

The Future of Value Analysis

A Handbook for Health Care Professionals



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Physicians and Value Analysis Professionals: A New Era for Collaboration



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Enterprise Value Analysis at Jefferson Health in Philadelphia, Pennsylvania. “It is not unusual for these committee chairs to call someone, a physician for example, who has requested something to say, ‘I need to understand more about this.’ Physicians are engaged with us side by side not only in the development of contracts but in monitoring patient outcomes to ensure we are achieving our goals.”

Ms. Lane evaluates new, expensive technologies and finds that physician committee members play a dynamic role. “They challenge each other and question whether a new product is essential,” she said. “And we have taken some expensive technologies that benefit a very specific patient population and received approval, with appropriate guidance, on how and when to use them. That’s a big win.”

Factors Driving the Change

According to Ms. Miller, there is more available information about reducing the variation in products. “Physicians want the best for the patient,” she said. “Reducing the variation in products reduces the variation in practice and outcomes. When they see that it is in the literature, and it is not just coming from me or my colleagues, it starts to connect.”

Ms. Lane identified an evolution of supply chain as a contributing factor in the change toward physician engagement and effective collaboration. “At one time, supply chain was part of the purchasing department in the basement of most hospital buildings; we were seen as roadblocks,” she said. “Supply chain employees are now more skilled and engaged. They meet with our physicians to discuss key initiatives and outcomes. We initiate collaboration instead of taking opposing sides.”

Ms. Lane also attributed change to a recent trend by value analysis committees to reach out to young physicians and new hires early in their careers. “Physician engagement is where we are making progress,” she said. Physicians are a treasure trove of information, and when they share it with us, we can determine the best practices to follow.”

Nonetheless, obstacles stand in the way of achieving effective collaboration. Value analysis professionals sometimes feel as if they are waiting for physicians to provide feedback on products. “Physicians don’t always have the time to sit down and send an email that says, ‘Hey, I used this product today and this is what happened,’” Ms. Lane said.

Stumbling Blocks

From the physician standpoint, Bruce Ramshaw, MD, FACS, Professor and Chair of the Department of Surgery at the University of Tennessee Medical Center, in Knoxville, Tennessee, said, “In the past, surgeons, especially those who bring high margins to a hospital, expected to get whatever they wanted for their patients. But, that is changing as we all recognize the unsustainable costs in health care.”

From the physician standpoint, Bruce Ramshaw, MD, FACS, Professor and Chair of the Department of Surgery at the University of Tennessee Medical Center, in Knoxville, Tennessee, said, “In the past, surgeons, especially those who bring high margins to a hospital, expected to get whatever they wanted for their patients. But, that is changing as we all recognize the unsustainable costs in health care.”

Tips From the Experts for Achieving Effective Collaboration

Physician Perspective

- **Get good data.** “Data that really matters to patient outcomes aligns everybody,” Dr. Ramshaw said. “If you want to use a new hernia mesh, for example, you need to measure the impact on outcomes for hernia repair. When introducing a new stapling device, you might need to measure the impact for both colon resections and bariatric procedures. That way, you can appropriately determine if the product added value, and localize it to specific

techniques and patient subpopulations. Without good data, you are flying blind.”

- **Define a test period.** In Dr. Ramshaw’s experience, when evaluating a new product, “you can usually see trends and determine if you are having a positive impact within 20 to 30 cases.”
- **Bring a collaborative attitude.** “Don’t fragment and defend your turf,” Dr. Ramshaw advised. “Understand that everybody contributes from their perspective for the greater good of patient outcomes. The solution is working together, not fighting each other.”

Value Analysis Professional Perspective

- **Demonstrate other benefits to a product.** “Value analysis committees want to understand if a new technology enables the hospital to offer something novel,” Ms. Miller said. “Does it fill a niche in the local geography that no competitors are providing?”
- **Consider joining a value analysis committee.** When she began in value analysis 12 years ago, Ms. Lane saw a lot of resistance from physicians to participate at any level, but now hospital administrations support both the physicians and value analysis groups. “I think that has helped physicians realize that working with us, and not against us, gets them closer to where they want to be,” she said.
- **Explain what you would do if a new product of interest was not available.** Ms. Lane stressed that it is important for value analysis professionals to hear how a physician would care for the patient if the product did not exist. “We are always striving for that best balance of improved clinical and patient outcomes versus finances.”

For more information about value analysis and supply chain management, please visit:
 Association of Healthcare Value Analysis Professionals at www.AHVAR.org
 Association for Health Care Resource & Materials Management at www.ahrmm.org
 W. L. Gore & Associates, Inc. at www.goremedical.com

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True Value: A New Approach to Reduction in Variation in Health Care



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Introduction

Bruce Ramshaw, MD, FACS, Professor and Chair of the Department of Surgery at the University of Tennessee Medical Center, in Knoxville, Tennessee, understands the importance of standardization to manage an increasingly complex health system environment. Recognizing that the conventional approach to standardization, rigid uniformity that narrows choices to a single option, is inadequate to the goal of improving patient outcomes, Dr. Ramshaw advocates for a flexible approach that embraces innovation to produce an optimal variety of choices. This flexible approach, also referred to by some as reduction in variation, can have a greater impact.

The Consequences of Complexity

We live in a fast-paced society, and an explosion of new technologies is taking a toll on health care and other organizations, according to Dr. Ramshaw. An accelerated pace of change has consequences for organizations. The average life span of a company on the Standard & Poor's 500 index shrunk from 33 years in 1964 to about 24 years by 2016; by 2027, the average life span is projected to be a mere 12 years.¹ Organizations, including health systems, have adapted to increasing complexity by fragmenting into more department silos. Hospitals then hire more administrators than patient care providers and ultimately become more wasteful.² "It's time for a new direction in patient care," Dr. Ramshaw said.

Paradigm Shift

Dr. Ramshaw asserted that surgeons have been trained in linear statistics, including *P* values, confidence intervals and chi-square tests, that "don't really apply to the complex biological world." He added: "Too often physicians get caught up in the reduction-

ist science mentality of proving or disproving a hypothesis by attempting to isolate single factors that contribute to outcomes." He emphasized that trying to prove or disprove a static, one-size-fits-all hypothesis requires the acceptance of at least 3 assumptions:

1. Nothing ever changes.
2. All variables are known and controllable.
3. Results are generalizable to all patients in all local environments.

"Clearly, these assumptions are not true," he said. "Patients are dynamic and the interaction between many variables affects outcomes." Thus, standardization—as a way of managing complexity and unceasing change—does not mean achieving absolute uniformity or reducing choice to a single option. "Ideally," Dr. Ramshaw said, "it is a fluid process that reflects patient variability and results in an optimal variety of choices." According to Dr. Ramshaw, an identical hernia mesh in 2 different people could produce radically dissimilar outcomes because of individual differences in the interaction between the body and the material. "The optimal variety will likely represent several different treatment options or device types, but depends on the patient process. For example, the optimal variety in hernia disease may include a larger number of options because there are so many different types of mesh. In bariatric surgery, however, we may work with a smaller number of stapling companies, and that is the optimal variety. You want to match the right choice with the right patient subpopulation to drive the best value."

Data science and analytics can help physicians identify links between combinations of factors and outcomes to thus discover the value in each type of surgical product and match optimal treatment options to appropriate subpopulations of patients. His practice analyzes data regularly to stay abreast. "Data flows in constantly. Implement a new product that might add value to the patient process, but then measure the impact. Trends usually emerge within 20 to 30 cases," he said.

