

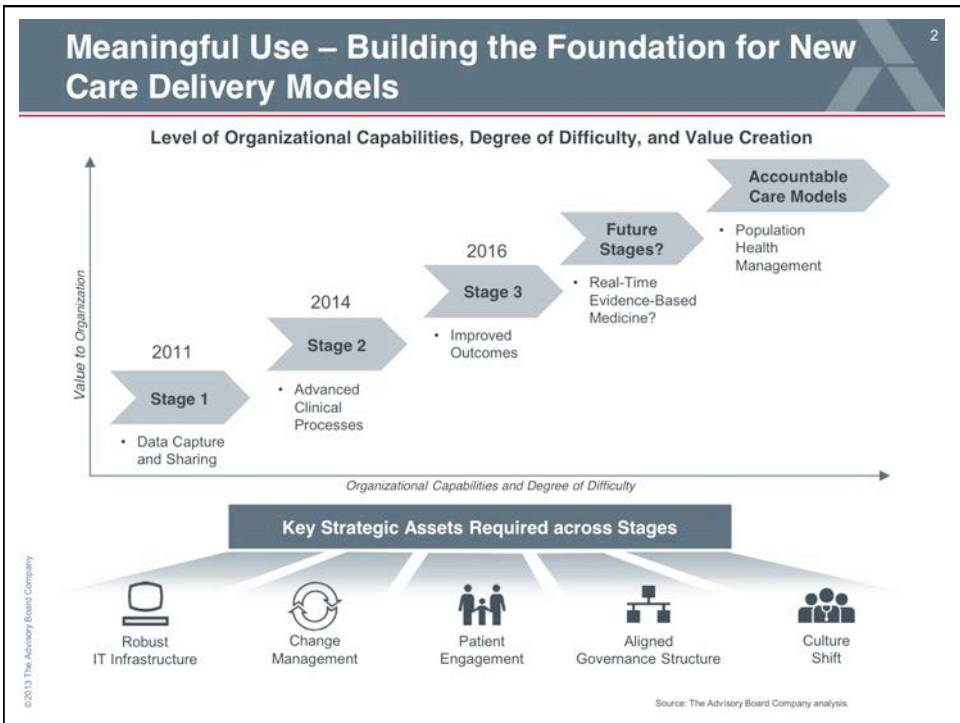


The Advisory Board Company

Health Care IT Suite

Health Care IT Top 10 for 2013

A Year of Accelerating Transition



EMR Optimization – So That’s Where Those Benefits Were Hiding!

Momentum of Advanced EMR Functionality Growing, Implementation Timing Compressed

Percentage of US Hospitals by EMRAM Stage

Quarter	Stages 0-3 (%)	Stages 4-7 (%)
Q4 '08	94.2	5.8
Q3 '12	64.7	35.3
Q3 '14 P	25.0	75.0

EMR Implementations Using “Big Bang”

Time Period	Percentage
Early 2000s	10 – 20%
2012	50 – 70%

Drivers of Big Bang, Standard Approach

- Meet meaningful use requirements
- Time and cost savings
- Experience with EMR implementations
- Increased clinician familiarity with IT

Rapid Implementation Does not Guarantee Desired Benefits; Benefits-Driven Optimization is Required

Study Finds EMRs Increase Cost

“Hospitals that adopted EMR between 1996 and 2009 did not experience a...significant decrease in costs on average. In fact, [in many cases] costs rose after EMR adoption, particularly for...advanced EMRs.”

National Board of Economic Research, 2012

Technically-Driven Optimization
Goals: Improve screen design, interfaces, reporting capabilities, functionality to meet requirements, etc.

Process-Driven Optimization
Goals: Identify better ways to use system capabilities, change and/or standardize workflows, address cultural issues, etc.

Benefits-Driven Optimization
Goals: Achieve business value as defined by the strategic goals of the hospital; a high-level focus on few key objectives.

Source: The Advisory Board Company analysis.

Revenue Cycle Management – ICD-10 and Accountable Care, Oh My!

Enabling Technologies for Revenue Cycle Management

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Complexity (y-axis)

Time (x-axis): 2013, 2014, 2015, 2016+

- Process Automation
- Clinical Documentation Improvement
- Enterprise Testing
- Electronic Charge Capture
- Business Intelligence/Analytics
- Computer Assisted Coding
- Natural Language Processing

Highest value technologies (points to NLP and CAC)

Timeline: ICD-10 (2013-2014), Accountable Care (2013-2016+)

Continuous monitoring and feedback is critical for success

Source: The Advisory Board Company analysis.

