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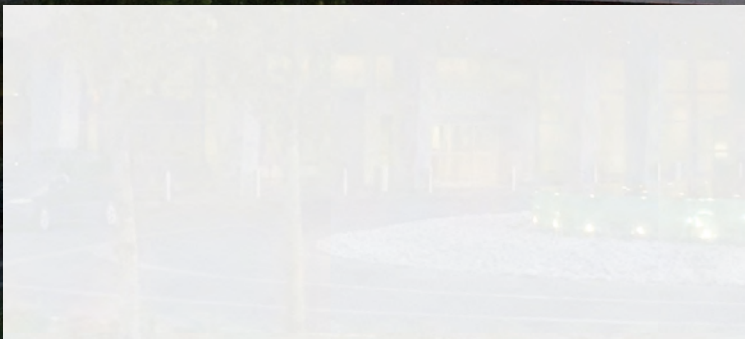
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## A Healthcare Model for the 21st Century

A Vision from Dr. Delos M. Cosgrove



# A Healthcare Model for the 21st Century: Patient-Centered, Integrated Delivery Systems

BY DELOS M. COSGROVE, M.D.

Health care is in a dynamic state. Cost concerns, quality issues, and legislative reform are driving essential transformation. Providers are challenged to do more with less. We're looking closely at everything we do and every dollar we spend. We're even examining the fundamental principles of health care: asking why we're here and what we hope to accomplish for patients and communities. These questions must be answered carefully. The direction we take today will affect health care for years to come. The old adage is correct. "If you don't create change—change creates you."

## The End of the One-Size-Fits-All Hospital

Among the basic questions about health care is how hospitals need to evolve. There are some big issues. Number one is functionality. The brick-and-mortar hospital offering all things to all patients is obsolete. It originated in a different environment, where there were fewer treatments and one facility could deliver adequate care to anyone who walked through the door. That doesn't work any more. No single site can provide state-of-the-art care in every specialty. No standalone hospital can afford all the latest technology. Clinging to the old model has led to wasteful duplication of services and roadblocks to quality and safety improvement.

Also, the center of gravity is shifting away from the hospital. Hospital

care is being replaced by outpatient care. Outpatient care is being replaced by home care. Patients want treatment and recovery in a familiar environment. This is a growing national trend: the average hospital stay has been reduced by three days; outpatient visits have grown by 200 percent; and 200,000 hospital beds have been closed in the United States over the past 25 years.

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Nonetheless, the standalone hospital persists, in part, because of an understandable desire among hospital administrators and local officials to offer a full range of services to local community, and also because certain sophisticated services can generate much higher reimbursement. The problem is that demand for services—such as CT scans, x-rays, ECGs, or blood tests, among others—is exceeded by supply in many localities. Facilities and equipment stand idle, bleeding cash. This approach is not only obsolete, it's unsustainable. According to a March 2009 analysis<sup>1</sup> by Thomson Reuters, more than half the hospitals in America are in the red.

But this is not primarily about dollars. The main issue is that

standalone hospitals struggle to meet patients' every medical need. We see now that patients do better in specialized centers that do high volumes of particular procedures. Medicine is called a "practice" for a reason. Studies by Duke University,<sup>2</sup> Memorial Sloan-Kettering Cancer Center<sup>3</sup> and others<sup>4</sup> have shown that higher volumes correlate with better health outcomes across a variety of procedures. Better outcomes mean fewer infections, complications, follow-up appointments, and readmissions—all of which ultimately lower costs.

## Creating a Fully Integrated System

America's healthcare infrastructure includes thousands of standalone community hospitals that can become valuable components of integrated regional healthcare delivery systems that offer full-spectrum care through multiple providers and facilities linked by multi-modal transport and information technology.

Cleveland Clinic is well advanced in developing this type of regional system. Many commentators have been kind enough to call our system a model for the future. Making it a reality has called for some hard choices. I'd like to share some of what we've learned in building our system, and where we hope to take it in the future.

## Efficiency

One of the biggest operational challenges in health care is to align locations with patient needs. With a healthcare system comprised of a specialized acute care center, 16 family health centers, and nine community hospitals, the Cleveland Clinic system has organized itself into a continuum of care delivery model based on a tiered system that provides patients with the appropriate level of care for each phase of their condition.

