



# The Role of Laboratory Medicine in Accountable Care Organizations

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## ONCE IN A GENERATION OPPORTUNITY

With the passage of the Health Information Technology for Economic and Clinical Health (HITECH) Act in 2009 and the Patient Protection and Affordable Care Act (ACA) of 2010, the nation and healthcare industry embarked on a period of historic experimentation and market

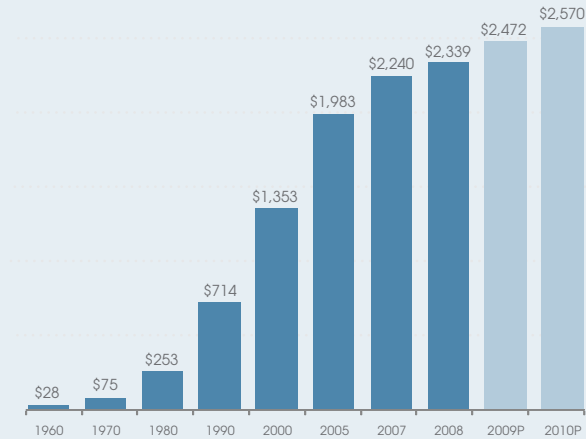
realignment expected to do no less than completely transform the healthcare delivery and finance model in the United States. Unlike previous attempts by the federal government to steer the healthcare industry, these two laws represent the founding principles of a blueprint for change that will develop over the next two decades.

Although employing world-leading technologies, the U.S. healthcare model has become inefficient, too often failing to produce high-quality outcomes while at the same time resulting in increasingly untenable economic burden. In 2010, over \$2.5 trillion was spent on healthcare in the U.S., nearly twice per capita of any other industrialized nation, and yet the United States ranks near the bottom of all industrialized nations in nearly every quality outcome measure.<sup>1</sup> With over 17 percent of the gross domestic product devoted to healthcare expenditures, American employers are finding that their products and services are becoming less competitive in world markets. After three decades of attempts to control healthcare costs, little progress has been made to improve the financial condition of the U.S. healthcare system.

Following on the current path, continuing with a fee for service payment model, which rewards providing more services without corresponding clinical results, does not offer the promise of a better outcome. The Institute of Medicine study in 2000, *Crossing the Quality Chasm: A New Health System for the 21st Century* concluded “the American health care delivery system is in need of fundamental change.”<sup>2</sup> Given the growing healthcare needs of an aging population and a shrinking worker population, if a correction is not implemented, the United States is on a collision course with an economic storm. Previous attempts to contain healthcare costs utilizing payment models that rely on controlling unit costs or restricting coverage have failed to optimize the use of available funds, restrain costs, or solve the healthcare needs of the underserved. In addition, the mergers, acquisitions, and affiliations that have been commonplace within the health insurance, hospital, and physician sectors over the last decade have resulted in little change to the way healthcare is financed or delivered.<sup>2</sup>

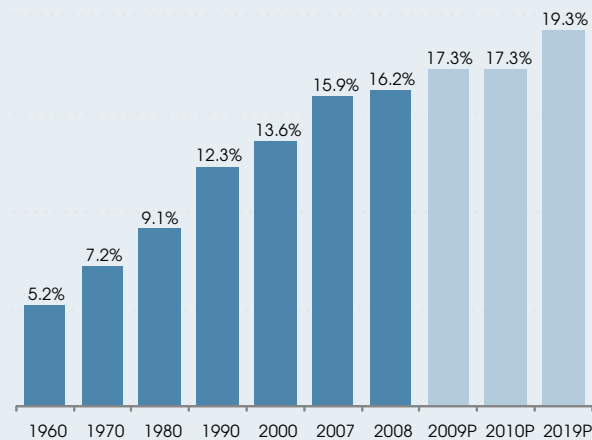
### NATIONAL HEALTH SPENDING, 1960-2010\*

IN BILLIONS



\*Selected rather than continuous years of data shown prior to 2007. Years 2009 forward are CMS projections.  
Source: Centers for Medicare and Medicaid Services (CMS), Office of the Actuary.

