American Hospital Association™

Advancing Health in America

Leveraging Data for Health Care Innovation

Maturity Framework: Data-driven Health Care Organizations

Hospitals and health systems are in the midst of navigating significant changes in how they operate and deliver care. As health care continues to shift toward patient-centered and value-based care, executives are becoming increasingly reliant on timely, accurate, actionable information to support the creation of new care delivery models and opportunities. Each organization can use this maturity framework to assess its current capabilities to determine where they are as a data-driven organization and how this impacts their digital transformation.

	MATURITY LEVEL		
CAPABILITY	**INITIAL**	**COMPETENT**	**EXPERT**
Status of Data Assets	• Data sources and definitions may be different. • Processes for ingesting data are not standardized.	• Standard definitions for data. • Standard procedures for ingesting data. • Data validation controls and processes. • Capturing patient claims data.	• Disparate sources of data are aggregated and one standardized source of truth is created. • Data governance and hygiene are widely practiced. • Capturing patient-generated health data from smartphones, mobile applications and wearable devices; social determinants of health data. • Participate in data consortia for broader insights and comparisons.
Data storage	• Cloud data storage and on-premise data storage solutions: Multiple cloud vendors and service models may be used to host different data resources. Transaction-based functionality with some analytics.	• Enterprise data warehouse: Integrated view of clinical, financial, patient satisfaction and administrative data for business analytics to improve quality and reduce costs.	• Integrated enterprise data warehouse: Agile data warehouse platform to accelerate analytics and scalable solutions to manage risk-based contracts and population health.
Data analytics and infrastructure	• Electronic health record: Functional EHR but little interoperability with affiliates. • Population health management tools: Use of disease registries/reporting. • Performance analytics: Some ability to track performance against quality/utilization benchmarks.	• Electronic health record: Strategy in place to integrate EHR and analytics platforms across network, though not necessarily common platform. • Population health management tools: Population health-management system to identify high-risk patients. • Performance analytics: Integration of clinical, administrative and care management data at patient level; practice-level dashboards to track performance against quality/utilization targets.	• Electronic health record: Common EHR, analytics and care management platform are used across enterprise. • Population health management tools: Ability to identify defined subpopulations for targeted interventions; use of predictive modeling to identify at-risk members; ability to facilitate and track closed-loop referrals to community-based organizations. • Performance analytics: Near real-time visibility into quality and cost performance.

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AHA CENTER FOR HEALTH INNOVATION

For more market insights on data analytics, vist:
www.aha.org/center/emerging-issues/market-insights/leveraging-data

CAPABILITY	MATURITY LEVEL: INITIAL	COMPETENT	EXPERT
Governance 	• Independent, departmental decision-making and oversight. • Lack of uniformity on data definitions, analytics and processes across departments.	• Data governance committee sets common policies and standards. • Centrally managed key performance indicators.	• Centralized data governance body exists and is staffed by executive and clinical leadership group that establishes overall principles of data management and analytics. • Creation of an enterprisewide, multiyear business intelligence/data governance roadmap that ties to the organization's strategic goals.
Talent 	• CIO leads new technology product development, facilitates internal customer adoption, drives innovation, protects data in private cloud and may sell innovations as services externally. • Each department is responsible for its own data and analytics support.	• CMIO/CNIO leads team to identify, develop and implement informatics strategies to support the highest-quality continuum of care. • Integrated data teams with committees for various business needs. • Some investment in staff dedicated to data analytics.	• Leadership roles focused on clinical analytics, e.g., the chief data officer or chief analytics officer. • Significant investment in advanced data strategy and management roles: data scientists, visualization developers and data architects.
Culture/ data literacy 	• Decisions are made regularly with no or incomplete data. • Emerging and growing emphasis on fact-based decisions.	• Training on data literacy. • Focus on using data to identify business improvement opportunities and change.	• Ingrained understanding of how data enhance decision-making, business improvement capabilities and its limitations. • Unifying organizational and data/technology strategies to more effectively collaborate, innovate and create new sources of value.
Privacy/security 	• Cybersecurity risk management practices are approved by management, but may not be established as organization-wide policy. • Integrated risk management program: There is an awareness, but an organizational approach has not been established.	• Cybersecurity risk management practices are formally approved and expressed as policy. • There is an organization-wide approach to manage cybersecurity risk.	• The organization adapts its cybersecurity practices based on previous and current cybersecurity activities, including lessons learned and predictive indicators. • Integrated risk management program: There is an organization-wide approach to managing cybersecurity risk that uses risk-informed policies, processes and procedures to address potential cybersecurity events.