The tiered network helps drive efficiencies throughout the system. First, it allows us to create multiple access points, which are essential to the new integrated, patient-centered model of healthcare. We believe providing access to all points across the healthcare continuum will reduce costs and empower patients. Cleveland Clinic has strived to improve the patient experience by using business intelligence tools to create same-day access in most cases. This has reduced wait times for new appointments from 14 to 7 days, adding 100,000 visits and increasing patient satisfaction scores as reflected by Hospital Care Assurance Program (HCAP) results. We've also implemented several innovative strategies to ensure optimal time management for giving and receiving care. Tools such as a patient-tracking GPS system have helped reduce office visit wait times by as much as 20 percent. The Cleveland Clinic Taussig Cancer Institute has been successful in reducing overall wait for chemotherapy patients from more than 60 minutes to 20 minutes.

The tiers take geography and clinical specialties into account:

- **Tier 1:** Consisting of more than 50 buildings on over 150 acres, Cleveland Clinic's main campus is where we perform the nation's highest volume of cardiac surgeries, solid organ transplants, and other complex procedures, such as the recent near-total face transplant.

- **Tier 2:** The next tier in our system is comprised of our 16 suburban Family Health and Surgery Centers, where we offer primary care, family health, and specialty services ranging from cardiology to colorectal surgery to plastic surgery. These are primary access point for our main campus services. Many of our main campus physicians rotate in and out of the Family Health and Surgery Centers during the week.

- **Tier 3:** The third tier is composed of nine Cleveland Clinic regional hospitals, many among the oldest and most respected institutions in their communities. However, many of them are aging out of their usefulness. Some operating rooms are too small for modern surgical equipment. Patient amenities need to be improved. We have invested heavily in our regional hospitals as we integrate them more fully into our system.

## The tiered network helps drive efficiencies throughout the system.

Our strategic goals include the further refinement of our facilities and services to ensure that they are meeting the true needs of their communities. For instance, a suburb with an aging population may need a diabetes center, rather than a new maternity ward, while another suburb may need the exact opposite. To that end, we have consolidated services to create specialized centers of excellence. In obstetrics, six hospitals have been consolidated into five centers of excellence. Inpatient rehabilitation has gone from five hospitals to three. Trauma care delivery originally provided by four hospitals is now offered only by two.

Our electronic medical record system and Critical Care Transport services tie all of these tiers together. Whether the patient is being treated

at Main Campus or a suburban hospital, doctors and nurses have immediate access to the individual's complete medical record, including but not limited to medications, x-rays, test results, and prior physicians' notes. This EMR system not only reduces duplication of effort, it also ensures that the treating physician has a comprehensive view of the patient's medical history. Currently, more than six million patients use our EMR system. Our Internet site ([www.my.clevelandclinic.org](http://www.my.clevelandclinic.org)) is the most-visited hospital website in America, allowing patients to make appointments and even view relevant portions of their medical records online—virtually aligning all of our locations and providing immediate access to patient records.

Our virtual network is paralleled by our Critical Care Transport capabilities. We have a fleet of ambulances, helicopters, and fixed-wing aircraft, each equipped with traveling medical personnel. They carry Cleveland Clinic staff physicians and their teams anywhere in the world. Our Critical Care Transport team transported 4,391 patients from 36 states and 14 countries in 2009, ensuring that these patients receive the advanced care they need when they need it, reducing the risk of complications and readmissions.

## Accountable Care

Accountable care organizations (ACOs) give patients access the full range of services through an interlinked network of physicians, clinics, surgery centers, and community hospitals, surrounding a tertiary care center and teaching hospital. The ACO puts the patient at the center of a vast network. This model also offers the potential for better collaboration among doctors, hospitals and other providers, as well as sharing of savings and rewards for meeting quality and cost targets. ACOs could also mean quicker referrals from primary doctors to specialists, less time tracking down test results, and fewer readmissions

for preventable problems.

Finally, ACOs are better able to bear the costs of high-tech diagnostic technology and medical devices than standalone hospitals.