### NATIONAL HEALTH SPENDING AS A SHARE OF GDP, 1960-2019\*



\*Selected rather than continuous years of data shown prior to 2007. Years 2009 forward are CMS projections. The 2009 CMS projects reflect a 5.7 percent increase in health spending and a 1.1 percent decrease in GDP, expected to result in the largest one-year increase in history of health spending as a share of GDP; NHE's 2010 projected share of GDP reflects a 3.9 growth in NHE and 4.0 percent growth in GDP. The full projection period, 2009 to 2019, reflects CMS assumptions of an average annual increase of 4.4 percent in GDP and 6.1 percent in national health spending.  
Source: Centers for Medicare and Medicaid Services (CMS), Office of the Actuary.

1. Centers for Medicare and Medicaid Services, Office of the Actuary.
2. Institute of Medicine. The Committee on Quality of Health Care in America. Crossing the quality chasm: a new health system for the 21st century. [http://books.nap.edu/openbook.php?record\\_id=10027&page=1](http://books.nap.edu/openbook.php?record_id=10027&page=1) (accessed on August 16, 2011)

## VALUE VERSUS VOLUME

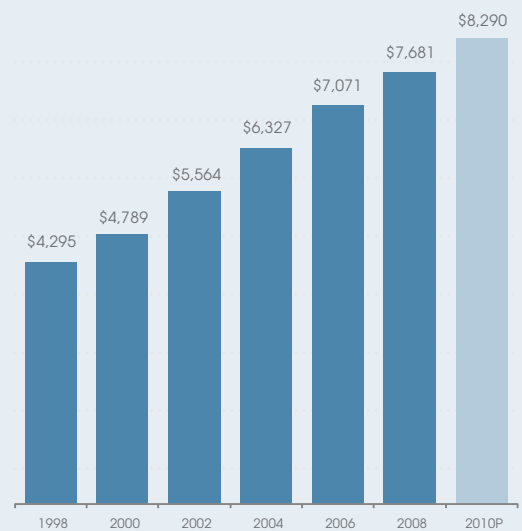
The current volume-based delivery model produces two factors contributing to our economic dilemma: high variations in care and fragmentation of information and care, both resulting in increased utilization of services. All evidence points to the fact that fragmentation of services results in delays in care, duplication of effort, loss of information, low quality patient experiences, inefficient operations, sub-optimal clinical outcomes, and increased costs. For decades patients have received care as a series of referrals among separate healthcare providers with little coordination of information or care. The amount of care as well as the quality and cost of care has varied (in some cases five- to six-fold variation). Access to medical procedures has often been dependent on the patient's location and the training of practitioners. Only 20 percent of physicians report that they follow practice guidelines for screening tests. Compounding the effect of service variations is the fact that healthcare is a local phenomenon. Health insurance plans require patients to pay more of the cost of out-of-network care and so few patients seek providers outside of their immediate area.<sup>3</sup>

## THE COST OF UNNECESSARY CARE

American Health Insurance Plans (AHIP) and The Commonwealth Fund have determined that 30–50 percent of healthcare expenditures are unnecessary due to inefficient, siloed, or poorly organized care. The coordination of care across many providers and sites therefore has the potential, to reduce inefficiency, error, duplication, and delays that contribute to nearly one half of the healthcare bill in the United States.<sup>4</sup>

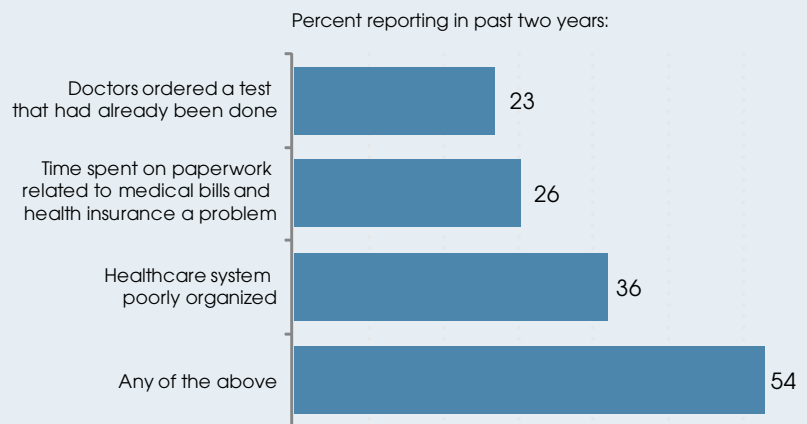
The Institute of Medicine, government commissions, think tanks, and academic studies have all concluded that competition concentrated on reducing costs alone is in pursuit of the wrong objective. Most experts now agree that a value-based model (quality of health outcomes per dollar expended) measured at the patient level is the only way to achieve real savings over time and bring about true system transformation. During the past decade experiments such as the Physician Group Practice Demonstration project (PGPD) and accountable care organization pilot project have tested the strength of this tenet and serve as the cornerstone for national healthcare reform legislation.<sup>5</sup>