This innovative approach to determining value requires a multidisciplinary team. In addition to collaborating with industry and other specialists, Dr. Ramshaw includes a materials science engineer, a

patient care manager, and patient and family commit-tees to gain multiple perspectives for improving outcomes. During a team outcomes review, for example, his hernia clinician and patient care manager noticed that individuals who experienced poorer outcomes frequently sent emails, exhibited anxiety or unrealistic expectations about the procedure, or required considerable care manager time prior to the operation. Dr. Ramshaw's team developed a measurement tool, and an analysis of subsequently collected data found that preoperative cognitive/emotional state was the highest modifiable factor correlating to outcomes. His team then collaborated with social scientists to develop a more robust measurement tool to identify the specific cognitive/emotional issues that put patients at risk. Because the analysis of the data was so conclusive, most patients are now required to undergo cognitive therapy before surgery as part of a prehabilitation effort.

Implementation

Physicians around the world rely on outdated approaches to determine value (e.g., centralizing data, working in silos and focusing on process over outcomes). Dr. Ramshaw offered this actionable guidance to clinicians who want to shift from the conventional approach to a strategy that connects combinations of factors to outcomes, and thus more accurately reflects the dynamic nature of the biological world:

- **Analyze data in each local context:** "Centralizing data produces an average instead of insight into each local environment."
- **Measure true value:** "Value must be viewed in the context of a definable care process; an inguinal hernia measure is different from a breast cancer measure of value, and it is always possible to improve measurements over time."
- **Focus on outcomes over process:** "Typically, we examine whether to administer antibiotics before operating, for example, but that is just a process measure. If you only improve the one part of the process, you are not affecting the process as a whole and cannot derive true value. That is a huge problem because it results in wasted resources and unintentional harm."
- **Collaborate:** "People have little training in how to work in true teams, yet we need to collaborate to determine what data matter when programming our computing systems, how to interpret that data, and which acquired insights can be applied to improving health care outcomes."

Dr. Ramshaw stressed that we cannot stop the rapid acceleration of change or the increase of technologies in our society and health systems. "However, we can learn the scientific paradigm equipped to manage persistent change, apply it to patient care, and improve value for a sustainable health care system in a better world."

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View From the C-Suite: Putting the ‘Value’ Back in Hospital ‘Value Analysis’



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Introduction: What We Talk About When We Talk About Value Analysis

“Value analysis,” like health care itself, is once again changing, said Raymond J. Seigfried, a visiting instructor of health care administration and policy at the Arcadia University School of Global Business, in Glenside, Pennsylvania.

Mr. Seigfried, who previously spent 26 years working in hospital administration at Christiana Care Health System in Wilmington, Delaware, explained that value analysis has always been an important metric in supply chain management and will continue to be in the future. When examining how value analysis began, Mr. Seigfried noted how it was heavily weighted on the price of each individual product: As Group Purchasing Companies merged, creating a national organization, and as hospitals incorporated, value analysis changed in scale from a value analysis committee (VAC) for one hospital to a committee representing hundreds of hospitals. VACs were now confronted with evaluating products based on majority rule. Mr. Seigfried said the real challenge during that time was managing the diversity of interest. For a single hospital, the structure of quality and cost could be pretty solid. The problem arose when there may have been 100 or more hospitals belonging to a single entity, and multiple brands being used by their members. “Each individual hospital may have its own value criteria and you have to somehow put all of that information together,” he said. “Scale adds a level of complexity in determining value.”

Performing value analysis on this larger scale meant bringing relevant stakeholders together to address their interests as well as making decisions that typically favored the majority of members. But now with prospective payment, specifically bundle payment, capitation and other arrangements, the meaning of value has changed once again. “Today with rev-

enue cycle management planning, value is defined on a local level. Hospitals are at much greater financial risk because they now have more accountability for how they navigate patients through their hospitals. Ultimately, with prospective payment, it’s about the local fit in each hospital and their revenue cycle management program,” Mr. Seigfried added.

Echoing this sentiment, Ann Marie Orlando, RN, the director of clinical services at Yankee Alliance, a group purchasing organization with over 15,000 members¹ that diverted 119 tons of medical waste through reprocessing in 2017,² wrote in the epigraph to the health care improvement company *Premier’s Value Analysis Guide* (2nd edition) that “as vendors merge and streamline services, the cost of the products we use to treat our patients can only be leveraged so much. We, as health care providers, must now leverage the value that those products add to the care of our patients.”³ She added that a multidisciplinary committee, consisting of both clinical and supply chain professionals, is necessary to achieve this task. These committees, ideally, should recruit physicians who play an integral role in the hospital and its processes, a point that Mr. Seigfried identified as key.³

Product Selection: A Systems Approach

“What value analysis means today is relative to the scope of the project and the people involved in doing the review,” Mr. Seigfried said. But with the emphasis on revenue cycle management, value analysis is important if it can result in contributing to the care cycle by improving quality and/or reducing the overall cost of care. Today, providers seek overall value so that the product demonstrates a quality improvement like decreasing adverse events, increasing patient safety, or improving the overall outcome. In this view, price becomes a secondary criterion. In order for that level of value to emerge, it takes a system view. “In order to understand the value of a product, it must have a contributing role in the overall care process,” he said. “As an example, one can demonstrate the value of the product using value stream mapping. Individuals held accountable for the cost and quality from a revenue cycle management point of view need to be involved in determining the value analysis.”

As such, all of the relevant information about a product that is being evaluated must be gathered and analyzed, Mr. Seigfried noted. “Hospitals today carry more risk than ever before with prospective payment. Everyone—the clinical staff, finance, administration and anyone else who’s involved in the process—must be working towards a common goal,” he said. “It’s not just about whether you can substitute product A for a cheaper product B. It’s about identifying the contribution towards the care cycle of the patient. Then, when you involve supply chain management and finance, the question becomes whether you can manage that product in a more efficient manner—whether in terms of transportation, warehousing, distribution, utilization or any combination thereof.” Mr. Seigfried identified that a well-educated supply chain manager can play a major role in reducing not only supply expenditures, but also overall operational costs. “What happens to the product once it leaves the warehouse? How is it being utilized? Is there a consistency of use? Does supply chain seek feedback on a regular basis about the utility of the product? Does the organization apply system learning for continuous quality improvement?” he said. “I think this is where supply chain management and the clinical departments need to blend together, to learn together. That’s what I mean by having all stakeholders involved working towards a common goal. I would

call that a systems approach—taking a wholistic view so that you’re incorporating the full breadth of information at your disposal, from the raw materials all the way through to the administration of the product to the patient.”

Value Analysis in an Era of Uncertainty

At present, Mr. Seigfried said that the future of value analysis is particularly difficult to predict. “What’s happening with the Affordable Care Act? We don’t know,” he said. “You have tremendous forces at play—Medicare, Medicaid, private health insurance—all of these entities only add layers of uncertainty to the picture. The danger posed by such uncertainty to health systems,” Mr. Seigfried said, “is that value analysis will regress to being price-focused at the expense of the patient. I’m concerned that this uncertainty will once again redefine value as a tool for price reduction as it was in the past,” he added.

With patient outcomes and safety potentially at stake, taking an aggressive and strategic approach to value analysis is more important than ever, Mr. Seigfried noted. “VACs must figure out how to reduce costs without compromising on care,” he said. “What that looks like will vary from hospital to hospital, but hopefully the progress made with value analysis will continue to be a necessary part of what a provider must use to be successful.”

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Value Analysis, Spelled A-H-V-A-P



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The Association of Healthcare Value Analysis Professionals (AHVAP) began in February 2000 as a humble email Listserv, spurred by the need to create the very rudiments of an as-yet nascent profession. Three years later, this digital fellowship had grown from 6 to more than 100 members, who were increasingly insistent on an in-person meeting. From that meeting in Chapel Hill, North Carolina, in 2003, AHVAP was formed: an organization of nurses and clinical professionals energized by the mission to provide optimal value in health care through education and collaboration.¹

Inseparable from that mission is a fundamental question that value analysis professionals are asked all the time: “What exactly do you do?” Although the question can be difficult to answer due to the broad scope of the value analysis professional’s role within a hospital organization’s supply / value chain, that very scope demands that such professionals be ready with a confident answer, grounded within a body of knowledge.

