Discovering Health Care Value: Outcomes and the Bottom Line

High-Value Innovations Have and Will Continue to Raise the Bar for Health Care

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A tectonic shift is happening in health care, where outcomes are the bottom line and where the system conforms to the patient, rather than the patient conforming to the system — Optum Health

We in the health care community are in a process of discovery. Most of us know the definition and equation that describes health care value:

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\text{VALUE} = \text{Superior Outcomes} + \text{Patient-Centered Care} + \text{Efficiency} - \text{at lower cost}
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(Health Care Advisory Board)

However, we are still determining the parameters of patient outcomes and costs and seeking to understand how to achieve “high-value” care. Currently, our health care “system” is not really systematic. The Institute of Medicine’s 2012 report *Best Care at Lower Cost: the Path to Continuously Learning Health Care in America* described the state of the health care industry as one in which insights from research are not disseminated or implemented well; evidence is used inconsistently in clinical practice; and patient experience is poorly captured. These findings reflect missed opportunities, waste, and harm to patients and poor health indicators in communities. These observations are depicted in Figure 1.

**Discovering Value by Focusing on Appropriateness of Care**

Multiple reports over a decade ago by the Dartmouth Center for Healthcare Delivery Science, the Institute for Healthcare Improvement, the RAND Corporation, and others told us about warranted clinical variation and
significant waste in the system — overuse, misuse, and underuse of tests, procedures, and services. Only in the last few years, with the advent of value-based purchasing and increasing calls for provider risk contracting, has the quest for “appropriateness” begun in earnest.

Physician specialty societies, such as the American College of Radiology (ACR) and the American College of Cardiology (ACC), have taken the lead in developing appropriateness criteria (ACR) and “appropriate use criteria” (AUC), encouraging practitioners to embed these clinical decision support criteria electronically in electronic health record (EHR) systems. Some health care organizations have been able to eliminate the need for pre-certification of imaging by ensuring the use of the ACR’s criteria.¹

The American Board of Internal Medicine’s (ABIM’s) campaign Choosing Wisely® is rapidly growing in importance. According to the Web site, the goal of the program is to “advance a national dialogue on avoiding wasteful or unnecessary medical tests, treatments, and procedures. Choosing Wisely® encourages conversations between providers and patients informed by evidence-based recommendations of “Things Providers and Patients Should Question.” More than 70 specialty society partners (physicians and non-physicians) have released recommendations with the intention of facilitating wise decisions about the most appropriate care based on a patient’s individual situation.²

The American College of Physicians (ACP) has developed a High Value Care initiative, including a curriculum, clinical recommendations, physician resources, and public policy recommendations. ACP also has published resources to help patients understand the benefits, harms, and costs of tests and treatments for common clinical issues.³

The American Hospital Associations’ Physician Leadership Forum published the guide Appropriate Use of Medical Resources in 2013, focusing on appropriate blood management in inpatient services; appropriate antimicrobial stewardship, reducing inpatient admissions for ambulatory-sensitive conditions, appropriate use of elective percutaneous coronary intervention, and appropriate use of the intensive care unit for imminently terminal illness.

Another important initiative is the development of Standardized Clinical Assessment and Management Plans (SCAMPs®) by the Institute for Relevant Clinical Data Analytics (IRCDA), which provides education and resources for the development, implementation, and analysis of these care plans. According to the
organization, SCAMPs are “an innovative method of examining relevant clinical data to improve patient outcomes while reducing practice variation and unnecessary resource utilization. SCAMPs outline a data-backed, consensus-based, care pathway for a diverse patient population with a particular diagnosis or condition.”

**Discovering Value by Focusing on Patient-Centered Outcomes and Costs**

Our focus on quality over the last decade or more has largely centered on structure (accreditation, licensure, facilities) and compliance with operational process measures as required by accrediting entities and for the Centers for Medicare & Medicaid Services (CMS) Value-Based Purchasing program. In the last several years, outcome measures have been added, but these measures focus primarily on hospital issues such as 30-day mortality, 30-day readmissions, and complications of procedures. CMS did add the Medicare Spend per Beneficiary (MSPB) efficiency/cost measure to the value-based purchasing (VBP) formula for fiscal year (FY) 2016.

MSPB measures total Medicare Part A and B program spend for beneficiaries for three days prior to hospital admission to 30 days post discharge, reflecting the importance of controlling post-acute care spend to the Medicare program — and to providers who must determine which post-acute venues and services will result in the best outcomes cost-effectively (because the spend is attributed to hospital decisions).

The future of outcome measurement is much more robust and will require us to manage outcomes, specifically linking what we do (interventions) to patient results — including a focus on health indicators and health behaviors in communities. CMS has listed the following goals in the 2015 National Impact Assessment for CMS Quality Measures Report (March 2015):

1. Make care safer by reducing harm caused in the delivery of care.

2. Strengthen person and family engagement as partners in their care.

3. Promote effective communication and coordination of care.


5. Work with communities to promote best practices of healthy living.

6. Make care affordable (develop and implement payment systems that reward value over volume; use cost analysis data to inform payment policies).

Leaders of the Institute for Healthcare Improvement (IHI) recently reflected on the organization’s Triple Aim project (better health care experience for individuals; improved population health; lower per capita costs) in its article “Pursuing the Triple Aim: the First 7 Years.” The authors present “triple aim outcomes measures.” These measures include:

- **mortality:** life expectancy; years of potential life lost; standardized mortality rates;
- **health/functional status** (CDC HRQOL-4 or PROMIS Global-10; VR-12);
- **healthy life expectancy** (HLE) — reflects remaining years of life in good health;
- **disease burden** (incidence and/or prevalence of major chronic conditions);
- **behavioral and physiological factors**;
- **patient experience of care** (CAHPS);
- **measures based on key dimensions of the Institute of Medicine’s (IOM’s) aims for improvement** (safe, effective, timely, efficient, equitable, and patient-centered care);
- **total cost-per-member-of-the-population per month**;
- **hospital and emergency department utilization rates and/or cost**.

