

Background

Technology has the potential to solve some of health care's most complex problems, and hospitals and health systems are leading the charge in putting it to use. America's hospitals are using artificial intelligence (AI) to diagnose disease and robots to perform surgery. They are exploring gene therapy applications and breakthrough pharmaceutical solutions. Hospitals are even on track to be able to print 3-D organs on demand. These technologies are changing how care is delivered. They also have the potential to improve value. Yet, technology alone cannot improve value.

As hospitals and health systems implement value-based strategies, they also are adopting innovative, low-tech approaches to improve value. This is happening for several reasons. First, technology will never be able to do it all. For example, it cannot replace the human connection involved in health care delivery. Caring is at the heart of what the 5.6 million women and men working in America's hospitals and health systems do every day.

Second, it will take time for all hospitals to be able to finance, implement and utilize state-of-the-art technologies to their fullest potential. In fact, many hospitals are unable to do this in the foreseeable future. Currently, many hospitals struggle to break even; the Congressional Budget Office estimates as many as half of all hospitals could have negative margins by 2025. However, they can adopt low-tech solutions at a more rapid pace. Low-tech solutions also can be adopted more broadly – and we have the potential to see large scale adoption by hospitals around the country.

Despite the financial challenges facing hospitals, they will continue to integrate advanced technologies into a larger system of care, which includes low-tech solutions, as they improve value. And, it is this combination of low-tech and high-tech solutions that will have the greatest potential to reduce cost, improve outcomes and enhance the patient experience.

Low-tech Solutions

Low-tech solutions have several characteristics in common. They are **tech-light** and only tangentially reliant on technology. And, when they are, they rely on technologies that are already in place, not new or costly equipment. These solutions also are **simple**, basic and uncomplicated in form or design. They are **human**. That is, they need a human connection and interaction to work and, ultimately, improve care coordination and integration. Lastly, they are **scalable** and could be implemented by every hospital for broad impact.

Tech-light

Simple

Human

Scalable



Here are several examples of low-tech solutions:

- Incorporating checklists in complex tasks;
- Nutritional counseling to teach the importance of eating healthy foods;
- Working as teams to address patient care;
- Screening for social needs and addressing the social determinants of health;
- Group appointments;
- Telephonic care;
- Video-assisted education combined with telephonic group support;
- Monitoring patients at home with smartphones and iPads; and
- Transportation to help people get to their medical appointments.

In addition, a low-tech solution can be as simple as clinicians building in time during visits to allow patients to open up and tell their stories. Studies have shown that 80% of diagnoses can be made just based on the story alone.¹

Implementing Low-tech Solutions that Improve Value

Through *The Value Initiative*, the American Hospital Association is addressing affordability through the lens of value to improve outcomes and enhance the patient experience while reducing cost. By implementing low-tech solutions, hospitals and health systems can improve each component of the value equation.

For example, hospitals have found value in the simple, low-tech practice of being mindful about where they invest scarce resources. *Russell (Kansas) Regional Hospital*, a critical access hospital, focuses on strategic investments to improve their energy efficiency, which allowed the hospital to reduce energy use by 43% over a three-year period, saving more than \$120,000 annually.

Hospitals also have made dramatic changes by giving patients more control over their care. *Parkland Health & Hospital System* in Dallas launched a program that allows certain patients, rather than medical professionals, to self-administer long-term antibiotics. This allowed Parkland to eliminate inpatient stays for patients that could be treated at home, freeing up 5,893 inpatient bed days in a 12-month period.

And, hospitals and health systems have found significant benefit in partnering with other organizations to address the social determinants of health. When *University of Illinois Hospital & Health Sciences System* in Chicago collaborated with the Center for Housing and Health to help chronically homeless individuals

move into fully independent and permanent living situations, they reduced these patients' health care costs by an average of 42%. These patients were 35% less likely to go to the emergency department, where care can be incredibly expensive. More of them started receiving routine care at clinics.

Team-based approaches are another low-tech way to improve value. *Clinch Valley Medical Center* in Richlands, Va., wanted to help hospitalized patients transition from the hospital to their homes and then to full recoveries. They engaged teams of case



workers, pharmacists, respiratory therapists and others to visit these patients where they lived. By that process, they learned which of their patients could not afford prescriptions, did not have heat or food, or lacked an understanding of discharge instructions. As a result of this program, avoidable readmissions for these patients decreased from 11.8% to 7.8%. And, one patient's monthly cost for prescription drugs decreased from \$1,700 to \$200.

Taking Low-tech Solutions from Paper to Action

In December 2017, the AHA launched *The Value Initiative* to help hospitals, health systems and the field take on affordability and value. In that time, AHA has conducted extensive research and evaluated health care delivery systems and new payment models, quality improvement strategies and more. *The Value Initiative* also highlighted nearly 50 strategies that have been proven to lower cost, improve outcomes and enhance the patient experience. And, we have engaged more than 5,700 participants, including hospital leaders, providers and others in the health care community in the conversation around affordability and value.

