Executive Profiles

Chief Information Officer

Other Common Titles

- VP of Information Technology

Role Description
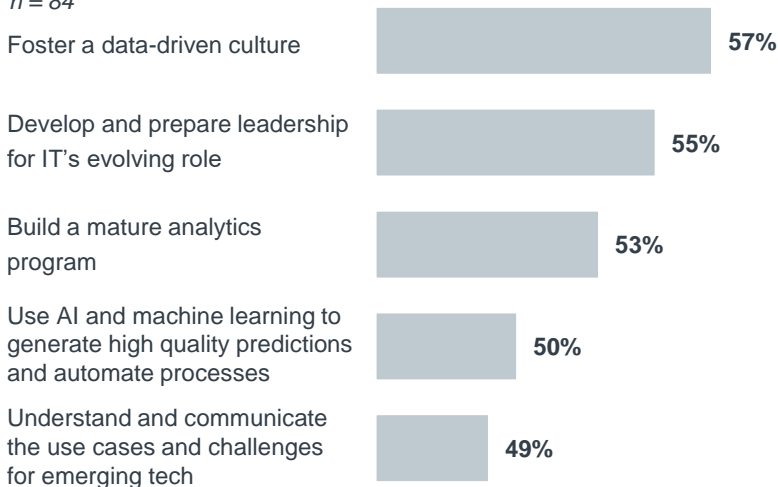
Overview:

The Chief Information Officer (CIO) oversees the selection, implementation, and optimization of information technologies (IT). While individuals in this role were historically seen as IT project managers, CIOs now assume more strategic roles and are vital to short and long-term success of provider organizations, especially as they transition from volume-based to value-based care.

As shown in the graph below, CIOs work to promote IT excellence across the organization, optimize care delivery, and lead the adoption of digital innovation.

Top 5 areas of interest for provider CIOs and IT leaders[1,2]

n = 84

Area	%
Foster a data-driven culture	57%
Develop and prepare leadership for IT's evolving role	55%
Build a mature analytics program	53%
Use AI and machine learning to generate high quality predictions and automate processes	50%
Understand and communicate the use cases and challenges for emerging tech	49%

Common Responsibilities:

Promote IT organizational excellence

- Identifying how IT can advance organizational interests

- Aligning IT strategic priorities with the organization's overall strategic plans

- Supporting specific departments in the planning, development, evaluation, and implementation of IT platforms

- Developing an IT workforce capable of executing on organizational strategic priorities

Optimize care delivery

- Leveraging new data sources and platforms that can contribute to improved clinical outcomes

- Ensuring clinician satisfaction with, and usability of, clinical IT

- Providing a digital front door that seamlessly connects providers and patients

Determine digital innovation strategy

- Understanding applications and use cases for emerging technologies and communicate potential challenges

- Determining which digital investments will advance organizational goals

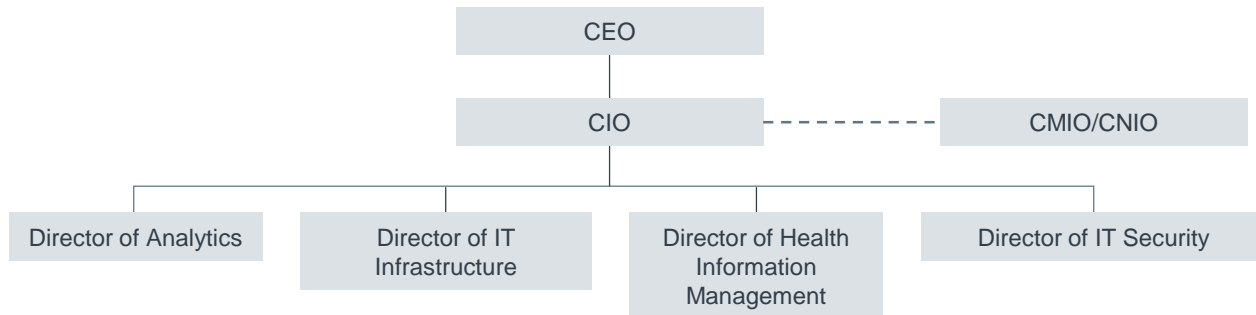- Evaluating and plan the deployment of emerging technologies

1) Percentage of respondents indicating that they are extremely interested in each area.
2) Survey of Advisory Board members, conducted by Advisory Board's Health Care IT Advisor.

Source: Advisory Board research and analysis.

