

Facing management's supply dilemma with healthcare value analysis

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Abstract Value analysis helps address the healthcare cost conundrum that continues to plague healthcare organisations. Healthcare spending across the United States doubled between 1980 and 2011, reaching 17.9 per cent of the gross domestic product (GDP) with a potential to reach 20 per cent by 2020.¹ Healthcare organisations are faced with a shifting paradigm where reimbursements are based on value versus volume. The focus is a two-fold, patient-centric approach to improve patient outcomes, at the same time reducing healthcare costs. Value analysis is a blending of both financial and clinical outcomes that provides healthcare organisations the ability to solve these problems.

KEYWORDS: value analysis, evidence-based outcomes, supply chain, costs

INTRODUCTION

Healthcare now, more than ever, is shifting its focus towards value analysis. The concept of value analysis simply addresses the issue of reducing healthcare cost without forsaking the quality of care delivered. Value analysis is not limited to larger healthcare organisations and can support organisations of any size achieve their desired clinical and financial outcomes. As a result, the process of value analysis aligns itself with the numerous changes seen, where reimbursements are based on value versus volume. Other factors impacting healthcare are a result of being in the midst of an ageing population, overconsumption of healthcare resources and an increase in raw materials and manufacturing costs along with better educated consumers of healthcare.² Change is constant within healthcare organisations, occurring faster at times than anyone can endure. To effectively navigate the continuous flow of changes, organisational leadership must learn the necessary skills to effectively manage the value analysis process. The importance of value analysis contributing to healthcare organisations to avoid reimbursement cuts without forsaking the delivery of the highest value of care is now more apparent than ever and is on the minds of healthcare professionals who can facilitate the delivery of outcomes-driven, patient-centred care.

VALUE ANALYSIS BASICS: WHAT IT IS

The challenges faced in healthcare today that require hospitals to reduce cost and eliminate waste while improving the quality of care are a result of the economic struggles and healthcare reform.³ One of the goals of healthcare reform is to reduce the amount of spending within healthcare organisations while improving the value of patient care. The success of healthcare organisations in improving patient outcomes is intertwined with the ability of the organisation to control costs. Nonetheless, focusing on costs

in isolation will not achieve the desired level of value and quality within healthcare. Therefore, it is important for healthcare organisations to adapt new processes and strategies to achieve the goal of delivering evidence-based, safe and quality patient care while reducing overall healthcare costs. Value analysis is an essential component of healthcare and is an important factor in helping healthcare organisations achieve these goals.

Value analysis crossed over into healthcare from the field of engineering in the late 1980s due to the changing landscape of insurance reimbursement. One of the founding creators of value analysis, also known as value engineering, was Lawrence D. Miles, an electrical engineer, who worked in the central purchasing department at General Electric (GE) in the mid 1900s.² Due to the competition for raw materials, products, personnel and other resources in a time of war, Miles developed a procedure for procuring, designing and using components and products resulting in a cost savings but not forsaking quality.⁴ As a result, GE was able to maintain the ability to provide services and products during a struggling economic environment during WW II, coincidentally not too unfamiliar with today's economic environment.

Value analysis best practice provides a single-entry access for product review or evaluation, cost reduction opportunities and implementation. In addition, it provides a single source for suppliers to navigate through the organisation. This is crucial to ensure the clinical efficacy and safety of the products, equipment and services used every day throughout healthcare organisations. The Association for Healthcare Value Analysis Professionals (AHVAP) defines value analysis as 'a systematic process to review clinical products, equipment and technologies to evaluate their clinical efficacy, safety and impact on organizational resources'.⁵

Over recent years, there has been an upsurge in popularity of healthcare

organisations implementing value analysis programmes. The value analysis process is responsible for the width and breadth of the product life within the organisation including product or services selection, evaluation, education and implementation. Many value analysis programmes hire RNs who can facilitate the programme throughout their organisation. Russell (2013) describes how nurses in the value analysis programmes act as a bridge between the silos within healthcare because they can comprehend communication from different sources that would get lost in translation.⁶ Each discipline has its own unique language and set of skills that can lead to the fragmentation seen within healthcare. Value analysis programmes that employ clinicians as value analysis facilitators are able to speak and understand both languages based on their extensive clinical knowledge and newly acquired business knowledge.⁶ The value analysis process blends together both worlds to achieve optimal patient outcomes clinically and financially.⁶