This work laid the foundation for where *The Value Initiative's* efforts go next, as we take this work *From Paper to Action*. Over the next two years, we will help AHA members implement four specific low-tech value-based strategies. Our tools and resources will provide hospitals with the information they need to implement each strategy and track and measure their progress. *The Value Initiative's* goal is to have widespread implementation of these four low-tech value-based strategies across the field – urban, rural, academic medical centers, critical access, etc., – and the country:

Building Age-Friendly Health Systems. Many older adults experience decreased mobility, social isolation and loss of independence that make the current health care system difficult to navigate. *Age-Friendly Health Systems* is an evidence-based approach for age-friendly care, an initiative of The John A. Hartford Foundation and the Institute for Healthcare Improvement (IHI) in partnership with the AHA and the Catholic Health Association of the United States.

The initiative seeks to create a system where every older adult gets the best care possible; experiences no health-care related harms and is satisfied with the health care he or she receives. It focuses around the 4Ms Framework for Age-Friendly Care that is both evidence-based and able to be put into practice reliably in health care settings. The *4Ms*, include: What Matters; Medication; Mentation; and Mobility.

The goal is to rapidly spread that framework to 20% of U.S. hospitals and medical practices by 2020. *The Value Initiative* encourages hospitals to join one of the upcoming Action Communities to test and share results with other organizations working toward reliably putting the 4Ms into practice.

Team Training Approach for Obstetrics. *Team Training* strives to make teams of experts into expert teams. Using a variety of approaches, Team Training supports change initiatives to help educate, convene and shape health care organizations to provide safer team-based care. The primary focus is Team Strategies and Tools to Enhance Performance and Patient Safety (TeamSTEPPS®) – an evidence-based set of tools for optimizing patient outcomes by improving communication and teamwork among health care professionals. It includes a comprehensive set of ready-to-use materials and a training curriculum to successfully integrate teamwork principles into any health care system.

The AHA is developing a specific Team Training model for obstetrics. Obstetric complications and adverse patient events are often preventable. Teamwork can improve detection and coordination of critical obstetric



emergencies, subsequently improving decision making and patient outcomes. *The Value Initiative* encourages hospitals to incorporate this model aimed at educating, convening and shaping clinicians as they provide team-based care during labor and delivery.

Using Z Codes for Social Determinants of Health. Hospitals are working to address their patients' social needs and the broader social determinants of health in the communities they serve. This includes societal and environmental conditions such as food, housing, transportation, education, violence, social support, health

behaviors and employment. Essential to this work is robust data related to patients' social needs, and for that the field needs heavy adoption of the ICD-10-CM diagnosis Z codes.

Z codes, a subset of ICD-10-CM, represent nonmedical factors that influence health status. Existing Z codes identify problems related to the patient's socioeconomic situation – education and literacy, employment, housing, lack of adequate food or water or occupational exposure to risk factors like dust, radiation, or toxic agents.

The Value Initiative encourages hospitals to employ a standardized approach to documenting social needs with Z codes, which has the ability to improve value and allows hospitals and health systems to:

- Track the social needs that impact their patients, allowing for personalized care that addresses patients medical and social needs;
- Aggregate data across patients to determine how to focus a social determinants strategy;
- Identify population health trends and guide community partnerships;
- Enable system-wide research at the national level to better understand the social needs of communities and tailor federal programs to meet those needs; and
- Support policy and payment reforms that include appropriate risk-adjustments for social determinants.

Implementation of OpenNotes. *OpenNotes* is an international movement to make health care more transparent. It encourages doctors, nurses, therapists and others to invite patients to read the notes they write to describe a visit. There is a growing body of evidence that shows that patients who have access to this information have better outcomes and enhanced patient experiences. Adoption of this fundamental change in practice is accelerating rapidly. To date, more than 40 million patients in the U.S. now have access to their notes. *The Value Initiative* urges hospitals to implement OpenNotes in their hospitals, clinics and other patient sites. To learn more about this effort, listen to AHA's podcast with three leaders of the OpenNotes Movement, [Getting Patients and Caregivers on the Same Page](#).

The AHA has started to roll out tools and resources for each of these strategies, and will continue to do so throughout 2020 and 2021. For more information and to access these tools and resources, please visit www.aha.org/from-paper-to-action for more information.

Sources

1. West J Med. 1992 Feb; 156(2): 163–165. Contributions of the history, physical examination, and laboratory investigation in making medical diagnoses. M. C. Peterson, J. H. Holbrook, D. Von Hales, N. L. Smith, and L. V. Staker.