Value analysis professionals are dedicated to working with clinicians and multidisciplinary teams to both optimize patient outcomes and financial value for the institution. AHVAP equips its members to do just that by providing a knowledge base, education, collaboration opportunities, and certification. Whereas other value analysis organizations narrow their focus to reducing expenses or managing the introduction of new products—potentially limiting the usefulness of the role in understanding the true value of products and services in the hospital—AHVAP members are aware of and sensitive to the clinical impact of the decisions they make and thereby empowered to communicate with clinicians, as well as administrators and suppliers.

To reflect the unique ability to bridge the gap between patients, clinicians, and the supply chain, AHVAP offers certification in value analysis. Obtaining certified value analysis healthcare professional

(CVAHP) status demands rigorous education, experience, and most importantly, an ongoing commitment to assimilate and apply current knowledge and best practices in value analysis. Far from being just another piece of paper and string of letters, CVAHP certification is a reflection of the value analysis professional’s organization, peers, and wider network, suggesting that he/she is a repository of valuable knowledge and a strong ally to clinicians in their never-ending quest to optimize patient outcomes.

“I was one of the inaugural members for certification when we at AHVAP started talking about the idea back in 2013 and 2014. I led the team that focused on the financial content of the course. Other experienced AHVAP members similarly led other sections of the certification course,” said Robin L. Lane, BSN, MBA, CVAHP the President of AHVAP and Senior Manager of Value Analysis at UPMC, an Integrated Delivery Network based in Pittsburgh, Pennsylvania. “I can tell you that the knowledge I acquired in the process allowed me to look outside of my little world here in Pittsburgh and get a better perspective of how things happen at organizations at a much different level than my own. And that’s been a real gift.

“Not only that, but it helped that other people recognized the knowledge that I had,” she said. “Before, I felt that only the people I worked with had an idea of what I did, what I knew, and what I was capable of. So, besides acquiring a lot of knowledge, certification allowed me to help people using knowledge I already had, which has led to opportunities to expand within my role. Being certified has even led recruiters to reach out to me online.”

The spirit of collaboration in which AHVAP began in 2003 continues to animate the organization in 2018, as they offer a growing array of educational resources, professional development, and networking opportunities to its members. AHVAP also is broad-

ening its membership. To better foster transparency and the exchange of knowledge between clinical and supply chain professionals, AHVAP announced a new level of affiliate membership, open to professionals whose job touches on the health care value analysis process. Building open, transparent partnerships between health care providers and suppliers is a cornerstone of the AHVAP mission, and offering affiliate membership to supply chain professionals opens up vast untapped potential in this area.

As AHVAP expands its leadership role in defining and optimizing value analysis in health care, getting involved in AHVAP increasingly means staying ahead of the curve in an ever-changing industry, and potentially playing a part in pivotal decisions about the future of the field. “Regardless of how long any of us have been in health care or value analysis, we all have opportunities to improve,” said Susan Miller, MN, RN,

CMRP, Senior Director of Enterprise Value Analysis at Jefferson Health in Philadelphia, Pennsylvania, and President-elect of AHVAP. “In most organizations, value analysis is a one-man or couple-man show so, encouraging our members to collaborate and get involved is key to making sure our knowledge base is translated into daily practice.”

As AHVAP empowers its members to become the best they can be, members are then able to educate their peers and colleagues, thus improving the field of value analysis as a whole. “When a physician calls me on the phone and says, ‘Hey, I’m giving a talk on value analysis next week. Can you help me remember how we did X and Y, and what were the outcomes?’ that’s when I know that we’re achieving our mission, slowly but steadily,” Ms. Miller said. “When we’re able to share information with our colleagues, everyone benefits.”

For more information about AHVAP and the CVAHP certification process, please visit:
www.AHVAP.org.

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Q&A: Health Care Perspectives—Critical Focus On the Future

In recent years, the pursuit of the so-labeled “Triple Aim”—providing quality patient and population care at a reduced overall cost—has helped propel changes in the health care field,¹ among other initiatives. Some changes have arrived in the form of a renewed focus on public policy to investment in administrative and procedural technology; although a primary concern for hospitals and other providers has been the move from a fee-for-service business model to one that emphasizes the important of positive outcomes and patient experience.^{2,3}

As these changes began years earlier and continue to develop, the question becomes: What areas will be the critical focus of hospitals, providers, vendors and patients in the near future? Participating in this Q&A are various members of the care team—from surgeons and providers to administrators and analysis professionals—to outline their future perspectives on health care.

How has the move from a fee-for-service model to one more focused on patient experience, outcomes, preemptive care and quality affected health care economics? Do you expect this trend will continue?



Cress Whitfield

Director of National Accounts,
W. L. Gore & Associates

The move from fee-for-service to pay-for-performance has forced facilities to consider overall cost of ownership, which includes not only traditional supply chain activities and procurement, but also patient outcomes that reduce the overall cost of treatment or improve reimbursements based on a set of performance metrics. This trend will and must continue as we, taxpayers and consumers, simply don't have the resources to afford a system based on the volume of consumption of care. This forces providers to consider investments in innovative products that demonstrate better outcomes, such as reduced complications, infections or readmissions, rather than just the price of a product.



Bruce Ramshaw, MD, FACS

Professor and Chair of the Department of Surgery at The University of Tennessee Graduate School of Medicine in Knoxville, Tennessee

The move from a fee-for-service model has been a challenge because there is a lack of understanding about systems and data science. The payment model that currently is most aligned with a value-based model for health care is the bundled payment model. This model does address the need for pay-

ments to be made in the context of a definable patient care process. However, this puts all the risk on the hospital and clinicians. The current practice for most hospitals and clinicians does not support working in teams around definable patient groups or measuring the value of care with appropriate analytics for each definable patient care process for the entire cycle of care. Until hospitals and clinicians understand the need to measure the value of care in the context of each definable patient care process, it will not be possible to lower costs at the same time outcomes are improved (improve value).

The other payment models, such as value-based purchasing and other quality metric payment models, are not being applied according to systems and data science principles. They do not measure value in the context of whole definable patient care processes for the entire cycle of care. Payment models will not be the driver of a sustainable health care system until the hospitals and clinicians can demonstrate patient care models that lower costs at the same time outcomes are improved for each definable patient care process.



John R. Moore

Global Leader-Health Economics,
W. L. Gore & Associates

The need to demonstrate economic value will only grow in importance as payment models begin to shift

more and more financial risk away from the payor and more towards the provider—and thus, ultimately, the patient. Outside of health care, most other industries operate according to a fundamental principle that governs success—create economic value along every segment of the business fulfillment cycle or risk unprofitability and unsustainability as an ongoing entity. In the end health care will be no different. Macro-economic realities will continue to push the drive for demonstration of economic value and lower total cost of care, at least until a visible inflection point has been reached towards a sustainable health care delivery model. If anything, we should expect an intensified effort in the coming years to increase the

pace of change towards greater payment model reform—including a strong push for bundled payment around episodes of care with much greater financial risk placed upon the hospitals.

Mr. Whitfield: Hospitals that participate in various alternative payment models will engage their patient populations on the front end and make investments keeping patients healthy rather than treating them once they are sick. I also believe you'll see hospitals continue to adapt their VAC processes to fully consider proven outcomes and true value in physician preference items. Those areas with high physician preference items content will be most impacted.

What will be the nature of relationships between hospitals, value analysis professionals and vendors in the future? Hospitals and payors/CMS? Administrators and physicians? Physicians and patients?