Mobility 5

Mobility – Taking Flight in Health Care

Four Forces of Health Care Mobility

- Security
- Manageability
- Support
- FDA regulation

- Meaningful Use – access to EHRs
- Communications among clinicians
- Patient engagement
- Social networking

- A billion smart mobile devices – BYOD on the rise
- Hundreds of thousands of mobile applications and growing
- Proliferation of wireless networks and GPS/RTLS

- Majority of health care applications written for mouse-and keyboard desktop platforms
- Existing investments in older laptops, phone systems, carts, etc.

©2013 The Advisory Board Company Source: The Advisory Board Company analysis.

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Interoperability – Evolving Incrementally, Addressing Heterogeneity

Interoperability Needs will Evolve with New Business Models

	Meaningful Use Stage 2	Meaningful Use Stage 3	Clinically Integrated Network	Accountable Care Organization
Structured Data	Must Have →			
CCD->CCDA	Must Have →			
Other CCDA (i.e. PHR Transfer)	Must Have →			
HIE	Should Have →	Must Have →		
EMPI	Should Have →	Must Have →		
Patient Entered Data	Should Have →	Must Have →		

©2013 The Advisory Board Company Source: The Advisory Board Company analysis.

Patient Engagement – The Acute, the Chronic and the Healthy 7

Engage Patients to Manage Population Risk

Opportunities to Engage Patients Across the Care Continuum

Disease Management

- Population management
- Patient-Centered Medical Home
- Cross-continuum, cross-network care coordination

Engaging the Healthy

- Incentive programs: employer-sponsored, ACO-sponsored
- Facilitating wellness interactions with the physician: online scheduling; secure messaging

Common Technologies:

- Portals
- Text, email, call centers
- Home monitoring
- Telemedicine
- Social networking

Impact on overall health status:

- Lifestyle and behaviors: 50%
- Human biology: 20%
- Environment: 20%
- Medical care: 10%

Episode of Care

- Before, during, after admission
- Education, expectation management
- Activation in their care

Source: The Advisory Board Company interviews and analysis.

Business Intelligence – Need for a Strategy to be Data-Driven; Data-Driven Strategy 8

BI Maturity Model

	Fragmented	Enterprise Perspective	Advanced Analytics	Big Data
BI architecture	None or several point solutions	Central infrastructure basics implemented	BI core and self-service infrastructure in place	Optimized infrastructure (e.g., data marts, ODS)
Data sources / data currency	Transaction application from one system or BI tool specific from limited number of internal source systems	ETL established for primary data sources	ETL established for secondary data sources	Web, patients, genomics, and other external sources
Types of analysis / use of analytics	Automated internal reporting	Enterprise KPIs and automated external reporting	Predictive and prescriptive analytics and evidence-based analytics	Analytics combining multiple and complex data sources
Data models	Departmental	Common vocabulary, star schema, dimensional	Multiple data models	No schema
Data governance	Independent and departmental	Common policies and standards, centrally managed KPIs, and security management	Agreed-upon agenda and priorities, data normalization, and initiate source system changes	Stewards of internal and external data, complex analysis review, and sophisticated delivery methods
Tools	Redundant tool sets	Consolidated data management tools	Extended analytic capabilities	Specialized, targeted capabilities
Skills	SQL, Excel, light data modeling, light visualization	In-depth knowledge of physical and logical data modeling, and light statistics	In-depth knowledge of statistics and operations analysis, procedural programming	NLP, genomics, and rules engine programming
Culture / enterprise data literacy	Value of data under-appreciated and "gut feel" decisions	Champions emerging and growing emphasis on fact-based decisions	Training on data literacy, identifying BI opportunities, and making changes	Engrained understanding of BI capabilities and limitations
BI governance / organizational structure	Local control	Central agenda and central funding	Coordinated resources	Includes relevant, external resources

Source: The Advisory Board Company analysis.

