

The Columbus Program: Building a Community Model of a 21st Century Intelligent Health System

Steven B. Leichter, MD, FACP, FACE; Newt Gingrich, PhD; Laura Linn, RN, MN; Barbara Butler, MNM; and Sheree Griggs

When Americans observe the world around them, they recognize the potential to access all the tools and conveniences afforded to them by 21st century advances in technology, communications, and transportation. Every day, citizens experience the 21st century model of America, and it is one of effectiveness, accuracy, speed, flexibility, efficiency, lower cost, and greater achievement.

This is not so in health care. In our current health care system, individuals are dependent on a structure that has resisted the natural progress and modernization achieved through time by most other surviving American institutions. The information age has been leaving health behind; in the health sector, quality of care continues to be less than desired, and prices continue to rise, even though it is the nature of a science- and technology-based entrepreneurial free market to provide more choices of higher quality at lower cost.

The current 20th century system on which we still rely is provider centered, price driven, knowledge disconnected, and disease focused. In a land of immeasurable opportunity and wealth, our health system is plagued by 45 million uninsured Americans and a third party-controlled market. Accurate health service price and quality information is scarce, the diffusion of innovation is sluggish, and choices are limited. All the while, costs continue to skyrocket, and according to the Institute of Medicine, as many as 98,000 Americans continue to die each year as a result of medical errors. The health care system as it exists today cannot be reformed. The system

we have inherited is one that is marked by ineffective bureaucracies and mountains of disconnected paper records. We can and must do better.

We must replace our current 20th century health care system with a 21st century “intelligent health system” as described by Newt Gingrich and Nancy Desmond in *The Art of Transformation*.¹ This system is characterized by specific features and principles. It:

- Is individual-centered
- Is values-driven
- Provides 100% coverage
- Offers transparent price and quality information
- Is knowledge intense
- Features rapid diffusion of innovation
- Is prevention and health focused
- Is electronically based
- Is based on a binary mediated market (individual-provider)
- Offers increased choice
- Provides a new system of health justice
- Focuses on quality of care and quality of life

- Is metrics led and outcomes focused
- Features collaborative leadership
- Would lead to overall cost decreases

A 21st century intelligent health system—and the principles of that system—can be distilled into three essential component areas, reflected in the model shown in Figure 1. Putting individuals at the center of the system requires that they be given the incentives, information, and power to make wise choices. They must have information about cost and quality, financial incentives for wise consumerism, and increased power to work in concert with doctors to make decisions, rather than placing such decision-making in the hands of third-party administrators.

Crucial to an individual-centered system are information technology, quality, and expert systems. These provide the basis for secure sharing, analysis, and usage of information about patients’ health and health history and about the cost, quality, and outcomes of treatments. They also support the information and infrastructure necessary for a system based on prevention, early detection, self-management, and best practices.

The third component of the model is a focus on prevention, wellness, self-management, and best practices, as opposed to the 20th century focus on acute care.

Diabetes as a Disease Model for Transformation

Diabetes is an important focus of initiatives to transform the health care system of the United States. Efforts to improve diabetes care are part of the Medicare

IN BRIEF

There is widespread and growing interest in modernization of the American health care system. Based in part on initiatives in the Medicare Modernization Act, diabetes has become a focus of initiatives in health care modernization. In this article, the authors describe approaches to health care reform in diabetes leading to an effort to standardize diabetes care according to national guidelines in one city, Columbus, Ga.

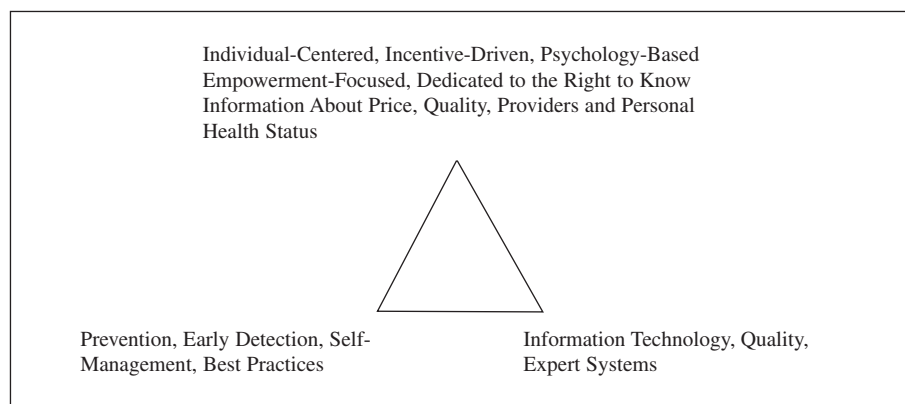


Figure 1. Triangle model of health and health care transformation. ©Center for Health Transformation, 2006. Reprinted with permission.