Mr. Moore: There is no version of future success in health care reform that will not include greater cooperative relationships between hospitals and vendors. Without a doubt this will become a required ingredient for success, as has been demonstrated in countless other industries that have undergone massive reform in order to reach sustainable levels of financial operation. The same thought applies to the relationship between hospitals and payors, administrators and physicians, as well as physicians and patients. All of these entities play a critical role within the continuum of care, and any gap in cooperation and communication creates inefficiencies in the care delivery chain. Whether the fundamental issue involves fractionation of care, shifting of financial risk, variation in care and outcomes, or any of the other numerous problems and issues currently plaguing health care delivery, one common theme for solutions involves greater cooperation and integration between all players within the care delivery spectrum.

and will change much more. Health care providers are more focused on evidence and if the evidence doesn't exist, then some providers are looking to collaborate with value analysis professionals to generate the evidence. It's to the benefit of everyone to have an objective measure to point to improvements in care.

Dr. Ramshaw: The patient care model where data science is applied appropriately to measure the value of the patient care process and of factors, including drugs, devices and diagnostic tools, that impact outcomes that measure value will align hospitals and vendors to work together to determine where each drug, device, and tool has or lacks value—and even where it may contribute to harm. For example, over 30 years of data evaluating the benefits and risks of screening mammography has shown that many more women don't benefit from having a mammogram than those who do benefit based on current recommendations. Even more women are harmed by getting a mammogram (unnecessary biopsy and treatment for a diagnosis that would never lead to harm). Although only about <2 out of 1,000 women benefit from mammograms, it could save their life.⁴ Only using the principles of systems and data science applied to breast health and disease will allow us to identify these subpopulations.



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Because health care is changing and the focus is much more directed on outcomes, our relationship with providers is beginning to change

Mr. Whitfield: Vendors should be encouraged and invited to better understand the strategy and goals of their hospital customers so that they can align products, services and solutions in the most effective

and efficient manner. Ultimately, no matter whether they be public, private or employer-based, payors will continue to push for contracts that will allow them to lower the cost of caring for the patient lives which they cover. They are demanding value from the dollars spent and are designing payment models and metrics to do just that. Hospitals and payors should align on what those metrics will be for a certain disease state and design contracts accordingly.

Hospital administrators have come to the rightful conclusion that including physicians early in the clinical care operations process makes for a better outcome for patients and profitability. By building bridges between service line coordinators, supply chain, the

C-suite and physicians, hospitals are better aligned to implement cost saving or revenue producing processes, evaluate and extrapolate true value from investments, and provide better and more efficient patient care.

As patients continue to become more affective consumers due to payor incentives or models that drive accountability of self, they will seek out clinical services in a more efficient manner. Those services will become more remote and easily accessible, outcomes and cost comparisons will become even more transparent, and physician/patient interactions will be more interactive. Physicians will be tasked with managing a patient's health rather than managing a symptom.

What do you believe will be of critical focus in the next two to three years of health care economic reform (e.g., risk-sharing models, new forms of collaboration, product innovation)?



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Prospective payment is here to stay and will continue to expand throughout the coming years. This will bring more focus on cost-effectiveness that supports quality care. Hospital departments will need to work together around the patient with an overall goal of cost-effectiveness and quality care. The relationship between the hospital and physicians needs to be closer than before in order to deliver care meeting both the clinical and financial payor standard. Information regarding performance outcomes must be shared with the team both clinical and financial in order to hold accountability forward. Vendors will need to be flexible to fit into the specific needs that providers confront and be ready to share in being a part of the strategic plan. I think all of the different providers will need to work together closer than before. Payors will be gathering information on outcomes and will continue to be a greater force on clinical utilization. During the next two to three years, those providers who have the information on outcomes and cost and are able to use this as a source of learning and improvement will have a sustainable strategy.

Dr. Ramshaw: I believe the clinical focus the next 2-3 years will be learning how to apply systems and data

science principles to actual patient care. Value-based clinical quality improvement principles and non-linear data analytics are tools from systems and data science. When these tools are applied to definable patient care processes and value-based outcomes are measured for the entire cycle of care, then costs will go down at the same time outcomes are improved. This is done with the clinical team who defines what data matters in the patient care process (patient and treatment factors) and what outcomes measure value in the context of each definable patient process. Then the various analytical tools are applied to give insight into the factors and combination of factors that most impact outcomes that measure value. The analyses produce weighted correlations (both positive and negative) that are impacting the outcomes that measure value. Then, the team can interpret the output of the analysis and propose ideas that could improve a measurement and that could improve the outcome for the patient care process. For example, if current smoking was highly correlated to complications of a particular operation as a part of a definable patient care process, the team might require that smoking cessation is mandatory for patients considering that surgical procedure. It is an iterative process with information and analysis feedback loops to inform the clinical team on how they can improve value-based outcomes.

Mr. Moore: As greater financial risk is placed upon the providers of care, it is only inevitable that en-

hanced emphasis will be placed upon risk-sharing models, new forms of collaboration between hospitals and industry, and stringent requirements on adoption of product innovation. Data sharing and information exchange must become the norm. Anything manufactures can do to provide tangible performance and quality improvements for the hospital will be noteworthy, especially if such improvements can be expressed in terms of improved patient care and increased incremental economic value.



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In the future, products that cannot demonstrate value and improved outcomes will probably not get a second look. Currently, my team is reviewing procedures with a physician who is on the cutting edge of changing thoracic surgery. Some of the products he needs to do that are not on our committed contract and are expensive. The question is should we use these products despite the contact? 'Did we improve the patient's outcome?' 'Did we cause the patient a shorter hospital length of stay?' 'Did we reduce our infection rate?' 'Did the patient get back to their life a lot sooner?' 'Did we get to the lesion faster?' There are a lot of areas we're looking at to determine if there's a benefit to the patient with a particular product. Those high-dollar technologies will always be scrutinized the most. This will probably never change. For example, the introduction of robotics has been seen as a blessing

and a curse because while maybe it has been better for some people, it has not necessarily been better for everybody. For some procedures, there has been absolutely no benefit to doing the procedure with a robotic component, and the patient sometimes is on the surgical table a lot longer than they expected to be. Understanding this difference is where we're becoming smarter in health care.

Ms. Miller: Also, organizations are becoming much smarter in reviewing claims of improved outcomes. Not only do they want claims to be objective, they're also asking 'How would that play out in my organization? Is it solving a problem that we don't have?' So, if we don't have an infection problem in a certain area, while it would be wonderful to bring everything useful product into the hospital, we also know that there are 25 competing clinical departments and a finite pool of resources. There has to be a prioritization to focusing on those things that are really going to solve real problems for our organization.

Mr. Whitfield: Clinical data, though exceedingly costly, is usually quite attainable through traditional study methodologies, but value data is much more difficult to extrapolate given the lack of standardization in practice, variety in global payment measurements, and the fact that each human is unique. Hospitals will want to invest in innovations that improve patient outcomes, but also will want to recoup a portion of those investments should they not. This will lead to collaborations in data collection (based on value), protocol development, education, service and contracts based upon performance to specific benchmarks.

Are there any new challenges or concerns you foresee for professionals (administrators, physicians, manufacturers, etc.) and patients in this changing health care landscape?

Mr. Whitfield: Fee-for-service is going away. Professionals that continue to develop strategies in that vein risk falling further behind. It's better to engage a portion of revenue in alternative payment models now, so as to learn from mistakes and prepare for the future. Likewise, manufacturers should look beyond price and portfolio to selling solutions that help hospital customers achieve their goals. Developing skills in value-based contracting and execution will be key to the success of both hospital and supplier.

