

Transforming Health through Interoperability and Analytics



May, 2014

H. Stephen Lieber

HIMSS President & CEO

HIMSS
transforming healthcare through IT™

Introduce You To HIMSS

- Global, not for profit NGO
- Mission: Transform health through information technology
- Services: Education, events, analytics & consulting, media, membership
- Operate in 20+ countries with significant activity; 10-12 more with lesser engagement
- Reach more than 800,000+ Professionals with active engagement
- Offices in the US, Europe and Asia
- Top 5 largest healthcare conference in US
- Top 10 largest healthcare association worldwide

Three Factors Influencing Transformation

- **Government Action**
- **IT as a Strategic Focus/Asset**
- **Changing Care Trends**

Transformational Factor: Government Action

US EHR Incentive Program

- Legislation passed in 2009; program began 2011
- For 1st time, US hospitals & MDs paid for how they handle information (additional payment to medical services payments)
- Designed around “Meaningful Use” requirements
- IT use in 2009 such that significant IT adoption necessary to meet requirements
- Nearly \$20B USD paid out to date but less than cost to meet requirements

The focus on clinical HIT acquisitions is evident in the shift towards advanced EMR capabilities in U.S. hospitals.

US EMR Adoption ModelSM European Adaptation

| Stage | Cumulative Capabilities | 2011 Q2 | 2013 |
|----------------|---|---------|-------|
| Stage 7 | Complete EMR, CCD transactions to share data; Data warehousing; Data continuity with ED, ambulatory, OP | 1.1% | 2.9% |
| Stage 6 | Physician documentation (structured templates), full CDSS (variance & compliance), full R-PACS | 4.0% | 12.5% |
| Stage 5 | Closed loop medication administration = Bar Code Enablement | 6.1% | 22.0% |
| Stage 4 | CPOE, Clinical Decision Support (clinical protocols) | 12.3% | 15.5% |
| Stage 3 | Nursing/clinical documentation (flow sheets), CDSS (error checking), PACS available outside Radiology | 46.3% | 30.3% |
| Stage 2 | CDR, Controlled Medical Vocabulary, CDS, may have Document Imaging; HIE capable | 13.7% | 7.6% |
| Stage 1 | Ancillaries - Lab, Rad, Pharmacy - All Installed | 6.6% | 3.3% |
| Stage 0 | All Three Ancillaries Not Installed | 10.0% | 5.8% |