Population Management – Turning Business Models Inside-Out, Upside-Down

A New Road Map for Success
Identify, Track, and Manage Patients Across the Care Continuum

Episode Management
Care Management

	Traditional	Redefined	Condition Management	Population Management
Incentive Mechanisms	Fee-for-service	<ul style="list-style-type: none"> Value-based purchasing, Readmission penalties 	<ul style="list-style-type: none"> Pay-for-performance Bundled payment PMPM payment Shared savings models Capitation 	<ul style="list-style-type: none"> Shared savings models Capitation
Success Metrics	<ul style="list-style-type: none"> Number of procedures Number of visits 	<ul style="list-style-type: none"> Cost of episode Quality metrics specific to episode, including three days pre-treatment and 30 days post-treatment Completion of all care pathways steps 	<ul style="list-style-type: none"> Cost of ongoing care management of targeted patient groups Quality metrics specific to condition outcomes as well as management trend data 	<ul style="list-style-type: none"> Total cost of care for population Broad quality metrics including preventive care and screenings Broad utilization metrics including ED utilization and unnecessary hospitalization
Performance Levers	<ul style="list-style-type: none"> Specialist referral network Workshop efficiency 	<p><i>Previous levers, plus:</i></p> <ul style="list-style-type: none"> EBM¹ care pathways Care coordination 	<p><i>Previous levers, plus:</i></p> <ul style="list-style-type: none"> Robust primary care network including top-of-license care management team Open access at low-acuity sites of care Targeted patient engagement at primary care 	<p><i>Previous levers, plus:</i></p> <ul style="list-style-type: none"> Broad patient engagement at primary care Independent self-management of health and wellness Partnership-driven community engagement
IT Enablers (Examples)	<ul style="list-style-type: none"> Interfaced transaction systems 	<ul style="list-style-type: none"> Optimized ambulatory and inpatient EMRs Physician portals Quality dashboards Readmission-risk stratification tools 	<ul style="list-style-type: none"> Private HIEs² Structured clinical documentation Standardized, evidence-based CDS³ Patient education tools Revenue cycle management tools 	<ul style="list-style-type: none"> Risk stratification, prediction and management tools Patient attribution capabilities Patient "connectivity" Population health management registries

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1) Evidence-based medicine.
2) Health information exchanges.
3) Clinical decision support.

Source: The Advisory Board Company analysis.

IT Governance – Stopping the “Yes Machine”

Governance Is Critical to Get the Right Work Done

Governance should be the way to reach alignment on:

- Where the organization is today
- Where it is going
- What it needs to do
- How to allocate resources
- How to monitor and measure performance, progress, and compliance

But →

Common governance challenges:

- Inability to prioritize
- Over-commitment
- Low technical sophistication
- Overly formal or informal process

Result In

Break through the challenges!

- Stop the IT yes-machine and set limits
- Focus on business initiatives—not IT projects
- Have IT make IT decisions
- Nurture your relationships
- Make your forum the place to be
- Adjust for new partnerships

The CIO's Burden

- Poor engagement
- Political decision making
- Frequent work-arounds
- CIO in the room but not at the table

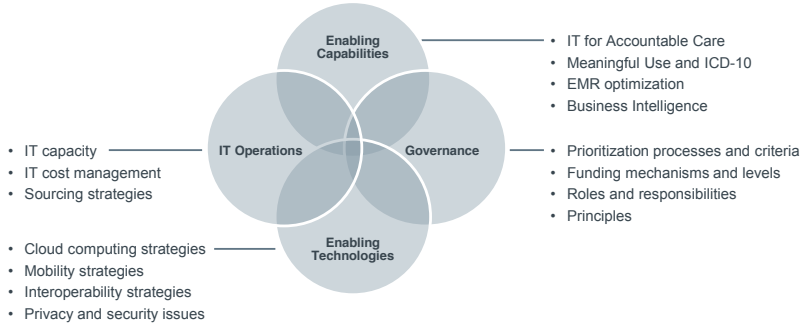
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Source: The Advisory Board Company analysis.

CEO Education – “What Do I NEED to Know?”

IT Must Be a “Team Sport” at All Levels

Possible Domains and Sample Topics for Basic Education



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Future Advisory Board Research

The Advisory Board plans to continue developing research, presentations and other resources to help facilitate mutual understanding on IT-related topics between CIOs and non-IT leaders. Please let us know what topics would be the most beneficial for you and your leadership team.

Source: The Advisory Board Company analysis.



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