Systemness in healthcare: More than the sum of its parts

Since the passing of the Affordable Care Act (ACA), models of Accountable Care Organizations (ACOs), from Pioneer ACOs to Medicare Shared Savings Program ACOs, are under way in some areas of the United States. Physician practice acquisitions, payer/provider partnerships, and patient-centered (or primary care) medical home (PCMH) models are also emerging, but vary geographically. At ECRI Institute’s 19th annual conference, held in Washington, DC, USA, November 28-29, 2012, speakers from integrated delivery systems, military healthcare systems, government, payers, policymakers, and other stakeholders, including patient advocates, discussed these trends in terms of “systemness,” microcosmic systems within a macrocosmic system. During the conference, titled “Creating Systemness within Healthcare Delivery: Can Success Be Proven and Shared?,” themes of team structures, governance, population health, culture, patient-centered care, and costs and reimbursement emerged.

Team systemness?

Various speakers discussed the evolution of the post-ACA healthcare team. Robert A. Petzel, M.D., under secretary for health in the U.S. Department of Veterans Affairs (VA), discussed the patient care team within PCMHs established within the Veterans Health Administration. The team structure allows doctors to “operate at the top of their license,” according to Petzel. In the past, “you [saw] physicians doing things a nurse or a nurse’s aide could do,” while nurses perform tasks appropriate for administrative staff, he observed. But ultimately, Petzel said, the patient is now the leader of the team. As doctors, “we are advisors, but ultimately the decision is theirs.” A comprehensive electronic health record (EHR) system also keeps everyone on the care team, including the patient, in the loop.

Lisa Schilling, R.N., M.P.H, vice president, National Health Care Performance Improvement, and director, Center for Health Systems Performance, Kaiser Permanente (Oakland, CA, USA), presented evidence on the effectiveness of multidisciplinary teams fostered by “top-down, bottom-up governance” and a “learning system” that allows observations from the front lines of care to shape policy, which are tenets she credits to George C. Halvorson, Kaiser’s chairman and chief executive officer. Schilling shared outcomes data from case studies demonstrating reduced 30-day rehospitalizations related to congestive heart failure at one site and a reduced rate of sepsis mortality at multiple sites. She attributed these improved outcomes to the team structure informed by the learning system.

Patient-centeredness, anyone?

Sharing a patient’s perspective, Jessie Gruman, Ph.D., president, Center for Advancing Health (Washington, DC, USA), said, “I worry about what it takes to do teams right.” Gruman, who declared that she received four diagnoses for different cancers requiring intensive treatment and follow-up, suggested that patients may not want to lead the care team, as patient-centeredness advocates suggest.

In upcoming issues

What are the top cardiac technology advances?
Public policy and private initiatives are driving healthcare organizations and providers into operating as ever-larger healthcare systems. Some newer organizational forms include Accountable Care Organizations and Patient-centered Medical Homes (PCMHs). But what are the potential benefits and harms of this trend? Are the elements that can be made up these larger systems functioning well together? Are they creating “systemness?”

ECRI Institute’s annual health policy conference brought together 50 policymakers and practitioners and a knowledgeable, vocal audience of more than 300 to address these questions, gauge our progress toward creating “systemness,” and examine whether lessons learned by one organization can be transferred to another. Health Technology Trends’ January issue features some highlights of this conference.

Starting with the question “What is systemness?” (see graphic), a seemingly fad word, Kenneth W. Kizer, M.D., M.P.H., who is largely credited with initiating the transformation of the Veterans Health Administration into a high-performing system, offered this definition: “Systemness refers to a functional state of diverse, interconnected, discrete parts that behave predictably and consistently as a coherent whole in ways that are distinct from and superior to the sum of the parts.”

Kizer’s successor at the Veterans Administration (VA) and chief medical officer of HCA, Inc., (Nashville, TN, USA) Jonathan Perlin, M.D., suggested that the core elements of systemness are people, processes, and technologies. But Perlin noted that systemness is complicated. “We need to be highly intentional about which elements of [healthcare delivery] we desire to organize and equally purposeful in considering how our efforts interact with the broader environment,” he cautioned.