Chief Information Officer

CIO's Place Within The Organization

Illustrative example of an organizational structure at a large health system:

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                          │     CEO     │
                          └──────┬──────┘
                                 │
              ┌──────────────────┴──────┐ - - - - - - ┌─────────────┐
              │         CIO             │             │  CMIO/CNIO  │
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│ Director of│ │ Director of  │ │ Director of  │ │ Director of  │
│  Analytics │ │     IT       │ │   Health     │ │ IT Security  │
│            │ │Infrastructure│ │ Information  │ │              │
│            │ │              │ │ Management   │ │              │
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As IT leaders support nearly every department within the health system, traditional organizational structures are starting to blur. Many functions that used to sit firmly under the IT leadership, AI and automation for example, now see shared leadership structures in which both business and clinical leaders have decision-making authority. That said, most traditional IT functions, particularly those related to IT infrastructure or cybersecurity, still report directly to the CIO.

CIOs relationship with other leaders:

IT touches every facet of health care delivery, making it essential that CIOs work collaboratively with a variety of stakeholders. CIOs partner with clinical leaders, Chief Operating Officers, Chief Strategy Officers, and Chief Transformation Officers to align an organization's strategic plans with IT initiatives. This is particularly important in the context of an organization's transition from volume-based to value-based care, since interoperability is essential for success in any risk-based payment environment.
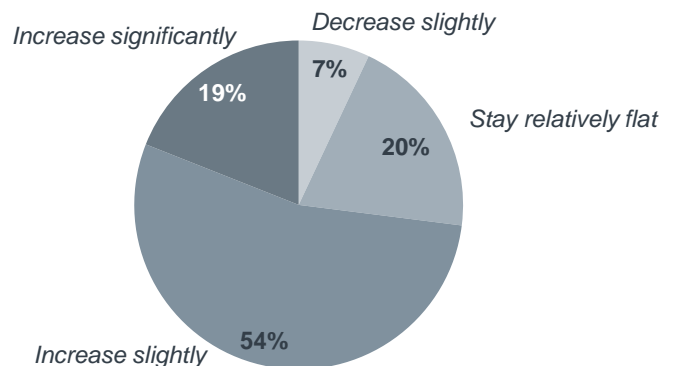
CIOs also work closely with Chief Financial Officers and other finance leaders to allocate capital and manage budgets.

Lastly, as the CIO devotes more time to strategic initiatives, they may not be involved with the purchase or use of individual IT applications. Instead they may lean on Chief Medical Information Officers, Chief Nursing Informatics Officers, and other clinical leaders to evaluate and manage the implementation of applications.

Trends in IT-related operating budget:

CIOs are among the few health care leaders who continue to see budgets rise despite lingering margin pressures. This trend is largely due to IT playing and increased role in achieving many of the organization's most critical goals.

Predicted change in IT-related operating budget[1]
n = 54

Increase significantly — 19%
Decrease slightly — 7%
Stay relatively flat — 20%
Increase slightly — 54%

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1) Survey of Advisory Board members, conducted by Advisory Board's Health Care IT Advisor.

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Chief Information Officer

The Evolving Responsibilities of Chief Information Officers

Historically, CIOs primarily evaluated and implemented IT platforms. But like the technologies they manage, CIO responsibilities continue to evolve at a rapid pace. CIOs are now more integral members of provider organizations' C-suites and heavily contribute to bringing system-wide strategic goals to fruition. As such, CIOs are tasked with transforming the organization to one that embraces digital health, emerging technologies, and IT-driven process changes.

Traditional Responsibilities

- Plan and manage system-wide IT platform implementations
- Manage regular maintenance of IT systems and troubleshoot unexpected problems
- Oversee IT governance and project prioritization
- Manage relationships with IT vendors

Emerging Responsibilities

- Create a seamless digital experience for both customers and clinicians
- Align IT goals with the organization's strategic goals
- Transform organization into a digital health system
- Leverage new data sources and platforms to keep population healthy
- Embrace and react to disruption and innovation in health IT

Top-of-Mind CIO Considerations

CIOs are under tremendous pressure to leverage IT strategically and operationally to drive change. It is therefore essential that they invest in IT which will quantifiably enhance a health system performance against a specific goal – in other words, more than just IT for IT's sake. As such, CIOs see value in solutions that support measures across the clinical, financial, and operational side of the organization.

Top-of-mind measures for CIOs

Clinical measures	**Financial measures**	**Operational measures**
• Patient satisfaction • Length of stay • Turnaround time • Care coordination • Social determinants of health data	• IT expense as a percent of total organizational expense • Cost-per-case • Revenue capture • Value-based payment penalties and bonuses	• Clinician usability of IT platforms • End user satisfaction • Quality of data related to quality outcomes and payment metrics • Interoperability with EMR and other internal and external IT systems

Source: Advisory Board research and analysis.