Modernization Act and its implementation,² and improvement of diabetes care is a priority for nonprofit activities to alter health care delivery.³ There are many reasons for this attention to diabetes, including its rising prevalence, its socioeconomic impact, and the availability of nationally accepted guidelines, which describe the management process and outcomes.⁴ This widespread activity in relation to diabetes distinguishes it as a model for overall efforts to transform health care.

The increased incidence of diabetes is one example of the impact of a health care system focused on acute care instead of prevention. Yet type 2 diabetes can be prevented. According to Frank Vinicor, MD, MPH, director of the Division of Diabetes Translation at the Centers for Disease Control and Prevention National Center for Chronic Disease Prevention and Health Promotion, “recent studies have shown that people with pre-diabetes can successfully prevent or delay the onset of diabetes by losing 5 percent to 7 percent of their body weight. This can be accomplished through 30 minutes or more of physical activity most days of the week and by following a low-calorie, low-fat plan, including a diet rich in whole grains and fruits and vegetables.”⁵

For those who have developed diabetes, complications can be prevented through control of blood glucose, blood pressure, and blood lipids and by

receiving other preventive care services, such as eye exams and foot checks. In fact, every percentage-point drop in the results of the hemoglobin A_{1c} (A1C) blood test (a test used to measure a person’s average blood glucose level during the past 2–3 months) reduces the risk of microvascular complications (eye, kidney, and nerve diseases) by 40%.⁶

Change in Diabetes

A number of modifications of health care are either written into the Medicare D legislation or are expected consequences of the activity related to that legislation.^{2,7} Diabetes is a key model for such changes. These changes include the expectation that modifications in the reimbursement patterns for provider reimbursement (pay-for-performance contracts) will induce providers to practice in a manner consistent with accepted guidelines. Given the broad acceptance of the National Committee for Quality Assurance (NCQA) guidelines for the care of diabetic patients, altering the pattern of care for diabetic patients based on those guidelines engenders broad support. Because the NCQA guidelines include descriptions of key *processes* of care as well as easily and reliably quantifiable *outcomes* of care, provider adherence to these guidelines may be accomplished within the course of the routine provision of care.

Center for Health Transformation’s Healthy Georgia Diabetes and Obesity Project

In September 2005, the Center for Health Transformation launched the Healthy Georgia Diabetes and Obesity Project, a statewide collaboration of public- and private-sector leaders dedicated to improving the treatment and outcomes for people with diabetes and promoting early diagnosis and prevention of diabetes, including decreasing the prevalence of obesity.

Goals of the project are to:

- Reduce the incidence of diabetes and obesity as well as the complications and death rate associated with both conditions through consistent implementation of best practices
- Reduce disparities in health in racial and ethnic populations disproportionately affected by diabetes and obesity
- Improve public awareness and patient understanding of diabetes and its control
- Promote better self-management among those with diabetes and obese individuals
- Accelerate the migration from paper to electronic record keeping so that access and accuracy of information will be improved
- Improve health care providers’ understanding of diabetes and its control and rapid adoption of proven best practices
- Promote policies that increase prevention and improve the quality of and access to diabetes care

One part of the project is a pay-for-performance program with a diabetes component that rewards physicians for NCQA diabetes certification. This project seeks to engage providers, employers, and insurers in a common effort to encourage the provision of care according to accepted guidelines, in return for fiscal incentives designed to encourage provider participation. By encouraging physicians to practice to standards of diabetes care, the program will lead to improved outcomes,

decreased complications from diabetes, and decreased health disparities.

Columbus Program

Columbus, Ga., is the largest metropolitan area in the western part of Georgia, with a population of ~ 375,000. It is the home of a number of major corporations and divisions of major corporations.