Mr. Moore: With such unprecedented levels of uncertainty in health care, it is very difficult for anyone within the equation (be it hospital administrators, physicians, nurses, manufacturers and ultimately the patients needing care) to feel confident that ongoing reform efforts are going to yield tangible solutions to ensure sustainability of the overarching health care delivery system. The stress and strain (at times even whiplash) tied to constantly changing political winds, extreme industry consolidation, and

other visible factors can take its toll on all involved in health care delivery unless viable options surface which form light at the end of the tunnel. One thing is clear: Manufacturers and suppliers need to gain a solid understanding of where we can provide holistic solutions to the hospitals and care delivery providers that move beyond just the product in question, otherwise we risk simply becoming a part of the problem. This will require new levels of cooperation, integration and partnership beyond what has been experienced in the past.

Ms. Lane: We are being asked for more products that are impactful to the patient experience. They're not all high-end devices, but they cost money that we are being asked to provide to improve the patient experience. Also, as hospital providers grow in size, the process of value analysis will look different depending on where you are located. However, if you are a one-hospital value analysis department or if you have 40 to 50 hospitals to manage, the tenets of value analysis remain the same. Thus, I believe it really is the principles of value analysis that we need to uphold and follow to best provide value and quality to all.

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The Patient Experience



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Today, the experience of patients is front and center, with evaluations of the quality of care and assessments of every “touch point” in the delivery of care affecting financial incentives and/or reimbursement for health systems.^{1,2} This has led to a significant transition in health care. Now, an engaged patient, family, and extended care population is fundamental to the quality assessment process; as a result, the patient experience has become a top priority for health care leaders—in the C-suite and beyond.

This fundamental change is in keeping with the Institute for Healthcare Improvement’s “Triple Aim,” which calls for improving the patient experience (both quality of care and satisfaction with it), improving population health, and reducing per capita cost.³ However, questions remain as to what elements comprise the patient experience, how this new perspective changes the way hospitals measure quality and performance, and what hospitals need to do to implement this new approach. It is important that executives in the C-suites at health systems, as well as surgeons and nurses at the patient care level, engage suppliers and partner together in this process to ensure that the products and services purchased and, ultimately, delivered during the provision of patient care enhance the patient experience.

What Is the ‘Patient Experience?’

According to The Beryl Institute, the nonprofit arm of global health care communications firm Beryl Health, “the patient experience” is “the sum of all interactions, shaped by an organization’s culture, that influence patient perceptions, across the continuum of care.”⁴ Similarly, consulting firm Deloitte LLP’s Health Sciences Practice defines the concept as “the quality and value of all of the interactions—direct and indirect, clinical and nonclinical—spanning the entire duration of the patient/provider relationship.”⁵

In short, patient experience incorporates all of the interactions patients have with a health system,

which includes contacts and communications with insurance plans, physicians, nurses, other administrative staff in hospitals, physician practices and other facilities. According to the U.S. Department of Health and Human Services’ Agency for Healthcare Research and Quality (AHRQ), these are the engagements patients “value highly” when they seek and receive care, including receiving timely appointments, access to information, and positive communication with providers before, during, and after the delivery of care.¹ At the hospital or surgery center level, these engagements could entail wait times, the size and cleanliness of waiting rooms (and/or hospital rooms), and any follow-up care, such as physical therapy.

Of note, the patient experience moves beyond “satisfaction,” even though the terms often are used interchangeably—and incorrectly so. As AHRQ notes, assessment of satisfaction gauges “whether a patient’s expectations about a health encounter were met.”¹ As patients receiving the exact same care may have different expectations as to how that care should be delivered, their satisfaction with their care may similarly differ. Although patient satisfaction still is an important metric, the assessment of the patient experience requires health systems to first learn what are the patient’s expectations, then plan to meet those expectations, and then measuring the experience to determine whether the expectations were met.¹

Research has linked the patient experience with other key health care processes and outcomes, including patient treatment adherence, improved clinical outcomes, enhanced patient safety practices and reduced future hospital admissions. It has been suggested that there are 3 dimensions of patient experience: physiologic illness experience (e.g., rash, bleeding), customer service (i.e., satisfaction), and illness experience (i.e., coping with/managing the condition).⁶

“When we think about the Triple Aim, we see that patient experience is listed,” said Karen Root, Global Leader of Customer Experience-Medical Division, W. L. Gore & Associates. “However, most hospitals and their key executives are still thinking about the patient experience in terms of patient satisfaction. The value chain of health care is a very long and varied set of experiences for the patient. With patient experience, we’re moving toward that overall perspective.”

Why Engage Supplier Partners in the Patient Experience Equation?

The most commonly used tool in the assessment of the patient experience is the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) Survey, which has been designed to measure patient perspectives on hospital care through patient responses to 21 factors organized into 9 topics: communication with physicians, communication with nurses, responsiveness of hospital staff, communication about medicines, pain management, discharge information, quietness of the hospital environment, cleanliness of the hospital environment and transition of care.⁷

Using the HCAHPS Survey, patients rate their experiences with everything from the quality of the food in the cafeteria to their interactions with staff at admission.⁷ Ultimately, Ms. Root noted, “Patients use their own experiences and word of mouth to make decisions about where to seek care.”

“When evaluating a health care system through the lens of patient experience, the goal is to look at every touch point the patient has, not just with their physician, but with the entire system,” she explained. “It’s really evaluating the patient journey all the way from admission to release, from the initial securing of an appointment (who scheduled the appointment, was it an easy process, did it have to be rescheduled for any reason) to the time spent in the waiting room, to the care experience, and, finally, to what happens after discharge.”

Typically, the suppliers providing health systems with everything from surgical devices to disposables and the administrators making the purchasing decisions have minimal direct interaction with patients. However, decisions on which products to purchase and which suppliers to use actually play a vital role in the patient experience because they directly affect clinical care.⁸

A recent survey by *Becker’s Hospital Review* indicates that health-system executives consider the supply chain to be an essential element in ensuring quality patient care.⁹ Of note, the survey found that “physicians and nurses spend up to 20% of their time on supply chain tasks, [such as] finding needed supplies, instead of caring for patients.” Moreover, approximately 25% of respondents reported seeing or hearing about a recalled or expired product being used on a patient, and more than half of the respondents recalled situations in which a surgeon did not

have a needed product for a procedure.⁸ Obviously, these are safety as well as quality-of-care issues.

“The most important thing to do when seeking to improve the patient experience at a health care system is to make the entire staff aware of how their role contributes to the patient experience,” Ms. Root said. “On the supply chain, this could mean making sure the hospital uses the best products, and that they are available when they are needed. And suppliers have a role to play here, too.”

How to Engage Supplier Partners?

How health systems analyze the patient experience within their facilities is an individual decision. However, because each engage the services of outside suppliers, involving these companies in the process is crucial.

For starters, health systems must work to close the gaps between the supply chain and clinicians, effectively connecting and engaging all stakeholders in the supply process. It’s vital that supply decisions not be made solely based on cost, but also on how products and suppliers can improve care quality and outcomes.⁸

Decision makers should ask existing and potential suppliers about ways in which they can assist customer health systems in reducing risk for human error. This may include the provision of automated solutions that can assist in:

- Time-consuming inventory management tasks and improve efficiencies, enabling clinicians to spend more time on patient care;
- Analytics software that assesses the level of value, if any, that specific supplies add to the patient experience; and
- Assisting in the establishment of protocols that, over time, improve predictability, consistency, and enhancement of desired outcomes.⁸

Suppliers also may have useful data on outcomes related to their products or access to print or online content that assist in patient education.

Suppliers working with health systems also may have unique insights into “process problems” within various departments in the facility, whether they supply products for service lines or administrative departments, such as scheduling and billing.