### NATIONAL HEALTH SPENDING PER PERSON, 1998–2010\*



\*Selected rather than continuous years of data shown. 2010 is a projection.  
Source: Centers for Medicare and Medicaid Services (CMS), Office of the Actuary.

### POTENTIAL WASTE AND INEFFICIENCY: MORE THAN HALF OF ADULTS EXPERIENCE WASTEFUL AND POORLY ORGANIZED CARE



Source: The Commonwealth Fund Survey of Public Views of the U.S. Health Care System, 2011.

3. Porter ME, Teisberg EO. Redefining competition in health care. *Harv Bus Rev* 2004;82(6):1–13.

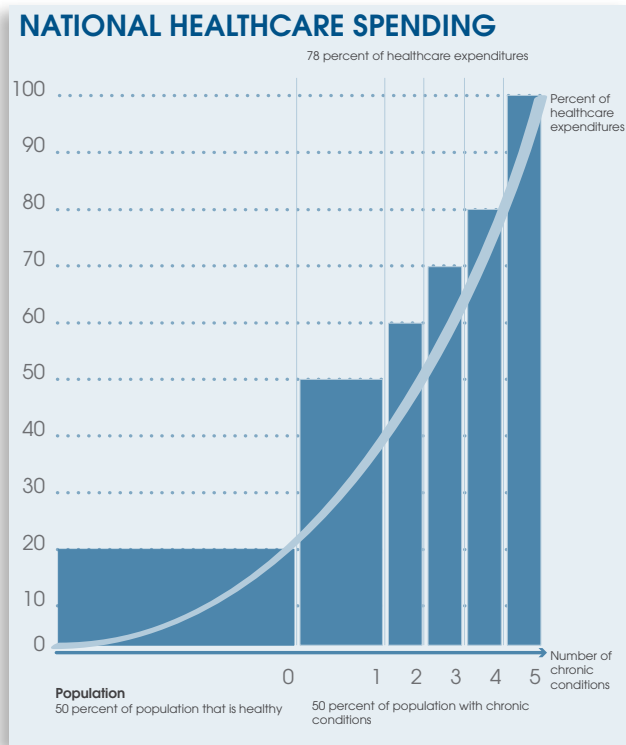
4. The Commonwealth Fund. The commonwealth fund survey of public views of the U.S. health care system; 2011.

5. Centers for Medicare and Medicaid Services. Medicare physician group practice demonstration 2005–2010.

[https://www.cms.gov/DemoProjectsEvalRpts/downloads/PGP\\_Fact\\_Sheet.pdf](https://www.cms.gov/DemoProjectsEvalRpts/downloads/PGP_Fact_Sheet.pdf) (accessed on August 16, 2011).

The ACA has three overarching goals: increased patient access to care, improved patient experiences and quality outcomes, and decreased the cost for care. The law embraces the notion that a value-based and coordinated-care model will produce the best alignment of incentives to eventually bend the cost curve. The first regulations for the ACA issued by the Centers for Medicare and Medicaid Services create a pilot shared savings program and outline rules governing the formation and operation of a new kind of healthcare delivery organization—accountable care organizations (ACO). ACOs are defined as groups of providers with shared accountability that have the legal structure to receive and distribute payments to participating providers, to provide care coordination, to invest in infrastructure and redesign care processes, and to reward high-quality and efficient services.

