Raaij, 2016). The implementation of VBP is long and costly, the support of general

management is imperative as well as a prioritization of purchasing categories (Réseau des Acheteurs Hospitaliers, 2021; Laing and McHale, 2022). Procurement procedures should be more flexible, allowing a choice of diverse procurement approaches (negotiation, competitive dialogue, innovation partnerships, procuring for solutions) on a tender-by-tender basis (AdvaMED, 2014). Furthermore, the role of value should be addressed in the pre-tender phase, before the specific procurement process begins (AdvaMed, 2014; Mangan and Ludbrook, 2018).

Supply chain and ecosystem

Suppliers are key for the implementation of VBP and should play a much more active role than in traditional procurement approaches used in the healthcare sector. Partnerships with suppliers would contribute to identify, define, create, and assess value (Prada, 2016; Nordic Medical Device Industry Associations, 2017, Mangan and Ludbrook, 2018). Suppliers may also be contracted based on the outcomes they contribute to generate for patients (van Raaij, 2016). From their side, suppliers should develop commercial strategies with sufficient ROI to incentivize organizations to adopt VBP solutions (Mangan, 2021). At the provincial, national, and regional levels, supporting policies and directives can certainly facilitate a wider use of VBP approaches (Gagnon-Arpin et al., 2022b). Large and coordinate efforts of patients, providers, delivery organizations, procurement professionals, industry and governments are needed to scale VBP (The Conference Board of Canada, 2022).

Discussion

The implementation efforts of PVB in the healthcare sector allow us to identify several lessons that could be relevant for other sectors. We regroup these insights into the same three categories used previously and discuss its relevance out of the healthcare sector.

Estimation of value

We were surprised to find a very similar definition of value and a common VBP framework in the selected papers. This shared definition of value contrasts with the lack of consensus reported by Francis et al. (2014) in the production-oriented disciplines. This consensus has probably been reached because of the generalized reliance on the more general framework of value-based healthcare proposed by Porter and Teisberg. In this sense, one may wonder what comes first: value-based procurement or value-based healthcare? The literature review suggests that the willingness to apply the principles of value-based healthcare precedes the efforts to implement VBP.

The existence of a consensual framework (Figure 1) certainly facilitates the estimation of value. For example, the MEAT framework recognizes the existence of several key stakeholders in the procurement process, but explicitly prioritize the patient perspective. Would it be possible, or suitable, to apply an adapted MEAT framework to other sectors? Customer-centric procurement decisions and processes represent a natural extension of VBP to other sectors. Procurement would need to capture the customer's interest (instead of the patient's) and translate it into purchasing. Procurement professional associations may contribute to developing similar frameworks in other industries.

The literature review reveals that the efforts to estimate value in the healthcare sector have focused on the first layer depicted in the MEAT framework (outcomes vs.

costs). Considering the challenges associated with the estimation of value, it seems reasonable to focus on the core definition of value to start with. Because procurement decisions in the healthcare sector have traditionally been focused exclusively on price, the estimation of total costs of ownership represents a significant challenge, along with the estimation of outcomes. In other sectors the challenge of the estimation of value would be on the estimation of outcomes, since TCO approaches are widely used (Gray et al., 2020). When estimating the outcomes, the challenge of integrating short- and long-term outcomes is certainly considerable in any sector.

Organizational competences, resources and practices

The implementation of a VBP approach can only be done by a mature procurement function. In this topic, healthcare organizations are probable behind organizations in other sectors. In fact, the call for a strategic PSM function has been heard and, in most organizations, in particular large ones, the supply function has been growing in recognition and influence (Johnson et al., 2014). One might then expect that most private organizations possess the competences and resources to implement VBP. The same cannot be said about PSM functions in the government and public organizations (Malacina et al., 2022) that should strengthen their supply functions before trying to implement VBP.

Supply chain and ecosystem

Organizations in the private sector do not have the same limitations as those of the public sector to collaborate with suppliers. Supplier partnerships are instrumental to implement VBP approaches because suppliers possess data and qualitative information indispensable to the estimation of value, especially for new products. The estimation of outcomes may be an interesting stream of buyer-supplier collaboration that would allow

the suppliers to better understand their customers' needs and to develop products and services that offer the greatest value outcomes for the customers of their customers.

While collaborative efforts at the level of the supply chain would facilitate the implementation of VBP approaches in other industries, the role of governmental supportive policies and directives seems less relevant, except for public procurement. Professional and trade associations may support the adoption of VBP by facilitating the exchange of successful experiences and developing tools and guidelines targeted to their members.

Conclusion

Based on a scoping review of academic and grey literature, we have documented Value-Based Purchasing, an innovative procurement approach implemented in the health sector, mostly unknown in the purchasing and supply management literature. With this study, we intend to contribute to the needed, but still rare, cross-fertilization between PSM and health management research (van Raaij, 2016). The scoping review of academic and grey literature of the last ten years on VBP in the healthcare sector showed a promising application of a value-based approach to PSM decisions. Despite several significant challenges, healthcare providers in Europe and Canada are successfully implementing this approach. The efforts to implement this approach in the healthcare sector leave lessons that can be useful to other sectors. As such, the existence of sectorial frameworks, guidelines and tools would facilitate the difficult task of value estimation. As PSM scholars contributed to the diffusion and utilization of TCO frameworks (Ellram, 1993), there is an opportunity to do the same for the estimation of value. Implementing VBP requires a mature purchasing function, with enough competencies, resources, and recognition to translate the knowledge of what is more valuable for customers into better purchasing

decisions. The adoption of a VBP approach would, in its turn, contribute to reinforcing the strategic role of the PSM function. VBP implementation in the healthcare sector also reveals the significant role of suppliers. Collaborative buyer-supplier' efforts to estimate, communicate and increase the value of purchased products would certainly promote mutual understanding.

From a methodological perspective, we use an uncommon method for our literature review: a scoping review including academic and grey documents. The scarce academic research on VBP approaches and our intention to consider practitioners and decision-makers' point of view motivated this choice. The identification of relevant grey literature was very challenging and time-consuming. It is possible that significant documents were not identified. For instance, we could not find a single eligible document from USA. This result may seem surprising given that the concept of value was associated with the management of healthcare systems in the United States as early as the mid-1990s (Tanenbaum, 2016). However, we need to understand the reality of this country to find a possible explanation. The American healthcare system is relatively decentralized, with insurers and private healthcare providers competing to provide care to the population, all constrained by federal laws and certain state-specific frameworks (Robinson and Megerlin, 2012). In the United States, healthcare organizations are reimbursed for their surgical interventions by insurers, according to pre-established rates. Under these conditions, the hospital must ensure that it controls its costs below the insurer's rates to minimize its out-of-pocket expenses. The logic of cost reduction will therefore tend to be favoured by procurement professionals.

To expand the discussion about the applicability of VBP approaches beyond the healthcare, there is a need to study experiences of VBP implementation in other sectors. There is evidence of implementation efforts in the construction and in the aerospace industries. These sectors are probably a good place to start the investigation.

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