An outstanding tool for health providers to use to determine costs of care, endorsed by the National Quality Forum (NQF), is Health Partners’ Total Cost of Care and Resource Use (TCOC). University of Utah Health Sciences has developed a series of algorithms, including “Know Your Costs,” that includes commentary and case
studies as part of its larger program: Value University.

**WHAT IS HIGH-VALUE HEALTH CARE?**

High-value health care refers to achieving optimal outcomes at the lowest cost. The effort to restructure and re-purpose organizations and health professionals to achieve high value has just begun to spread. The American Hospital Association’s *Hospitals and Health Systems of the Future* report of the Hospitals in Pursuit of Excellence initiative (HPOE) identified four priority strategies to achieve high value:

1. aligning hospitals, physicians, and other clinical providers across the continuum of care;
2. utilizing evidence-based practices to improve quality and patient safety;
3. improving efficiency through productivity and financial management; and
4. developing integrated information systems.

The IOM’s 2012 discussion paper *A CEO Checklist for High-Value Health Care* identified the categories of foundational elements, infrastructure fundamentals, care delivery priorities, and reliability and feedback. Examples of checklist items include:

- culture of continuous improvement: a commitment to ongoing, real-time learning;
- effective, efficient, and consistent care;
- optimized use of personnel, physical space, and other resources;
- right care, right setting, right providers, right teamwork;
- patient-clinician collaboration on care plans; and
- internal transparency — visible progress in performance, outcomes, and costs.

Richard Bohmer of Harvard Business School contributed “The Four Habits of High Value Health Care Organizations,” which are particularly instructive for organizations and health professionals today, as we continue the value discovery process:

- **Specification and planning**: these organizations specify decisions and activities in advance. Both operational decisions and core clinical decisions are based on explicit criteria.
- **Infrastructure design**: High-value health care organizations design microsystems including staff, information and clinical technology, physical space, business processes, and policies and procedures that support patient care to match their defined subpopulations and pathways.
- **Measurement and oversight**: High-value organizations primarily use measurement for internal process control and performance management. They collect more measurements than those required for external reporting, selecting those that inform staff about clinical performance. Measurement is an integral part of accountability and performance management.
- **Self-study**: Beyond ensuring that their clinical practices are consistent with the most recent science, these organizations also examine positive and negative deviance in their own care and outcomes, seeking new insights and better outcomes for their patients. High-value organizations treat clinical knowledge as an organizational as well as individual property.

Bohmer stresses the importance of engaging in all four habits systematically, “baking” these activities into structures, cultures, and routines.

Readers are also referred to other resources and opportunities for learning about high-value performance, including the Health Care Financial Management Association’s Value Project (www.hfma.org/valueproject); the High Value Healthcare Collaborative (highvaluehealthcare.org); the innovation collaboratives of the IOM (iom.nationalacademies.org/Activities/Quality/VSRT/Innovation%20Collaboratives.aspx), and the collaboratives of the Institute for Healthcare Improvement (IHI) (www.ihi.org/engage/collaboratives/Pages/default.aspx).

These initiatives and guidance may best be summarized by examining the “value
convergence” model offered by Lumetra Healthcare Solutions. Analytics, clinical optimization, and health information technology converge to create value, described by Lumetra as: sustainable change, better patient outcomes, reduced complexity, and lower costs. The model is shown in Figure 2.

COMPETING ON VALUE

In 2004, Michael Porter and Elizabeth Teisberg published the article “Redefining Competition in Health Care,” later publishing the book Redefining Health Care: Creating Value-Based Competition on Results. Their thesis is that the fundamental flaw of the health care system has been the wrong kind of competition: “zero-sum competition,” which is not focused on delivering value for patients. Zero-sum competition — which divides value — has created high costs, low or variable quality, under- and over-treatment, too many preventable errors in diagnosis and treatment, restrictions on choice, rationing of services, limited access, and costly lawsuits.

Instead of zero-sum competition, these authors contend that:

- The focus of competition in health care should be on value for patients, not just lowering costs.
- Competition must be based on results.
- Competition should center on medical conditions over the full cycle of care.
- High-quality care should be less costly.
- Value must be driven by provider experience, scale, and learning at the medical condition level.
- Competition should be regional and national, not just local.
- Information about results of care to support value-based competition must be widely available.
- Innovations that increase value must be strongly rewarded.

We value-learners are also facing a group of “value disruptors” — innovators who are leapfrogging ahead with tests, procedures,
and services that are faster, cheaper, and as good as or better than competitors’ traditional methods. Examples include Theranos for faster and less expensive lab tests that require small amounts of blood; Cologuard®, a simple, non-invasive screening test for colon cancer using DNA markers; single-dose intraoperative radiation for breast cancer; smartphone diagnostics that replace the need for expensive equipment and increase access to tests globally; retail pharmacies and retail clinics that are convenient “one-stop shops” for many primary care services; tele-health; wearable health technology; “enhanced recovery protocols” for surgery that reduce the need for fasting, heavy intravenous (IV) fluid, and post-op narcotics and that reduce length of stay (LOS), complications, and recovery time after surgery. These and other high-value innovations are raising the bar for all of us and will likely result in a far better health care system for all.

Endnotes:
2. See www.choosingwisely.org
3. See hvc.acponline.org
4. See www.scamps.org
6. See www.healthpartners.com/public/tcoc
7. See healthsciences.utah.edu/innovation/algorithms/2013/two
8. healthsciences.utah.edu/value-university
11. HBR, June, 2004, pp. 64-77