



**CTIS** | A HEALTH  
INFORMATICS  
COMPANY  
Proven Solutions. Improved Results.

## **Why Health IT Matters**

## **Generational changes do not happen overnight.**

Our health system is stepping into a new age in patient care. Information Technology (IT) solutions are at the center of this generational change.

CTIS delivers high impact solutions to solve the most pressing issues in the health system today for patients, health professionals, health organizations, payers, and sponsors, both for public and private sectors.

Our IT solutions not only integrate information from all sources, but also integrates business process reengineering, total quality management, standards and best practices, organizational alignment, and human resource empowerment.

## Current State of Healthcare

*Child care* : The rate of autism in the U.S. rose from 1 in 110 to 1 in 70 births in the last ten years.

*Elder care*: The world's 60+ population will double by 2050.

*Redefining the point of care*: Encounter and episode information no longer occurs just at the doctor's office.

*Chronic disease*: Over 50% of Americans suffer from a chronic disease, a number that is growing.

*Fraud, errors, mismanagement*: Medicare fraud is estimated to exceed \$60 billion annually.

*Incomplete data exchange*: Systems exist in incompatible silos.

*Obesity*: Over 60 million Americans are obese, the second largest cause of preventable death.

*Health disparities*: The health disparity community will grow to 25% of the total population by 2025.

*Lack of preventive mechanisms*: Episode-based treatment has led to an unsustainable cost curve.

*Fragmentation of stakeholders*: Lack of collaboration and information exchange between public health, clinical researchers, clinical care, and health education hinder advancements in care .

*Lack of access to continuity of care management*: Incomplete systems hinder quality of care.

## PRICE OF INACTION

### **\$6 Trillion by 2050**

*The total cost of chronic disease to the economy without intervention.*

### **100% GDP by 2082**

*The Congressional Budget Office reports that if health costs continue to rise at the same rate as in the last 30 years, health expenditures will equal the GDP.*

### **45.1%**

*Percentage of Americans not receiving "recommended processes for basic care."*

### **2/3 of bankruptcies**

*The amount of personal bankruptcies annually linked to medical expenses.*

# Patients

Patients today need and demand the highest quality of care...

...how can we deliver this to them?

Patients are calling for greater quality of care and control over their treatment. This includes demand for:

- Access to best in quality, individualized care
- Control mechanisms for patients, allowing for them to share information with caregivers and research communities securely
- Ability to prevent diseases through understanding health risks and preempting acute episodes
- Care continuity and management between multiple caregivers that allows for a reduction in errors and redundancies
- On-demand support for patient conditions from health professionals
- Secondary prevention / care management through protocols
- Increased engagement with patient's support system, including family and social network of patients with similar conditions
- Tools to become better educated about their conditions
- Privacy and security of health information
- Ability to share information with the research community
- Mechanisms to understand reimbursement from payers
- Quality care through an integrated treatment regimen



Through the use of mobile applications\*, such as CTIS' mPHR, patients can record their physiological metrics daily and share it with their physicians.

Patients can receive targeted information about their condition from their doctor.

Patients control access to their records, allowing them to share health information with each doctor monitoring their care.

Patients diagnosed with chronic diseases such as diabetes and congestive heart failure can use their mobile device as a tool to remain compliant with a lifestyle modification regimen.


Patients can receive an integrated training regimen that is shared among all their caregivers with increased efficacy.

Communities of patients can share experiences and exchange information about conditions through social networking sites, creating greater awareness and support.

\*CTIS mobile devices deliver integrated information built upon an interoperable data warehouse, bringing data from all required sources.

**Connecting Patients to the Best Care at the Right Time.**





Using health IT solutions, physicians can integrate electronic health records, electronic medical records, and personal health records data to create a longitudinal view of patients to improve decisions on care, including on demand monitoring of care.

Physicians will be able to seamlessly integrate information from health systems to maintain continuity of care.

Physicians can interact with their patients' information from a mobile device\*, which includes the capability to receive tailored alerts, schedule appointments, and pre-scribe treatments.

Physicians will be able to manage the information patients receive through automated RSS feeds and email alerts regarding their conditions.