“If we think about it, suppliers and health care systems ultimately have the same end goal, and that is providing the best care to patients,” Ms. Root said. “If we look at the relationship through that lens, it

becomes a partnership, and that should change the conversation between suppliers and administrators. In general, the OR [operating room] manager and supply chain can be provided with so much more information and resources, for things like patient education, inventory management, and predictive analytics. Understanding the resources and information

that your suppliers have, and making use of them, can be tremendously influential to the patient experience. But suppliers also need to take on part of that ownership, understanding that their products have an impact on patient experience, and that means sharing some of the responsibility for treatment outcomes and risk.”

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Unlocking the Value of Innovative Devices and Products: The VAC Process



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According to the Association of Healthcare Value Analysis Professionals (AHVAP), hospitals use up to 17,000 different services, products and technologies to deliver quality health care each year.¹ Not all of these products warrant a value analysis, but the task of comparing competing products, services, or strategies in order to deliver the best care at the lowest possible cost requires a rigorous and organized approach. According to Melissa DeMarinis, Global Strategic Marketing at W. L. Gore & Associates, “Fifteen years ago, clinicians were the decision makers, but the pendulum has swung. Clinicians participate, but decisions about costs and value are made by a broader group, and we need to show each of the stakeholders data to support advantages that they define as important.”

In recent years, value analysis committees (VACs) in various forms have been created at most hospitals to tackle evaluating different products and services. The composition of these committees and processes vary. The variations are important in terms of each committee member’s level of understanding and perspective. “Not every VAC functions the same way,” said Ms. DeMarinis. “The application forms and information they require may differ, and the processes with which they evaluate these applications are not the same. In preparing for a VAC, we also have to consider the level at which members of a VAC understand materials and technical aspects important to outcomes.” Because of innovation and advances in technology, recognizing the value of one product relative to another does not always involve an “apples-to-apples” comparison.

Value Analysis in the Hospital Setting

Acquisition cost cannot be calculated without the context of what value means to the individual. When

quality is sacrificed for a low purchase price, the impact to overall value must be recalculated. This is not a simple exercise. Benefits and risks do not always move in the same direction; therefore, competing products or strategies may have different acquisition prices, types of risks, and associated costs for managing those risks, and an unequal likelihood of achieving the treatment goal. Each of these factors affects the value calculation.

Assessing Time as a Component of Value

Time consideration (e.g., long-term outcomes, recurrence rates) is an essential component in analyzing the value of different products and services. Ultimately, the amount of time spent in the hospital or the need to return to the hospital will impact patient satisfaction, the hospital’s reputation, and value-based care in terms of financial incentive. One example of how value analysis provides insight is the ongoing debate about stents to sustain patency of a coronary artery after angioplasty. A recent study concluded that bio-resorbable vascular scaffold stents (BVS), which are a newer technology, produce inferior “long-term” results when compared with second-generation medically-coated stents.² The long-term follow-up in this analysis was two years; however, BVS devices bio-resorb after three years and were designed specifically to reduce the problem of late stent thrombosis, which can occur five or more years after stent placement.^{2,3} The modest difference in early failures showed that BVS devices are inferior, but a reduction in late failures (e.g., a lifetime risk of drug-eluting stents in the artery) may yet compensate for this early risk and provide a better long-term outcome.

For a hospital VAC, a two-year time frame may or may not be the appropriate window to use in comparing the value of one stent device with another, but the time frame of outcome comparisons is essential for value analysis. The aggregate costs within the time frame of interest, including the acquisition cost of the product; how the product affects procedural costs, such as operating time or hospital stay; and the costs of complications, are all relevant to valuation. Moreover, some additional costs may be warranted for some incremental improvement in outcome. The value of patient satisfaction and institutional reputation is not insignificant.

Weighing the Cost Benefits

In assessing the value of health care products, the VAC will ultimately weigh the costs incurred to determine if it will contain associated costs. As an example, when selecting the appropriate mesh for hernia repair, a number of factors must be taken into account in pursuit of optimal long-term outcomes and the total costs of care. Due to the high rate of recurrence without reinforcement, ventral hernias—including high risk and complex cases—are typically closed with some form of mesh reinforcement.⁴ Although synthetic mesh products, which have relatively low acquisition costs, are typically used in potentially uncomplicated repairs, the more expensive biologic mesh is often used in patients with a high risk for complications or who have comorbidities, such as diabetes.

Traditionally, there have been two categories—biologic and synthetic—for mesh products. Hernias, however, are challenging due to risk for wound complications and patient comorbidities. To combat the challenges, a third type of mesh—biosynthetic—was created to provide support during ventral wall healing before it is reabsorbed.⁵ Not all VACs had a process in place by which a new category of mesh could be evaluated since biosynthetic was not biologic nor synthetic. In some centers, the biosynthetic mesh application for a VAC evaluation was not evaluated because the assessment protocol for the VAC was whether the mesh was biologic or synthetic—it was neither. For hospitals whose VACs realized that the biosynthetic product was providing the same function as the other two mesh products, and had the potential for supporting quality outcomes, they were able to track large cost savings after adopting the biosynthetic mesh product into use.

At one tertiary care institution that adopted biosynthetic mesh for routine use, the adoption provided the impetus to review general guidelines for a system wide approach to synthetic, biosynthetic, and biologic mesh.⁵ When the initiative began, the center was using a market leading biologic mesh in hernia repairs including complex abdominal wall reconstruction cases. The surgeons using these biologic products found the devices were not delivering value or the expected outcomes:

- Cost per unit of biologic mesh was high.
- For complex cases overall, the total cost of patient care was rising.
- Very little level one comparative evidence is available to demonstrate the long term durability of a hernia repair.

The center formed a Mesh Committee to evaluate mesh utilization. This multi-disciplinary team consisted of physicians, Value Analysis Committee members, and purchasing and materials management staff. The Mesh Committee reviewed the available data on biologic meshes and performed an in-depth cost analysis. Based on the findings, GORE® BIO-A® Tissue Reinforcement was chosen for use in complex repairs for ventral, hiatal, and paraesophageal hernias. As a result, use of biologic meshes largely was discontinued for these repairs.⁵

No change in quality outcomes was observed, but the cost savings were large.⁵ In a separate analysis, it was estimated that \$340,000 was saved over a 12-month period, a reduction that mostly reflects the lower purchase cost of biosynthetic relative to biologic mesh.⁵ Although this savings is significant, a longer time frame of outcome assessment is relevant to a VAC deliberation because of the risk for late recurrences and complications.

Rigid VAC protocols have been designed to input apples-to-apples risk overlooking innovative products that require an appreciation of impact on downstream risks and costs. “Although it is easy to understand why VACs want to standardize their processes and apply uniform criteria to the evaluation of new products, there is a very significant risk of using criteria with a too narrow lens,” Ms. DeMarinis said. “One set of criteria cannot be used for all products without the risk of looking past opportunities.”

For many products, including biologic stents and biosynthetic mesh, an extended outcome time horizon is critical to capture relative risk for late complications. As with comparing two devices on purchase price alone, VAC deliberations confined to comparing strategies for outcomes at 90 days or even longer periods are unreasonable when the peak risk for adverse events or adverse outcomes occurs later.

Outlook on the Field of Value Analysis

Despite the widespread adoption of VAC processes to provide an organized and objective approach to purchasing, the field is still young. AHVAP which is recognized as a leading organization in this field, held its first organizing meeting in 2003.⁶ AHVAP now provides certification to value analysis professionals.⁷ Open only to clinicians with experience in this field, those certified are tasked “to ensure optimal patient outcomes through clinical efficacy of health care products and services for the greatest

financial value.”¹ To this end, an evidence-based systematic approach is advocated.