The patient-centered medical home concept also emphasizes the importance of increasing collaboration in the changing healthcare environment. It operates on the belief that health care should be consistent and continuous, not simply “sick care.” It focuses on the development of long-term doctor-patient relationships instead of episodic care, and creates a physician-led team that provides all the patient’s healthcare needs and, when necessary, arranges for specialty care with other qualified physicians to help manage chronic diseases. This sort of patient-centered, collaborative effort and extended lines of communication among physicians can also contribute to reduced readmission rates.

### Quality

At the Cleveland Clinic, all of our departments measure quality and report it on a regular basis in the form of 16 annual Outcomes booklets with data on our procedures, mortality, complications, and innovations.

We owe our public and our boards the best outcomes possible. New tools and resources are essential to improving transparency and accountability. For example, we have created real-time, transparent snapshots of key performance metrics on dashboards to help monitor critical system information such as bed utilization, readmissions, and patient experience scores. This information can then be used in annual performance evaluations and to implement process change.

Our current effort to improve collaboration, share best practices, and establish consistent protocols and metrics among physicians throughout our system is resulting in significant improvements. Physicians now have better knowledge of their patients and

## Resources

For more information about the concepts mentioned in this article, please see:

- **Efficiency:** The Dartmouth Atlas of Health Care at [www.dartmouthatlas.org/publications](http://www.dartmouthatlas.org/publications)
- **Accountable Care Organizations:** The American Medical Group Association ACO Resource Center at [www.amga.org/AboutAMGA/ACO/index\\_aco.asp](http://www.amga.org/AboutAMGA/ACO/index_aco.asp)
- **Quality:** Cleveland Clinic’s Outcome Booklets at [http://my.clevelandclinic.org/about/quality/Quality\\_Measures\\_List.aspx](http://my.clevelandclinic.org/about/quality/Quality_Measures_List.aspx)
- **Healthcare Reform:** Healthcare.gov, a federal government website managed by the U.S. Department of Health & Human Services at [www.healthcare.gov](http://www.healthcare.gov)

their needs; health care is delivered more efficiently; and, ultimately, patients receive better care.

Honest, transparent self-evaluation is the only way we’re going to get better. We’ve learned that every time we look at our outcomes, we identify problems; then we go fix those problems. That is the essence of the quality movement. At the end of the day, quality brings down cost.

This institute structure puts patient needs first, ahead of medical practice tradition.

### Staff Structure

With 2,700 salaried physicians and scientists, Cleveland Clinic—a not-for-profit group practice with physician leadership—is the second-largest group practice in the world. Our staff structure is unlike almost all other hospitals in that all physicians are on salary. There are no bonuses or financial incentives. All physicians are subject to annual performance reviews and are on one-year contracts.

Our delivery system model is also distinctive. Three years ago, we transitioned from the typical profession-oriented organization designed around physician competencies, such as surgery, to a patient needs-oriented approach, such as the Heart and Vascular Institute, which is comprised of cardiologists, cardiothoracic surgeons, and vascular

surgeons in the same location to handle whatever cardiovascular issue the patient may have. In all, we have 27 institutes, ranging from anesthesiology to wellness, in which caregivers can come together and discuss innovative approaches, whether surgery or medical intervention.

This institute structure puts patient needs first, ahead of medical practice tradition. It promotes innovation and the efficient use of resources, representing teamwork at its best to solve complicated problems.

### Putting Patients First

The dust from this total reorganization has had time to settle, and we can say quite confidently that it is a success in the view of both patients and staff. It would have been nearly impossible outside the group practice model, which creates a structure to implement care coordination, share best practices and align governance and incentives.

The Dartmouth Atlas recently held up the Cleveland Clinic as the model for delivering high-quality, low-cost care. The Mayo Clinic and Cleveland Clinic, which share the same model of healthcare delivery, were the two leaders in low-cost chronic care.

To ensure our future success as a vibrant and growing integrated healthcare delivery system, we will continue to put our patients first. We will hold ourselves to our founders’ values of patient care,

research, education, and innovation. We will take risks with our ideas. We will be creative, and we will continue to drive innovation. It will sustain our future; it will differentiate us; and most importantly, it will help us continue to achieve the best experience and outcomes for our patients, even in the face of our ever-changing healthcare landscape.

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