If Columbus resembles the rest of Georgia, then

- 8% of the population has diabetes,
- 23% of adults smoke,
- 30% have heart disease,
- 35% are overweight, and
- Health care costs an average family > \$9,000 per year.

It is unlikely that incremental change will improve these numbers quickly enough to secure Columbus's future. The community must rally around the more fundamental changes that will save the lives of its citizens and reduce the economic drain on the region. In Columbus, a consortium has arisen of employers (led by Synovus, Inc., and the local Chamber of Commerce), hospitals (led by the chief executive officer of Hughston Hospital), health administrators (led by the chief executive officers of the two largest physician groups), and physicians (led by endocrinologists in the area). The consortium is working with the Center for Health Transformation to transform the health of the citizens of Columbus. The first steps will be grounded in facts and information that will begin to mobilize individuals to take control of their health and health care because at the end of the day, an informed public will drive us to improve.

The program will begin with challenging individuals to know three simple numbers: their A1C, blood pressure, and cholesterol. This will arm them with a baseline to better understand their health and provide an incentive to begin the behavioral changes to modify the real drivers of health care costs.

Complementing this effort will be an initiative to improve physician-patient

interaction. When disease strikes, physicians take the lead, informing patients about the nature of their illness and providing them with a treatment protocol. But often, the interchange between physicians and patients is less than effective. Patients often walk away from such encounters without fully understanding what their physician is saying. Again, focusing on information, an educational campaign will be launched to train the population to ask the following simple questions of their doctors: "What is my main problem?", "What do I need to learn/know?", "What do I need to do?", and "Why is it important for me to do it?"

This effort will rely on the support of mass media outlets in the area, but it will be grounded in a series of employer-driven initiatives because employers have a vested interest in making sure their employees have the information they need. Because health disparities are a real issue, special emphasis will be placed on making sure these messages reach minority populations through more targeted communications.

A pay-for-performance diabetes initiative called "Bridges to Excellence" is being launched in Columbus that establishes outcomes goals for physicians' practice and rewards physicians who obtain those goals. The program has been launched statewide in Georgia through a collaborative effort of 15 large employers, six health insurance plans, and the support of the governor.⁸

In concert with outpatient initiatives, there will be an effort driven by the medical community to improve inpatient care through the standardization of insulin therapy protocols.

Providing consumers with more information, improving physician-patient interaction, and focusing on improving the quality of care for people with diabetes are important building blocks for the future we want to create. However, the vision of a 21st century intelligent health system will not be met unless the elimination of paper records is achieved. As long as processes are root-

ed in paper-based systems, we will not see the dramatic improvements in efficiency and effectiveness that are needed.

During the past 2 decades, improvements of similar magnitude have been routinely achieved, as the power of information technology has been brought to bear on numerous projects across a multitude of industries. Therefore, we will be facilitating the movement to electronic prescribing as the third step in our journey. Most of the pieces are in place in Columbus to make electronic prescribing a reality. Electronic prescribing will save lives by eliminating errors and will improve the efficiency of physicians' practices by reducing the staff time spent with pharmacists clarifying what has been prescribed.

The final building block we are calling "The Next Step." Using the nonprofit community and employers as a base, we will get Columbus off the couch and moving through a communitywide program to encourage and facilitate walking as a form of exercise. Everyone understands that exercise is essential to well-being. Walking is a simple, effective way to get the exercise we need, exercise that will translate into better health and lower health care costs.

What we are proposing is both simple and profound. It is simple in its message and design. It is profound in its scope and impact. If we are successful we will have:

- Armed individuals with better information,
- Rewarded physicians for quality care,
- Eliminated the paper prescription, and
- Motivated Columbus to "take the next step."

Through the Columbus program, we will build a community model for the 21st century intelligent health system and create the template for transformation of communities across America.

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Steven B. Leichter, MD, FACP, FACE, is the medical director of the Columbus Research Foundation and Endocrine Consultants, PC, in Colum-

bus, Ga. Newt Gingrich, PhD, is former Speaker of the House of the U.S. House of Representatives and the founder of the Center for Health Transformation in Atlanta, Ga. Laura Linn, RN, MN, is a project director at the Center for Health Transformation in Atlanta, Ga. Barbara Butler, MNM, is the chief executive officer of Horizon Diagnostics in Columbus, Ga. Sheree Griggs is the program director of the Columbus Research Foundation in Columbus, Ga.