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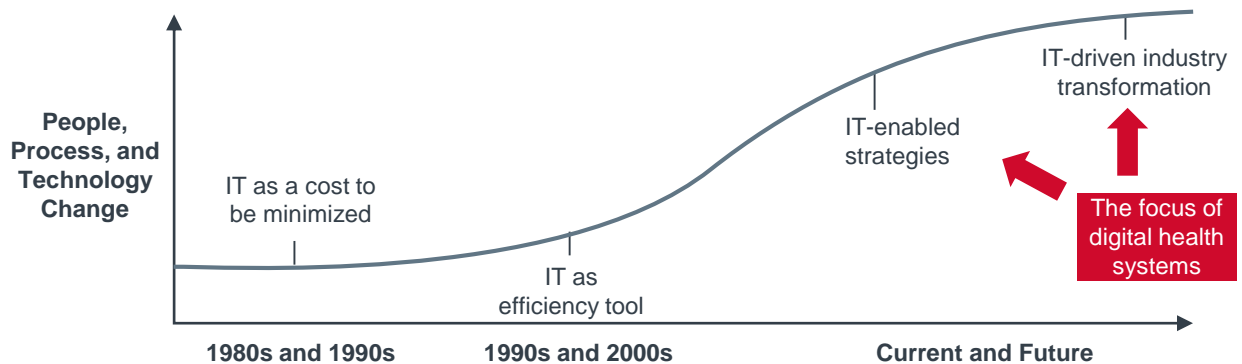
Chief Information Officer

Pressing Issues

1 **Building a highly skilled IT enterprise**

As IT plays an increasingly important role throughout the entire organization, many CIOs will focus on growing and transforming the IT enterprise. As a result, CIOs will have to 1) delegate running the business side of IT to other leaders who have greater capacity for departmental decision-making, and 2) develop a workforce capable of delivering on organizational goals and priorities.

2 **Developing a digital health system**

Digital health systems take full advantage of IT-related capabilities in three domains: redefining business models, improving processes, quality, and cost structure, and identifying and addressing customer and patient needs. CIOs must help their organizations drive success in all three domains. For example, to succeed under increasing financial and clinical risk, organizations must leverage IT-enabled clinical decision support to deliver better care and avoid unnecessary costs. Next, technology must help expand care delivery from primarily a "find it, fix it" model to one that is more predictive, proactive, preventive, and precise. Lastly, technology must play a role in helping patients change from being passive recipients of care to becoming active participants in their own health.

The evolution of IT in health care

People, Process, and Technology Change

IT as a cost to be minimized

IT as efficiency tool

IT-enabled strategies

IT-driven industry transformation

The focus of digital health systems

1980s and 1990s   **1990s and 2000s**   **Current and Future**

3 **Prudently adopting AI and other emerging technologies**

There is no shortage of emerging technologies for organizations to invest in – robotics, automation, machine learning, and virtual reality just to name a few. These advances have the potential to redefine care delivery. However, with so many technologies on the market, CIOs are careful not to overextend their IT departments by helping non-IT leaders focus their investments on solutions that contribute to specific goals. In addition, CIOs and other IT leaders will keep clinician burnout, and the role that the digitization of care has on clinician satisfaction and workflows, at top-of-mind.

Source: Advisory Board research and analysis.

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Chief Information Officer

Education and Training

CIOs typically have any combination of the following degrees:

Undergraduate Degrees	Graduate Degrees
B.A./B.S. in Health Information Management	M.B.A.
B.S. in Computer Science	M.H.A./M.H.S.A.
B.S. in Engineering	M.S. in Computer Science

Training Programs	Certifications
American Health Information Management Association	• HIM certifications • Coding certifications • Specialty certifications
College of Healthcare Information Management Executives	• Certified Healthcare CIO
Healthcare Information and Management Systems Society	• Certified Professional in Healthcare Information & Management Systems (CPHIMS)

Common Societies / Associations

CIOs are typically members of at least one of the following professional associations:

Organizations	Publications
American College of Healthcare Executives	• Healthcare Executive Magazine • ACHe-news
College of Healthcare Information Management Executives	• IT Warehouse • benchmarkIT
Healthcare Information and Management Systems Society	• Clinical Informatics Insights • Business Edge • Health IT Policy Update • Information Xchange • HIMSS Weekly Insider • HIMSS Monthly Insider
Society for Information Management	• SIM Connect • SIM News Extra

Conversation Starters with Chief Information Officers

1 What IT capabilities will be vital to success on your organizations strategic plan?

2 How are you collecting and managing the data needed to improve administrative and clinical functions?

3 Do clinician leaders indicate that their workforce is capable of leveraging clinical IT to its fullest extent?

Source: Advisory Board research and analysis.

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This "*Targeting*" resource is part of a broader Sales Transformation Support Initiative which is intended to help suppliers and service providers better understand how to partner with their provider customers given the ever changing health care landscape. The Sales Transformation Support Initiative is a service offered to health care industry members through Advisory Board's Health Care Industry Committee.

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