New and emerging practices and technologies are challenging the healthcare industry to become careful stewards of diminishing resources. According to Upenieks, Akhavan & Katlerman (2008), one of the major driving forces contributing to healthcare organisations seeking out value analysis is a result of the scientific advances, technology, an increase of informed consumers and the increase in patient's severity of illness among an ageing population.⁷ The complexity of the product selection process within value analysis is a result of these factors, which is why it is crucial to develop a multidisciplinary team structure. Teams are typically comprised of, but not limited to, various professionals and disciplines such as nurses, physicians, infection control, biomedical engineering, health and safety, and supply chain management. These teams are usually based on specific product groupings to assist with

the various steps within the value analysis process such as product review, evaluation, implementation and education of staff. In spite of that, value analysis has to be more than just a programme or a team within an organisation; to be effective, Donatelli (2013) describes how it must be an organisation-wide process with executive support.⁸

THE VALUE ANALYSIS PROCESS

There are many methodologies describing various steps within the value analysis process. AHVAP, which is the pre-eminent clinical resource within the industry, describes a five-domain methodology for the process of value analysis. The five domains are identification, information gathering, analysis, implementation and monitoring.⁵ Each domain has various steps listing important aspects for each domain. Organisations of any size can achieve the results of reducing cost without forsaking quality through a value analysis process. Some healthcare organisations may have full-time clinical value analysis staff where other organisations can adopt the concepts of value analysis, with non-clinical staff managing the process. Healthcare organisations, no matter the size, should consider this a viable process to help with cost containment while preserving the aim of providing safe, quality products for patients and staff.

These steps offer a standardised approach for healthcare organisations to develop and individualise their value analysis programme.

One of the goals within the identification domain is to validate the need of the request. The process is typically started by having the requestor fill out a new product request form to elicit key determinants about the request. In spite of that, the value analysis process is not limited to just new product requests but includes opportunities to go after cost reduction strategies through a variety of different avenues. Validation helps flush out the purpose or

reason for the request by identifying the source, such as a problem with the current product or practice, a potential recall of the product, standardisation opportunities, group purchasing organisation (GPO) contract opportunities or responses to strategic initiatives within the organisation.⁵ Another important factor to take into account during the validation is to consider the compatibility with other systems or products within the organisation. During the information-gathering phase, all of the vital data is collected to help start putting the pieces of the puzzle together, which will ultimately aid the value analysis team members with their decisions.

The analysis domain builds on the data collected from the previous steps to determine the impact of financial, clinical, safety, quality and potential outcomes to the organisation.⁵ Activities may include an evaluation of the requested product, completing the cost analysis, conducting negotiations and finalising the team decision.⁵ Once the team has made its decision, the implementation domain is the next step in the process. During implementation, there are many 'behind-the-scenes' supply chain logistics that must occur to bring the product into the organisation. In addition to the supply chain activities, collaboration with various disciplines to ensure staff education, communication and policy or guideline updates is important.

The last domain in this process revolves around monitoring the intended outcome or goal. Monitoring helps close the loop within the process whether it is a new product request or a cost reduction project.⁵ This is a crucial step in helping healthcare organisations achieve their goals based on the impact of financial, clinical, safety, quality and potential patient outcomes. The compliance metrics, which are based on the clinical justification, determine a project's success and need to be developed prior to implementation of the product. For example, a product implementation

is executed because it contributes to the reduction of catheter-associated urinary tract infections (CA-UTIs). Establishing a timeline to review the effect of the product usage on the CA-UTI rates is warranted. At the established time period, an analysis of infection rates along with product usage should be brought back to the team for review and to assure the product's effectiveness and removal of the product if the intended goal is not achieved. Decisions such as this are more successful when there is a strong connection between the value analysis programme and leadership support. The fallout among associated clinicians can be very difficult to manage; however, Murray, Griswold, Sunesara & Smith express how 'the effectiveness of a value analysis program is related to the support of executive leadership of the organization' (p. 98).⁹