The balance between clinical efficacy and financial value is complex, delicate and variable by perspective. At the institutional level, limited resources encourage decisions from the perspective of population health, a concept captured in the cost-effectiveness of one strategy relative to another. The cost for achieving a desired outcome, such as recovery, sustained remission, or an acceptable quality of life, contributes to overall value and explains why a VAC should employ end points relevant to the patient and institution. Rather than costs incurred over 90 days, strategies are best compared for outcomes of importance, particularly the indication for treatment with a follow-up that exceeds the risk for complications or relapse. This approach ultimately could result in better patient outcomes as well as lower overall costs related to care. “There is no standard window for comparing costs or outcomes,” Ms. DeMarinis said. “Some VACs only look at data out to 90 days, and this can lead them to overlook opportunities to save money and improve outcomes more appropriately evaluated over a longer term. The right comparative window is not the same for every choice or disease state. VACs that apply one standard are at a disadvantage.”

In countries with a national health system, such as the United Kingdom, VAC-like decisions are made on a greater scale in the form of guidelines that identify care eligible for reimbursement. Since it was created in 2001, the United Kingdom’s National Institute for Health and Care Excellence (NICE) has issued more than 200 guidelines based on a systematic review to compare strategies for cost-effectiveness.⁸ In a published review of these guidelines, it was stated, “There is an inevitable tension in advising on the quality of care that individual patients could expect while recognizing the broader public health objectives of equity, fairness and efficiency.”^{8,9}

VACs have the same mandate of delivering high-quality care at lower cost. When a new product, strategy, or service is being considered, value includes the total costs incurred to achieve a desired outcome relative to other options. The decision is straightforward when the option under consideration achieves the same or better outcome at a cost that is equal to or lower than the current alternative. However, effective

VAC processes must accommodate more complex calculations required for new or disruptive technology.

For example, a new product might expand candidates for treatment, allowing care to patients who were not eligible with a previous standard. This advantage would not only be expected to increase revenue for procedures with favorable reimbursement, but comprehensive care has other implications, such as providing the institution with a reputation for innovation. VAC methodologies account for these types of differences to avoid less-valued choices with lower up-front costs.

According to a report from the International Society for Pharmacoeconomics and Outcomes Research, the principles of cost-effectiveness are useful for defining affordability in order to reach an objective analysis of value in the context of budget constraints.¹⁰ The application of cost-effectiveness principles avoids arbitrary end points, such as costs or outcomes at 90 days that do not capture the value of alternative strategies for reaching the clinical goal.¹⁰

Hospital VAC processes can help evaluate products, strategies, and services that offer the greatest value at the lowest cost but are methodology dependent. Processes sufficiently flexible to recognize, incorporate, and appropriately value risks and benefits provide the best opportunity to arrive at a choice that is both cost-effective and in the best interests of the institution.

Conclusion

In the United States, the VAC has been functioning at some institutions for 10 years or more to evaluate new products and services; yet, the field remains in the early stages. At some centers, the effort to introduce rigor and standardization has created its own deficiencies. Although objectivity is fundamental to an effective VAC deliberation, the process also requires flexible analysis to capture novel characteristics of one choice relative to another. New and innovative approaches often present the best opportunity to improve care at the same or lower cost, but this opportunity is available only to those who calculate value using relevant measures. “VACs have been created even at the smallest hospitals, which are often now under the greatest pressure to control costs,” Ms. DeMarinis said. “Health care costs just keep going up. The concept of demonstrating value is nothing new for those of us working in this field, and this process is not going away.”

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Q&A: Evaluating the Current State and Future Direction of Value Analysis

As hospital value analysis develops to meet the needs of a changing health care system, value analysis professionals must review what initiatives have been successful, such as measures to improve communication with physicians, as well as identify areas for improvement in providing quality care at reduced cost. A firm knowledge of what is working and what is not should help prepare the field for its future, the direction of which depends largely on patients expecting optimal care at hospital centers concerns with spiraling costs.

To better understand the current state and future direction of value analysis, several representatives working in health care—both within and outside of provider W. L. Gore & Associates—have taken time to provide their individual perspective on this developing field.

What is working well today in hospital value analysis? How have value analysis programs been ineffective in delivering quality along with affordability of care?



John R. Moore

Global Leader—Health Economics,
W. L. Gore & Associates

Over time, hospital value analysis has elevated and highlighted the need for evaluating supplier devices and services for clinical quality and cost-effectiveness in the face of massive payment reform and shifts from volume to value. The fact that this sort of financial discipline has begun to further evolve within the walls of the hospital is a good thing, for sure. However, many times value analysis committees (VACs) are too inwardly focused and not equipped with the right knowledge to make truly informed decisions regarding adoption of novel products, services, and technologies. In addition, the methodologies used for analysis can, at times, become too focused on short-range impact from an economic standpoint instead of taking a long-term view and the corresponding measure on total cost of care. This fundamental divergence, along with a lack of primary information around fitness for use, tied to a product, technology, or service, can lead to suboptimal decisions, thus missing the mark on delivering quality along with ultimate affordability of care.



Karen Root

Global Leader of Customer Experience—
Medical Division
W. L. Gore & Associates

Value analysis programs strive for cost/quality assessments in measuring patient outcomes. The shift

from fee-for-service to population health requires hospitals to change their metrics and processes. Patient experience and outcomes drive needed focus, but there are limitations to current value analysis processes. Evaluation on substantial innovation often is difficult when many current evaluations are done anticipating incremental improvements. Wholesale game-changing technology often is cut from consideration because it is so far from the norm when the process was developed. We need to think differently when considering the evaluation process: Is it incremental or true innovation?



Cress Whitfield

Director of National Accounts,
W. L. Gore & Associates

I'd say that VACs have been quite effective in limiting the number of products that come into a hospital. In some cases, this may be a good thing. In others, it may be limiting opportunities to improve care, lower costs or improve profitability.



Stacy Prigmore

Global Leader—Provider Marketing,
W. L. Gore & Associates

The single biggest issue with ineffective VACs is that they have not built a repeatable process with set deliverables and have failed to improve their processes. Since there are no standards, every product is reviewed as a one-

off, and the criteria change to potentially fit the need. Without process improvements, they never move closer to the desired state. The second biggest issue is members' commitment to the process. They may not show up at certain meetings, and when this is the case, they do not fully understand their responsibilities to the process.



Raymond J. Seigfried

Independent Consultant and Visiting
Instructor at Arcadia University School of
Global Business, in Glenside, Pennsylvania

What is working well in value analysis is the recognition that many different professionals are needed to determine quality and cost. What we need more of is a multiple-level value analysis that measures products differently depending on their clinical intervention in care and cost. Should a medical device be measured with the same value analysis criterion as business office supplies? There is great opportunity in redesigning value metrics for different products.

Ms. Root: Additionally, evaluations in fee-for-service models consider outcomes in a very truncated time frame. Reducing readmissions in a 30-day window still is a standard for many procedures. Instead, VACs need to consider a much longer term view when evaluating in the realm of population health. Committing to care for a patient from birth through death drives a much different perspective and the value analysis process must adjust accordingly. More needs to be asked in the durability and performance of the products and devices used today. Those longer term assessments of value must become part of the equation, and the payor implications will intersect here as well, driving the change. But, hospitals can drive

those differences today through slight shifts to their processes. For example, if three products are viewed as equal value in a procedure but one has additional data demonstrating longer term benefit, the hospital may still realize gains today—even before payor changes are recognized and implemented. Partnerships between manufacturers and providers can drive improvements in value with clearer commitments to the “Triple Aim.”¹

Mr. Whitfield: Unfortunately, many VACs do not allow vendors to engage with the committee. This can lead to a misunderstanding of the value that a product can bring to the overall continuum of care. Too many times the questions are, ‘What will it replace?’ ‘Is it more expensive?’ ‘Will we get paid for it?’ Although they are legitimate questions, they should only be a part of the assessment. Without a greater understanding of why to invest in an innovation on the front end, hospitals can miss out on an opportunity to improve patient care, lower costs or improve profitability elsewhere.