VA Under Secretary for Health, Robert A. Petzel, M.D., detailed the VA’s current overall approach to systemness, which you can read about in “Systemness in healthcare: more than the sum of its parts,” in this issue.

Petzel shared the stage with representatives from large health systems who identified culture as an important aspect of systemness. Speakers considered how financial and nonfinancial incentives can be used to create the desired culture within a healthcare system and the extent to which that culture is transferrable to other systems, which we also cover in this issue.

Forming care teams is another popular healthcare reform trend. Speakers examined the structure and merit of teams used at Kaiser Permanente (Oakland, CA, USA), as well as perspectives from a patient/patient advocate, which we present in this issue.

Healthcare systems are creating an increasing number of transformation centers, and many question whether these centers can produce significant outcomes. One of these initiatives is the linkAgesTM community, a concept developed in part by Paul C. Tang, M.D., M.S., vice president and chief innovation and technology officer at Palo Alto Medical Foundation (CA, USA), a Sutter Health Affiliate, to address the social needs of elders beyond acute care. See “Are healthcare systems ready for the baby boomer Medicare coming-of-age crisis?” in this issue.

Other examples of transformation centers discussed at the conference included PCMHs, as demonstrated by VA, and social media use.

The conference session “Measuring the Success of Systems” featured key evaluators of health system performance who shared perspectives on whether the evidence shows that health systems are taking the right steps to improve patient outcomes. In “Evidence, quality, and the search for meaningful metrics,” we highlight concerns of Ralph Muller, M.B.A., chief executive officer at the University of Pennsylvania (Philadelphia, PA, USA), on these issues.

The conference examined 10 elements of systemness, more than we can cover in a
That dialogue made critical contributions to the public conversation, and more will come as session presenters and audience participants write and publish follow-up articles exploring in greater depth the concepts discussed and may cover other topics too vast for this Trends issue, such as:

- How electronic health records can further systemness
- How systems can evolve through new partners and partnerships
- What the evidence shows about Federal and state initiatives
- How business world models can inform evidence-based healthcare management
- What issues the regulatory and legal worlds must address to enable systemness

We have an obligation to create systemness effectively to produce better patient outcomes. Aggregation of organizations and providers into larger units can be simply a business process—the push toward oligopoly—or, as it should be in healthcare, a push toward a public interest. The conference fostered combining evidence-based outcomes information with evidence-based information about business processes. We invite Health Technology Trends readers to also view the conference transcripts at www.ecri.org/2012conf and continue the conversation.

Jeffrey C. Lerner, Ph.D.
President and CEO, ECRI Institute
Are healthcare systems ready for the baby boomer Medicare coming-of-age crisis?

In 2011, the first of the baby boom generation reached what used to be known as retirement age. And for the next 18 years, boomers will be turning 65 at a rate of about 8,000 a day, according to AARPTM. Speakers at ECRI Institute’s 19th annual health policy conference, held November 28-29, 2012, in Washington, DC, USA, observed the scale-tipping U.S. demographics of baby boomers who are “coming of age” for Medicare benefits and the related demands on caregivers and the healthcare system.

Social isolation

“By 2030, one in five [people] will be over 65 years old,” observed Paul C. Tang, M.D., M.S., vice president and chief innovation and technology officer, Palo Alto Medical Foundation (PAMF) (CA, USA), a Sutter Health Affiliate. In April 2012, Tang and colleagues issued a challenge to software developers in the Silicon Valley to develop a social networking system for what they call the “linkAges™ community” to address isolation and reduce the care burden on extended families by connecting seniors to social services and additional caregivers within their community. Part of the challenge involved technology such as home monitoring devices. Developers were asked to focus on “signal detection,” which involves tracking and interpreting data that will forewarn of impending adverse events, whether clinical (symptoms) or social, such as a neighbor noticing that the house or garden isn’t being maintained.