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**The Right Information Delivered Through  
Optimized Clinical Workflow.**

# Health Professionals

Health IT can be viewed as either an asset or a liability for health professionals. To become the former, they require tools that create or improve:

- Facilitation of group care and integrated treatment regimens through collaboration
- Clinical workflow that allows for the ability to spend more time with individual patients while increasing the number of overall patients
- Synchronization with all stakeholders in patient care from payers to patients and their families
- Mechanisms to participate voluntarily in clinical research, translational research, epidemiology, and public health studies
- Ability to integrate information from multiple sources and create a longitudinal view of a patient
- Maintain regulatory compliance and privacy requirements, without it becoming a burden on medical practice
- Keep abreast of new treatments, therapies, drugs, and applicability to individual patients
- On-demand monitoring of patient care
- Connectivity with health systems as part of the continuity of care

How can technology enhance the performance of physicians, nurses, and other health professionals in delivering care?



# Health Organizations

(Health Systems, Research Institutions, and Academic Medical Institutes)

Stop letting  
health IT  
dictate your  
strategy.

Let your  
strategy  
dictate health  
IT.

Health systems and health centers are the foundation that adheres patients, physicians, payers, and the research community together. Realizing their potential requires the capabilities to:

- Lay the foundation of IT and organizational shifts toward preventive medicine and ACO compliance
- Establish the highest quality of care for patients through better integration with ambulatory doctors
- Maximize patient safety and reduce errors, redundancies, and fraud that lead to increased costs
- Reduce 'rate limiting factors' that inhibit growth of the organization
- Conduct research and generate value through best practices in treatment accelerating drug development
- Act as an agent of public health through education and conducting comparative effective research
- Improve efficiencies through process alignment, integration, and streamlining, thus reducing cost



Capacity for organizations to view population-level data to conduct “virtual” Framingham studies and epidemiology studies.

Build foundation to harness genomics to drive cures of the future.


Use of mobile devices to distribute care to patients and improve outcomes by promoting compliance with monitoring metrics.

Integration with disease surveillance networks to preempt infectious disease epidemics.

Creation of data warehouses that facilitate public health studies and accelerate research for new cures and treatments through analytics, creating new value and revenues.

**Improving the Point of Care.**



A close-up, vertical view of a fountain pen nib. The nib is silver and is positioned as if it has just finished writing or is about to start. It is resting on a light blue surface. In the background, there is a darker blue vertical bar on the left side. The overall image has a clean, professional aesthetic with a light blue color palette.

Launch disease management programs that harness mobile devices\* and web applications for lifestyle modification.

Reduce insurance fraud through standardized frameworks and robust data security.

Customize dashboards that allow for better understanding of drug efficacy, leading to cohort-based drug delivery.

Allow payers to identify best performing care organizations and better target incentives.

Generate new value through use of analytics to identify new treatment options for patients.

Create mechanisms to connect patients directly to the research community through tools such as social media and mobile applications.

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**Leveraging Information to Reduce Cost.**

# Payers and Sponsors

(Insurance Companies, Pharmaceutical Companies, & Research Sponsors  
(Government and Foundations))

Declining revenues and uncertainty surrounding reimbursement plague both the pharmaceutical and medical insurance industries. Addressing the following issues will take this community on a more sustainable path.

- Pressures to move away from a fee-for-service model and towards a preventive model
- Inability to seamlessly interact with stakeholders across the health continuum to derive new insights
- Stringent regulations requiring extensive investments in compliance for new drugs and devices
- Lack of ability to monitor trends, opportunities, and trials in a public health research environment
- Unsustainable cost curve associated with treating chronic disease
- Policy pressures to increase coverage of patients
- Excessive cost overruns from lack of information exchange including redundant tests, missed diagnosis, and fraud
- Need for synchronization of information between physicians, patients, and health organizations to maximize reimbursement and maintain costs
- Ensure all necessary physicians and providers are in the network
- Provide the broadest disease coverage to patients

In uncertain times...

...take a steady step towards your future.



## **About CTIS**

CTIS has over 20 years of proven history in providing total informatics solutions to the health sector. CTIS provides innovative, appropriate, timely, and quality information technology solutions to health systems, health professionals, research organizations, and payors to support their goals in serving patients. To address this need, CTIS' informatics solutions converge health sciences, information technology, process reengineering, total quality management, and organizational effectiveness in order to optimize the capture, storage, and use of information in health and biomedical sciences.

CTIS is also building needed personal information solutions that serve patient directly in dealing with their healthcare providers. CTIS' leadership is at the forefront of national discussions that are defining the next generation of biomedical, clinical research, translational research, personalized medicine, comparative effectiveness research, performance driven healthcare, health disparities, elder care, and chronic disease management programs that will not only provide better patient care, but also meet the cost management goals of the health industry.

## **Contact Us**

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