CHALLENGES AND BARRIERS

One of the barriers to the value analysis process may be as a result of a knowledge deficit among many clinicians regarding crucial supply chain management activities. The answer to this problem lies in the ability of the value analysis facilitator to act as the bridge between the clinical and financial worlds. Change is sometimes very difficult for healthcare providers; a frequent occurrence, it provokes the emotional boundaries that clinicians have to products they use on a daily basis. Clinicians fail to realise the process isn't just about obtaining the cheapest product or about saying 'no', it's about utilising the process to achieve a win-win for all parties involved. The goal is to have clinicians focus on the clinical aspect of patient care and utilise supply chain for all things related to contracts and logistics, taking away the burden from the clinician and the supplier. The process utilises the appropriate personnel in their areas of expertise and has them collaborating together; so, at the end of the day, it is about achieving the optimal patient outcomes.

Additional challengers are when product selection and procurement occur outside the value analysis process. There are so many things that can go wrong when products are brought into the organisation through the infamous 'back door'. For example, having the product available for patient-care use is based on it being vetted through supply chain management. The product does not magically appear on the shelf once the decision is made to use the product; there are many steps necessary to determine if the product will be set up with distribution or buy direct, adding the product to the item master or formulary and, importantly, having the product available in all inventory locations as the patient moves throughout the organisation.

Another critical area with consequences when products are not vetted through the process occurs as a result of staff's knowledge deficit on the application of a product and knowing the product is available for use. The lack of staff training can lead to the potential for serious safety events to occur within patient care or even staff injury. Additional factors to consider are the loss of patient charges resulting in loss of revenue, underutilisation of contracts and recalls by the Food and Drug Administration (FDA) not being captured to the purchase history. All of these challenges or barriers can be a contributing factor to reasons why some value analysis programmes are not successful or even exist within organisations. It is suggested that only about 10 per cent of the hospitals across the nation have a meticulous value analysis process, which leaves the remaining 90 per cent to practice a mediocre value analysis process.⁹

SUPPLY CHAIN GUIDING PRINCIPLES

Much like nursing's five rights of medication administration, which states the right medication, the right patient, the right drug, the right dose, the right route and the right time, the healthcare supply chain must

incorporate a similar philosophy for supply delivery. The supply chain and value analysis staff has to embrace a culture of principles that prevent harm to the patient. The Five Rights of Product Management are outlined and can be applied to manufacturers, distributors and hospital staff.

Right product: provide the product requested and in the correct quantity.

Right bin/location: ensure that products are placed in the correct location.

Right condition: provide products that are not expired in clean and good condition.

Right time: ensure products are delivered at the right time.

Right the wrong: if something is not right, fix it or tell someone.

SUPPLY CHAIN DISRUPTIONS

The risk and actuality of supply chain disruptions is real. 'It happens with quality and safety issues, supply shortages, legal issues, security problems, regulatory and environmental compliance, weather and natural disaster, and health disasters (eg pandemics or Ebola).'¹⁰ Some of the disruptions are on a global level and others are national or local level issues. Many disruptions to the supply chain may be caused by the supply chain itself. Manufacturers may have forecasting errors, manufacturing issues, regulatory oversight, product recalls or logistical interruptions.

Closer to home, a hospital supply chain is not only dealing with the fallout from the manufacturing issues and other disruptions but the hospital may be dealing with a higher patient census, causing a need for increased product use, product recalls or discontinuation of products with limited or no clinically acceptable substitutions available. A supply chain/value analysis professional, however, knows that supply disruptions happen and the answer is not always being able to control the environment, but being able to react to the circumstances quickly

and proactively. The value analysis process promotes a standardised approach to help deal with the variety of supply chain disruptions that occur daily within healthcare organisations.