Tang showed the audience a short production titled “Aging in America” that described one woman’s pathway within PAMF’s linkAges community. Once an avid gardener, the woman’s chronic condition relegated her indoors and dependent on her daughter once her condition deteriorated and she was hospitalized. However, enrollment in linkAges allowed her to connect locally to people with shared interests. Home health monitoring technologies kept her chronic condition in check, preventing unnecessary hospitalizations.

Seniors in the linkAges program are able to maintain more independence and social connections, combatting what Tang called the “perceived lack of socialization” in those with chronic conditions and decreased mobility who feel isolated and dependent on family. “We can’t just be a sick-care system,” said Tang.

Costs, social support

Part of the problem is how we care for older patients, according to Joanne Lynn, M.D., director, Altarum Center for Elder Care and Advanced Illness (Ann Arbor, MI, USA). Altarum is a nonprofit research and consulting organization that designs and implements demonstration projects in communities nationwide, based on research the center conducts.

“Our current healthcare system is developed to treat and cure acute illness and injury,” said Lynn. “It is not prepared to care for the millions of people aging into the phase of life when they are likely to live for many years with chronic, eventually fatal, disabling conditions.”

Lynn shared the story of her 91-year-old mother who, during a recent hospitalization, incurred $12,000 in medical bills related to unnecessary radiological exams to rule out diagnoses that were not related to her condition. She characterized the current system as a “dysfunctional care system that prioritizes short-term and costly medical interventions over continuity, comprehensiveness, and caregiver support.” Lynn observed that the United States is woefully short on social services support compared with other countries. “We need a care plan that actually matters to [seniors] in their phase of life,” noting that much of what is done medically for seniors is not centered on what they would choose if they were provided a fuller picture and choices that focus on what is important to them.
Evidence, quality, and the search for meaningful metrics

Can a system’s success be measured? Can these measurements be used to substantiate its effectiveness? Speakers addressed these questions at ECRI Institute’s 19th annual health policy conference on “systemness,” held November 28-29, 2012, in Washington, DC, USA. Measuring success might be easier said than done in the current healthcare system, as benchmark variations abound.

Going lean

Peter S. Anderson, senior vice president of strategy and business development at Sutter Health (Sacramento, CA, USA), said that Sutter has only recently become a system. Anderson described the efforts to achieve systemness through lean management strategies that eliminate waste. He said he believed that there was evidence to measure the success of systemness but added that it “takes many forms.”

Anderson shared statistics on efforts to reduce ventilator-related pneumonia cases and central line infections in the intensive care unit and to lower rates of induced labors, based on 2011 Leapfrog benchmarks.

Hospital ratings vary

Leapfrog Group benchmarks from the annual Leapfrog Hospital Survey are one of many ways to measure outcomes, and critics have argued that these metrics can unfairly categorize facilities. This is evidenced in a 2009 study published in the *Journal of the American Medical Association* (2009 Apr 1;301[13]:1341-8) by Leslie P. Kernisan, M.D., and colleagues at the University of California San Francisco (USA). The researchers set out to determine how Leapfrog’s Safe Practices Score (SPS) correlates with outcomes such as inpatient mortality. Kernisan looked at discharge data from 1,075 hospitals using 2006 SPSs and found that survey scores were not significantly associated with risk-adjusted inpatient mortality.

“We don’t have agreement in what we are aiming to improve,” observed Ralph W. Muller, chief executive officer, University of Pennsylvania Health System (Philadelphia, PA, USA). He illustrated his point in a slide comparing Joint Commission top 2011 hospital performers with those of Healthgrades®, Thompson Reuters 100 Top Hospitals®, and U.S. News Best Hospitals.

Each top hospital list measured different items and identified a different set of top performers, a number of which did not have Joint Commission accreditation.

Margaret VanAmringe, M.H.S., vice president for public policy and government relations at the Joint Commission, acknowledged the “measurement challenges” that come with “measuring disparate systems, multiple illnesses, transitions of care,” and other outcomes. However, she concluded that “measurement is not the endpoint.”