## CHRONIC CARE MANAGEMENT VERSUS EPISODIC CARE



The healthcare system has been studied vigorously since the beginning of the Clinton administration. U.S. doctors have world-class skills to deliver episodic care—treating acute illnesses and returning patients to health. However, the health needs of patients have changed over the last 40 years. Patients are living longer, but more patients are living with chronic conditions. Fifty percent of the population has been diagnosed with at least one chronic illness. Seventy-eight percent of all healthcare expenditures are directed toward patients with at least one chronic condition.

Successful models for the treatment of chronic conditions require coordinated care and case management. Care for chronic conditions is ongoing care, often life-long, delivered mostly in ambulatory settings by a variety of practitioners and physician extenders. In order to begin bending the healthcare cost curve, healthcare providers will need to take advantage of the economies of integration embedded in coordinated-care models.

## THE VALUE OF COORDINATED CARE AND INTEGRATED SYSTEMS

Coordinated care requires provider organizations to function in new ways. Innovation leaders employing new healthcare delivery methods consistently produce industry-leading patient outcomes at lower costs, adopt leading-edge technology more readily, and are more resilient to changing market dynamics and reimbursement pressures. Examination of the highest-performing healthcare organizations such as Intermountain Healthcare (UT), Mayo Clinic (MN), Cleveland Clinic (OH), Geisinger Health System (PA), Kaiser Permanente (CA), and Veterans Health Administration (US) reveals that these organizations have the following key characteristics that allow them to coordinate services across the continuum of care and to create the economies of integration:

- Physician leadership
- Patient centric culture
- Quality driven performance
- Coordinated systems for the management of chronic illnesses

- Evidence-based medical protocols
- Shared electronic medical records and performance data
- Commitment to cost containment
- Alignment of financial incentives

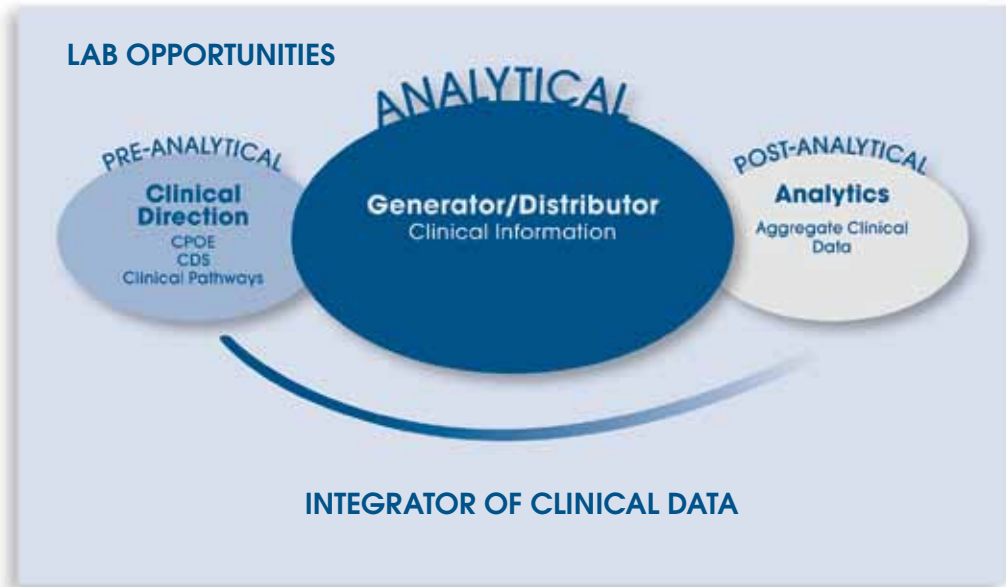
## A TIME OF OPPORTUNITY FOR CLINICAL LABORATORIES

The medical professions are under pressure to perform to a much higher standard today. New delivery models rely on the case-management skills of primary-care physicians at a time when their numbers are at historic lows. In order to be more productive and care for more patients, primary-care physicians are looking for partners who make information more readily available to them, assist in clinical decisions, and speed results of patient progress to them and their care team. Clinical laboratories and pathologists, as physician partners, both support and enable the practice of coordinated medical care.