THE VALUE ANALYSIS PROFESSIONAL

Currently, there is no consensus on position titles for value analysis professionals. Some are called clinical resource specialists, clinical product specialists, value analysis coordinators or facilitators, or value analysis analysts. Their titles may include manager, director or consultant. But their roles include ensuring product safety for patients and staff; educating non-clinicians about the supply chain; assisting in the process of new product introduction; liaison for clinical and non-clinical staff and suppliers and identifying cost savings opportunities. According to Barbara Strain, a Past President of the AHVAP, 'value analysis is not just a process but it includes the value analysis professional who helps to identify, recommend, and implement cost savings initiatives'.

The design of a healthcare value analysis programme will include finding the right professional for the organisation. It may be a seasoned veteran at the hospital or a newcomer to the institution. It may be a non-clinician or it may be a clinician who may or may not be an RN. Many value analysis professionals who are hired do not come ready-made. Instead, they learn on the job but can be supported in various ways. They need to be oriented to not just the hospital's culture but the supply chain and value analysis processes. Their skills need to be developed or enhanced, and they need to be engaged with value analysis professionals from other institutions. The value analysis staff should be encouraged to join supply chain professional organisations for the networking and learning opportunities. Professional certifications add a dimension of professionalism and a statement that the

person is serious about a career in supply chain and value analysis. AHVAP introduced the industry's first and only healthcare value analysis credential known as Certified Value Analysis Healthcare Professional (CVAHP).

The value analysis professional attributes are many. They must above all be professional, ethical and patient-centred. They have to have both clinical knowledge and supply chain expertise. They have to be proactive, resourceful and reactionary as supply issues happen overnight. Business and financial savvy are a must. Collaboration is key, with the ability to negotiate and influence as needed.

SUPPLIER RELATIONSHIPS

Patient-centred care and the supplier relationship are crucial in achieving both clinical and financial outcomes within value analysis. The supplier relationship is changing to a partnership exploring both clinical and business needs and is on the minds of healthcare suppliers. The goal is to help suppliers understand their correlation to patient care. In the landscape of reducing overall costs, supply chain expenses are typically around 30 per cent of the operating budget, usually about the second highest expense for the hospital.² To effectively make a difference within healthcare organisations to help achieve those cost-reduction strategies, the supplier's approach has to start at the front door. The relationship needs to continue evolving towards a collaborative effort with supply chain/value analysis where solving problems together is the basis for the relationship.

The change in the supplier relationship philosophy is now, more than ever, critical for a couple of reasons. First, there is a cultural shift within the healthcare consumer community. The healthcare consumer is more savvy and in tune with the options available in healthcare organisations. Consumers expect transparency around costs and outcomes to aid in their decision on which healthcare organisation they will

select for their healthcare needs since the information is widely available through the Internet. Secondly, the physician models within healthcare organisations are beginning to change. Over the past several years, many physicians are employed by the hospital and not based in an outside group practice. In the past, suppliers would work directly with the physicians or surgeons regarding the products and or devices. Today, however, the climate has shifted to where suppliers are guided to work with the value analysis facilitator first and then the appropriate physician or surgeon is brought into the conversation. There is a growing trend where physicians are being hired as the Medical Director for the supply chain. This role within the supply chain is another aspect of the team creating an avenue for a physician champion within the value analysis process. There are many organisations that are successful in collaborating with physicians or surgeons without this defined role, but this trend is growing in popularity.

CONCLUSION

In conclusion, part of healthcare reform is about reducing cost without forsaking safe and quality patient care. The solution to achieving this element of healthcare reform is based on an outcomes-driven, patient-centred value analysis process. According to Murray et al. (2012), 'value analysis is the science of balancing the mandate to deliver high-quality clinical outcomes with the necessity

to drive down costs in order to thrive in the challenging economics of healthcare' (p. 93).⁹ In this era of increasing healthcare costs and reduction of reimbursements, healthcare organisations need to solidify their role in achieving cost-reduction strategies with or without negatively impacting patient care through value analysis.

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