“You have to build around the frontline,” according to Brent James, M.D., M.Stat., chief quality officer and executive director, Institute for Healthcare Delivery Research, Intermountain Healthcare (Salt Lake City, UT, USA). James stressed that you need to have “clinical teams set the goals so accountability measures are meaningful.”

During a question-and-answer session, Richard Bagley, director of strategic sourcing in the Supply Chain Organization of Intermountain, observed that “the banking industry has figured out how to measure [its successes], the retail industry has figured it out, but time and time again in healthcare we hear, ‘we need more regulation,’ and so we hire more administrators.” Bagley suggested that the healthcare industry needs its own version of Generally Accepted Accounting Principles.

Advanced age metrics

Part of the problem is how we care for older patients and what the system measures, according to Joanne Lynn, M.D., director, Altarum Center for Elder Care and...
“The impressions of 40-year-olds are being imposed on 90-year-olds,” she observed. Advances in modern medicine, coupled with the coming-of-age baby boomer population, means that “most of us get to grow old” said Lynn. Unfortunately, she said the healthcare system is geared to measure specific conditions, not whether seniors have services like a meals-on-wheels program in their neighborhood.

Metrics also need to take the patient’s perspective into account during end-of-life transitions. In October 2012, Altarum’s Center for Consumer Choice and the American Hospice Foundation received a one-year, $328,000 grant from the Agency for Healthcare Research and Quality to study consumer preferences related to quality measures for hospice care approved by the National Quality Forum. The two groups will gauge the value of incorporating consumer preferences into displays of healthcare quality data.

“Quality measures endorsed by the National Quality Forum are already used by many hospice providers for internal management purposes,” said Naomi Naierman, president and chief executive officer of the American Hospice Foundation, in a press release. “But that information is not yet available to the public to enable informed consumer choice.”
“People don’t see a burning need to be treated by a team,” said Gruman, who conducted her own informal poll of several people who had intensive encounters with the healthcare system. She observed that the benefits of a team approach (i.e., the team’s purpose or the role of each team member) is rarely defined and explained to patients in terms of patient-oriented care goals. Patients are also vulnerable by virtue of their illness, further diminishing their capacity as a “team leader.” One person told her, “when I’m in the hospital, I’m too sick to care.” And while those she spoke with expressed a desire to have “the final say” in their care, she said ultimately, patients tell her, “what I want is to get better,” not lead a team.

Population health

The patient as team leader may be part of ACA’s patient-centeredness goals, but another goal concerns population health. Initiatives such as the Health Information Technology for Economic and Clinical Health Act that incentivizes hospitals to adopt EHRs include tracking, measuring, and hopefully improving outcome—goals to which hospitals are held accountable.

“When you think about population health, how do you get there when not incentivized?” questioned Ralph W. Muller, chief executive officer, University of Pennsylvania Health System (Philadelphia, PA, USA). Muller said his health system is challenged with serving a population that is socially and economically stratified. This makes preventing readmissions difficult. And yet, he said, “every time we prevent readmissions, we lose money” in the current fee-for-service payment model. Referring to payers as part of the overall system, Muller said, “systems have to take into consideration the social and economic variation in populations.”

Governance, which is crucial to systemness, can do only so much to address this, Muller pointed out. “Governance can’t overcome the overlying reality of variations in population in healthcare,” as evidenced by variations in hospital care in the Dartmouth Atlas*. Governance can provide the structure for systemness. According to Petzel, up until 1990, VA consisted of 174 individual medical centers and “when you saw one VA hospital, you saw one VA hospital.” The paradigm has since shifted dramatically, and now VA is a national system, with 21 integrated delivery systems across the country. Based on Petzel’s experience, creating more “systemness” within a system does not take a lot of money but requires specific actions, including facilitating a performance management system, aligning all of the elements in the organization, utilizing an integrated EHR, and providing education and training about goals. This also speaks to the culture of a system.