Pathology and laboratory medicine play pivotal roles in the creation and use of meaningful clinical information, impacting the diagnosis and treatment of patients as well as test utilization and cost of care. The practice of medicine is not easy. The correct diagnosis and course of treatment is not always clear. Therefore, with every episode of care the resources expended ensuring a timely and accurate diagnosis may be the most important because they influence all other decisions thereafter in the delivery of care. The effective use of resources to perform the right test at the right time and as close to the patient as possible is essential to the achievement of quality patient outcomes.

Hospitals and health systems are investing heavily to create the components of healthcare delivery models that provide more cost-effective and efficient care and are structured to adapt to new reimbursement models. Primarily, these investments are in the purchase or employment of private physician practices and the information technologies necessary to connect these physicians to their health system EHR. The alignment of physicians and hospitals does not mean the hospital laboratory automatically becomes the default lab provider for these physician practices. However, hospital laboratories have an opportunity to establish their value as clinical integrators by demonstrating the ability to disseminate critical clinical information to physicians across the continuum of care. At the same time, when the clinical laboratory is utilized as a health system asset, it will be contributing to a return on the substantial capital investments made to purchase physician practices and provide connectivity infrastructure.

Healthcare executives are beginning to understand how the lab/physician relationship can be used to strengthen and enhance a hospital's physician alignment strategy. Through the



deployment of a robust connectivity system, laboratories have the ability to streamline physician office work flow, receive test orders and return results to a variety of EMR systems in real time, and play an essential role in building physician relationships. Downstream benefits of enhanced lab order accuracy, complete patient and billing information, improved revenue collections, and better patient outcomes are critical differentiators in an era of quality improvement and cost reduction mandates.

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Decision support prior to selection of diagnostic tests to ensure the appropriate utilization of laboratory tests can create total savings in laboratory expenses 10 to 20 times greater than savings associated solely with unit costs. With this in mind, pathologists and laboratory professionals have the exact qualifications to assist in the development of clinical pathways and clinical decision support software utilized to guide physicians in test selection.

With a great deal of hospital capital invested in the purchase and retention of physicians and connectivity solutions that integrate physicians across hospital service lines, laboratories have a built-in opportunity to demonstrate how investment in laboratory outreach contributes positively to the hospital's overarching goal of physician alignment and integration.

Medical homes, ACOs, and other coordinated-care models are being designed with attention on improving the health status of a population of patients. In order to accomplish this, organizations are collecting and analyzing performance and outcomes measures. This aggregate clinical data requires review and study by disease-management specialists. Pathologists and laboratory professionals have the expertise to identify significant trends and patterns and medical outcomes that can be used to adjust the decision support and clinical pathways used to care for different disease states and effectively reduce and control the cost of care.

Coordinated care and the ACO model redefine the importance of the clinical laboratory as an integrator of information and data. Laboratory clinical expertise in combination with the laboratory's network of physician and patient touch points make laboratories a central component of an integrated provider organization. By hosting the vast majority of centralized information, laboratories reaffirm the importance of highly functioning physician/laboratory relationships.

## **STRATEGIES THAT ADD VALUE**

Clinical laboratories must recognize the opportunities ACOs create and respond with strategies that position the lab to reach its full potential within the ACO model. The following strategies are crucial for laboratories to meet the clinical information needs of physicians practicing within ACO organizations and demonstrate their value by facilitating decision support and coordinated care.

**Develop outreach by extending lab services outside the four walls of the lab** to staff and non-staff physician offices, nursing facilities, clinics, and service centers. It is essential to create a network of integrated and coordinated laboratory services across the continuum of care. The critical success factors for outreach programs are equally applicable to laboratories focused on

-serving the needs of ACOs and coordinated-care models. It will be necessary for laboratories to develop the infrastructure and logistics required to serve chronically ill patients, who need to access care periodically in different venues from a variety of providers, in an ambulatory environment. Outreach has long been a successful volume and revenue enhancement strategy for hospital laboratories. Going forward, a laboratory's association with physician offices and electronic connectivity may be the best long-term strategy in the era following healthcare reform.