Mr. Prigmore: For those that have a more sophisticated VAC process, the areas that are working well are:

- Collecting input from a larger variety of stakeholders than only physicians
- Validating information for both the clinical and economic claims made by suppliers
- Reviewing post-acquisition to ensure that the anticipated benefits of a product or service are being realized and learning is used to improve the process
- Developing a standardized, repeatable, and well-understood process by all members of the VAC or departments that provide a member to the committees
- Continuing standing membership or consistency in their membership so that the process takes hold

What are the main drivers for success in value analysis (e.g., communication, quality data, relationships with vendors, etc.)?

Mr. Whitfield: I think data and communication with vendors are key components to attaining a successful value analysis. Equally important is the inclusion of a supply chain, risk management, the appropriate service line coordinator and physician, as well as the C-suite in the process. Making sure that everyone understands the strategy of the facility and service line, comprehends the value of the product, and aligns

with the decision-making process is critical to having a successful and efficient process. Training on these steps and the information needed before the VAC meeting will help drive a more productive agenda.

Mr. Seigfried: The main drivers of success in value analysis are the ability to measure the value of a product relative to both financial and clinical goals.

This means having the right professionals involved with the right measurements, forming the structure of value analysis, having accurate information about the quality and cost (not price). Lastly, building the relationship between professionals and having transparency of information are very important in order to develop trust.

Ms. Root: The greatest challenges and strengths for success still focus on the human element. Having vendors ensure proper education of all stakeholders (patients, physicians, payors and providers) is critical. Vendors can be seen as helpful partners that can bring lifesaving technologies, instead of being viewed with skepticism and distrust when bringing new products for consideration. Ensure that the VACs are integrated with strong working relationships—supply chain, value analysis professionals and physicians—with each dropping any predisposed and often defensive postures and truly seeking to understand *why* a certain viewpoint is held. These seem simplistic but often are the grounds for process failure, time delays and dissatisfaction among team members.

Mr. Moore: It seems that the best value analysis programs exhibit a high levels of collaboration with vendors, both from an informational and preparatory standpoint. Knowledge-based decisions are the best path; so the more knowledge, the better the ultimate decision. Factors, such as open communication, data sharing between the hospital and vendor, and trusting

What possibilities and innovations are yet to come in this field?

Ms. Root: This is a dynamic time in health care where new entries and vast types of partnerships can change the entire environment. Enhanced use of data, prospective and retrospective clinical quality improvement models coupled with risk sharing models to drive improvements for patient outcomes, greater efficiencies among providers (hospital systems), and new innovations are closer on the horizon than ever before. The benefit will be paramount for patients, but all stakeholders can benefit.

Mr. Prigmore: Third-party services that provide validated data are on the cusp of becoming a reality with the transparency of information and ability of third parties to obtain cost, reimbursement, performance and clinical data. This is not exactly an innovation but

relationships—all attained without sacrificing objectivity—can holistically lead to an optimal decision versus a path that is based on internally sourced information alone. Rushed decisions that are based only on product or service pricing, along with incomplete information or evidence as to the underlying economic and clinical value, lead to suboptimal decisions and reduced effectiveness of the value analysis process.

Mr. Whitfield: Programs that prevent vendor interaction at the time of a VAC meeting only serve to limit the understanding of the value a product may bring to the facility and the patients they serve. Failing to include the input from all parties necessary for value analysis review (professionals, administrators, physicians, etc.) will only delay the process, reduce commitment to the decision, postpone improvement to patient care, and delay recognition of value.

Mr. Prigmore: The main drivers for success are validation of the information they are reviewing and solid understanding of their own internal data (e.g., number of procedures, complication rates, reimbursement rates, etc.). Again, trained dedicated membership also is key so that the VAC members know their responsibilities and gather appropriate probing questions to ask. Internal data reporting and understanding of that data also are important. Hospitals are putting a great deal of emphasis and investment in creating the required data. However, if it is not used or understood, it is of no benefit.

a change—linking all systems into one data source to create actionable information.

Mr. Whitfield: Clinical outcomes need to be translated to value for patients, physicians, providers and payors, which is not always easily done. VACs that develop or hire the capability to mine data and monitor effectiveness may help their facilities recognize value more quickly, respond to low performance more rapidly, and contract more productively.

Mr. Moore: Hospitals/providers will eventually learn to further leverage their suppliers—especially implantable device partners—for everything from procedural education to data evaluation and implications on even the “societal impact” of products. They will

begin to see vendors more as partners; realizing manufacturers often can be the “go-to expert” in terms of fitness for use of the product or technology. Vendors are generally in a prime position to provide critical information on anticipated patient outcomes and the cost associated with use of the technology. In reality, this could extend beyond just evaluation of clinical outcomes and even move into the realm of efficiency and productivity gains associated with device-specific procedures—areas more related to Six Sigma analysis and process improvement. Resources provided directly by the manufacturer could help generate relevant and meaningful data in these areas. Given the coming changes in payment systems, the manufacturer may be in the best position to describe and even highlight the comparative influence on specific quality measures reported to payors, such as the Centers for Medicare & Medicaid Services under the Medicare Access and CHIP Reauthorization Act of 2015 and the Merit-based Incentive Payment System, and the relevant impact on hospital revenue projected over time. In addition, the manufacturer may be able to provide automated tracking tools and perhaps even apps designed to directly reflect real-time hospital budget impact and cost avoidance associated with the

manufacturer’s product. To that end, health economic resources could be provided by the manufacturer to aid hospital decisions on product usage and revenue cycle optimization, even to provide help in identifying the most appropriate quality measures linked to product usage for reporting optimal outcomes to relevant payors. Lastly, manufacturers will be expected to provide variable product pricing that is based on actual performance against hospital-reported quality measures and real-time-associated revenue cycle impact (i.e., performance-based risk sharing arrangements).

Mr. Seigfried: Value analysis by definition is an inclusive approach to decision making. The criterion used to determine value should be measurable in order to understand its contribution to the organization’s outcome. Most value analysis is about quality and cost. As quality goes up and cost goes down, the value increases. But most products, when put to this test, do not have a clear measurement either way, relative to their competing brands. Because of this, price has historically been the big factor in selection. I think vendors need to step up with clinical studies to verify their product’s clinical value.

How do you expect value analysis to grow as the health care field changes to meet the needs of administrators, physicians, insurers and patients?

Mr. Prigmore: Without a doubt, all hospitals will have some form of a VAC. What will be interesting is how fast they expand and become as sophisticated as the best in the industry. This will be helped as transparency and best-practice sharing continues to expand on a global basis. Societies or associations of VAC, supply chain, and materials management will continue to provide opportunities to learn and expand the capabilities of committees and individuals. The administration side of hospitals is changing: They are hiring professionals from outside the industry with experience in Six Sigma or a lean business model as well as experience from other industries that has reduced costs in their supply chains. Thus, the focus is shifting to efficiencies or small price concession from vendors.

Mr. Whitfield: Investments in outcomes data by insurance companies, group purchasing organizations and large systems have been huge over the last several years. As these capabilities continue to grow, hospi-

tals will be able to access real-time data on outcomes associated with specific products used for specific disease states in patients with a specific morphology. This will allow facilities to better understand where and how a product should be most appropriately used, the amount of inventory they may likely use in a given period of time, the likelihood of cost and reimbursement, and, therefore, the overall value a product may bring. This will help patients receive better care, as the right product will be available for their specific needs. Physicians will have what they need to deliver effective care in a timely manner. Providers will understand why they are making the investments they are and the return on investment thereof. Payors will see the most efficient and affordable care being provided to the lives they cover. This is only a matter of time.

Ms. Root: Mergers and acquisitions will continue to drive increased efficiencies, standardization of procedural best practices and purchasing power. We expect growth in the globalization of health care from provid-