Patient-centeredness: A cultural thing

“It’s important to have a culture of systemness,” according to Kaiser’s Halvorson. He defined culture as “a belief system, a paradigm of shared values and beliefs . . . that has rules to tell people what they should and shouldn’t do.” But the belief system must be “believed, modeled [and] illustrated . . . to be adopted.” Halvorson said at Kaiser Permanente they strive for a culture of excellence that “reinforces constant improvement,” but in the end, he said, “it’s not about the system, it’s about the patient.”

Putting the patient at the center of the care team was a cultural change at VA, which is often cited as a model of successful healthcare system transformation. Asked how the mission changed at VA with regard to patient care, Petzel observed that mission statements seldom change. “The mission has not changed; what varies is not the mission but how you execute it,” he said. Part of a revised execution at VA involved implementation of a systems-based approach to problem solving and eliminating a culture of blame to improve patient safety.

Costs, incentives, and quality

“We’re pulling people out of the river rather than fixing the break in the bridge upstream.”

* The Dartmouth Atlas, maintained by the Dartmouth Institute for Health Policy and Clinical Practice (Lebanon, NH, USA), documents geographic variations in the distribution of medical resources using Medicare data.
“Upstream,” said Sharon Levine, M.D., associate executive director, the Permanente Medical Group, Inc. Kaiser Permanente. Levine observed the growing interventions in the medical armamentarium, such as statins, that keep an aging population mobile, but as this population grows, so do costs. “If we’re so good, why aren’t we cheaper?” she asked.

“Reimbursement has to support systemness; otherwise, you are asking clinicians to work against their wellbeing and lifestyle sustenance,” according to Gail Wilensky, Ph.D., John M. Olin Senior Fellow, Project Hope (Millwood, VA, USA). She observed various innovative private-sector projects but questioned their scalability. “We’ve had interesting pilots in the past that went nowhere,” she recalled.

Levine joked about “three forms of physician compensation: last year’s, this year’s, and next year’s,” adding that she has “lived through paying doctors with certain measurements and expecting to get better results.” One problem she observed is “a stunning gap in perceived versus real performance.” She recalled one survey in which doctors perceived that 75% of their patients had hypertension under control, when in fact the real rate was 40%.

Physicians’ perception of delivering quality care to the population may be a common one. “Physicians in Philadelphia think they provide excellent care,” observed Richard Snyder, M.D., chief medical officer, Independence Blue Cross (IBC) (Philadelphia, PA, USA). In fact, he said, they are “extraordinarily average” due to the “enormous variation in practices.”

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To level out variability, “we’re growing medical homes like weeds in Philadelphia,” said Snyder. The PCMH models have allowed IBC to keep cost and utilization down, he said, adding that IBC will soon be publishing detailed evidence to substantiate this. He shared some encouraging results, such as reduced hospitalizations for chronically ill PCMH participants, an 11% reduction in cost for high-risk PCMH members, and a 21% reduction in costs for PCMH members with diabetes attributed to reduced hospitalizations.

The value elixir

Reduced costs and improved outcomes are part of successful systemness, that “collection of interconnected discrete parts that behave as a coherent whole,” which can “produce results that are superior to the sum of the parts,” according to Kenneth W. Kizer, M.D., M.P.H., distinguished professor and director, Institute for Population Health Improvement, University of California Davis (USA) Health System. But it doesn’t just happen, said Kizer, who observed that it requires intentional design. Systemness is “complex, nonlinear, and dynamic,” and as Kizer observed, “no one is really in charge.”

Whether this evokes a runaway train or a self-sufficient machine, the suggestion may be disconcerting to patient advocates who rally against their cog-in-the-machine status, especially given the “immature” evidence base of healthcare systemness that Kizer observes. Systemness’ maturity notwithstanding, Kizer believes the most important component of systemness is culture, and a “culture of collaborative synergies can only develop if the finances are supportive,” he noted. “Financial incentives are the value elixir.”

What is systemness? (continued from page 7)