**Build electronic connectivity solutions** to providers in a way that integrates data in and out of physician practice EMRs. During the initial phases of the HITECH act beginning in 2011, providers are focused on the selection and implementation of EHRs and establishing the groundwork for meaningful use and interoperability. Laboratories have the opportunity to be instrumental in assisting physicians with these projects and demonstrating value to their physician clients by streamlining order and result processes within their offices.

**Lean internal laboratory processes.** One of the most important steps a laboratory can take to position its services for inclusion in an ACO or coordinated-care model is to improve (or Lean) every process to eliminate waste, minimize variation, and reduce costs. Regardless of payment reforms or reimbursement models being proposed, such as bundled payments or capitation, the best investment a laboratory can make in its future is to maximize its internal operations. Laboratories should focus on the accessibility and convenience of their services and information communications. The ability to facilitate the coordination of care and to exchange data seamlessly results in the creation of savings through economies of integration.

**Develop utilization-management tools.** Clinical utilization management has the potential to reduce or eliminate unnecessary expenditures. Test-utilization review within a hospital organization can be performed by a multispecialty medical committee, such as a laboratory formulary committee. This committee can have the same scope and authority as a traditional pharmacy and therapeutics committee to recommend the appropriate use or availability of lab tests as well as review process for referred test orders and protocols for lab workup for specific disease states. Laboratory experts are uniquely qualified to be involved in the development of computerized physician order entry (CPOE) with clinical decision support (CDS), test algorithms, and clinical pathways. Pathologists have the medical training necessary to analyze aggregate clinical data for outcomes and quality. As medical doctors, pathologists are trained to understand the clinical and medical relationships embedded in the data and can use outcomes data to improve diagnostic pathways.

**Understand the laboratory's role in the big picture.** The director of laboratories operating within hospitals or health systems should have a clear understanding of the health system's clinical and financial objectives, including plans for an accountable care organization. Successful laboratories will align the laboratory's strategic objectives with those of the larger organization such as community marketing, physician-alignment strategy, or information technologies strategy. Moving beyond the hospital's bricks and mortar, well-informed laboratories will also be cognizant of efforts from competing laboratories to disrupt the integrated services of a hospital laboratory or replace it in an accountable care organization.

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## CONCLUSION

*Develop outreach by extending lab services outside the four walls of the lab.*

*Build electronic connectivity solutions to providers in a way that integrates data in and out of physician practice EMRs.*

*Lean internal laboratory processes.*

*Develop utilization-management tools.*

*Understand the laboratory's role in the big picture.*

Attempts in the past by many traditional managed-care models have had limited success bending the healthcare cost curve because they were designed primarily to limit utilization. Many early models failed to incorporate improvements in the delivery of care while simultaneously restricting access to care. An inherent and perhaps fatal flaw in these models was the failure to improve the delivery of care. With the enactment of ACA, Congress has created conditions for experimentation with new coordinated care and accountable delivery systems under the shared savings program. ACOs are developing in many forms across the country. Pathologists and clinical laboratories have the opportunity to play a central role and to demonstrate greater value by facilitating the integration of clinical information across the continuum of care. In addition, when laboratories as hospital assets are utilized to establish a conduit to clinical data between hospitals and physician practices, they create tangible value that contributes to a return on investment for the capital outlays used to purchase physician practices and information technologies.

It is absolutely critical that laboratory directors become high-level messengers and articulate the value of their laboratory services and the pivotal role of the laboratory in ensuring that an accurate diagnosis is established early in an episode of care and that clinical information is available to coordinate the course and cost of care. Health system executives, managed-care directors, physicians, and health plans are not always aware of the important contributions laboratories make to nearly 80 percent of all medical decisions.

Successful laboratories under the new challenges of healthcare reform will be the single most integrated laboratory providers within health systems, leveraging outreach relationships, actively participating in the formative stages of ACO development, and preparing for upcoming reimbursement changes. The paradigm shift in healthcare from episodic care to chronic-care management represents a once-in-a-generation opportunity for proactive laboratories to redefine their value in a new, much larger role as integrators of critical clinical information and decision support.