+160%

+212%

+260%

-45%

-50%

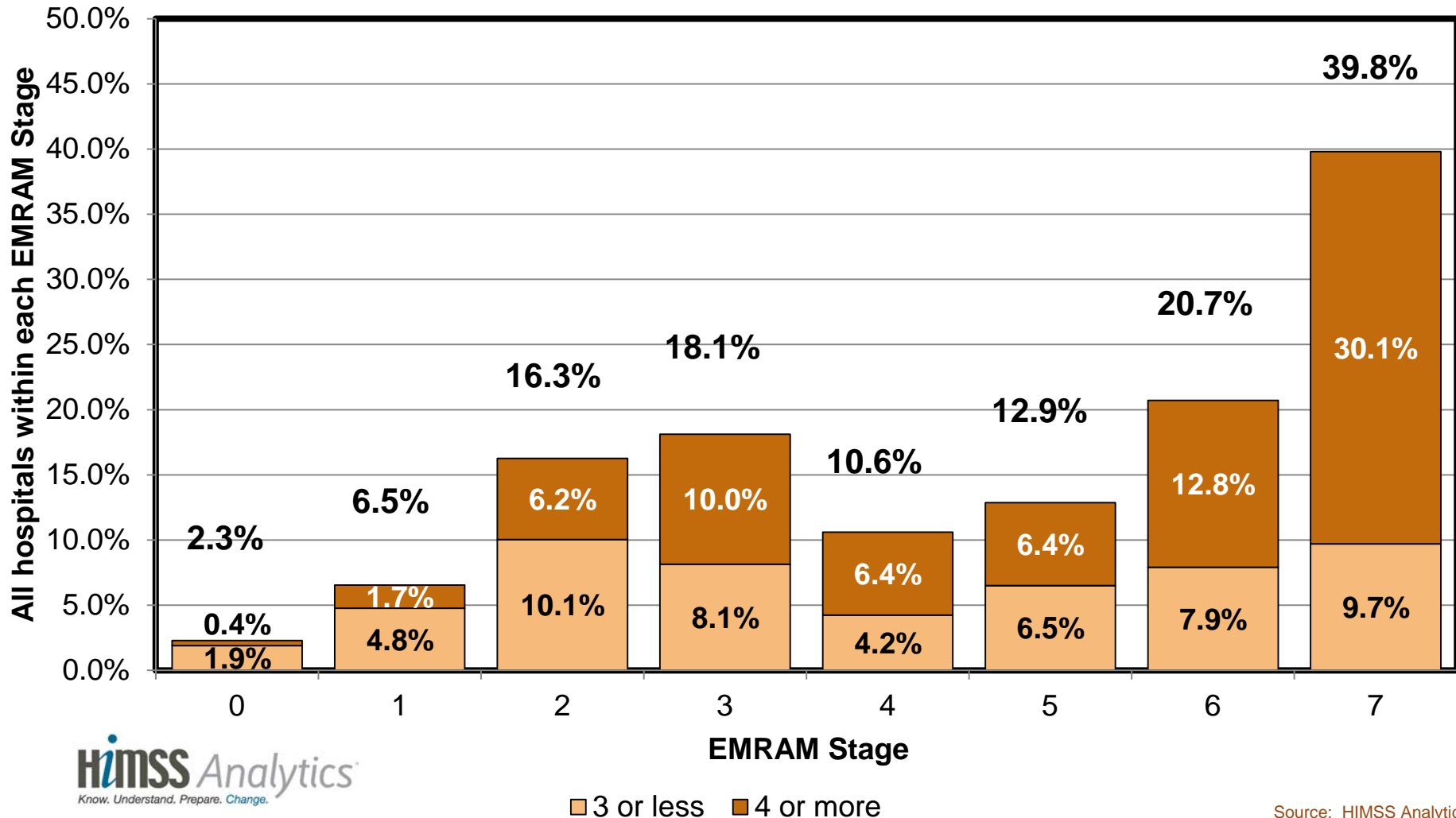
-42%

Data from HIMSS Analytics® Database © 2012 HIMSS Analytics

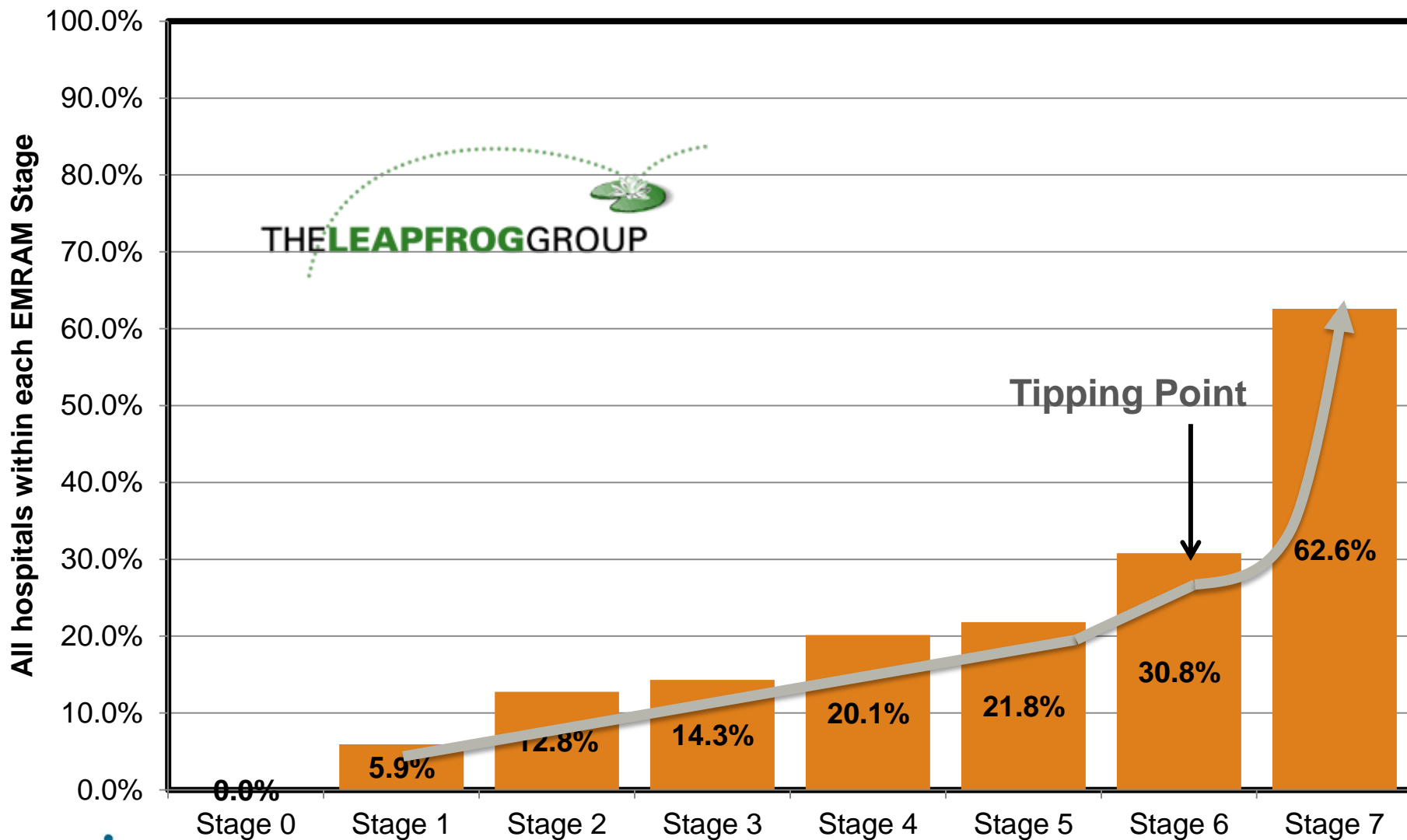
N = 5439

N = 5458

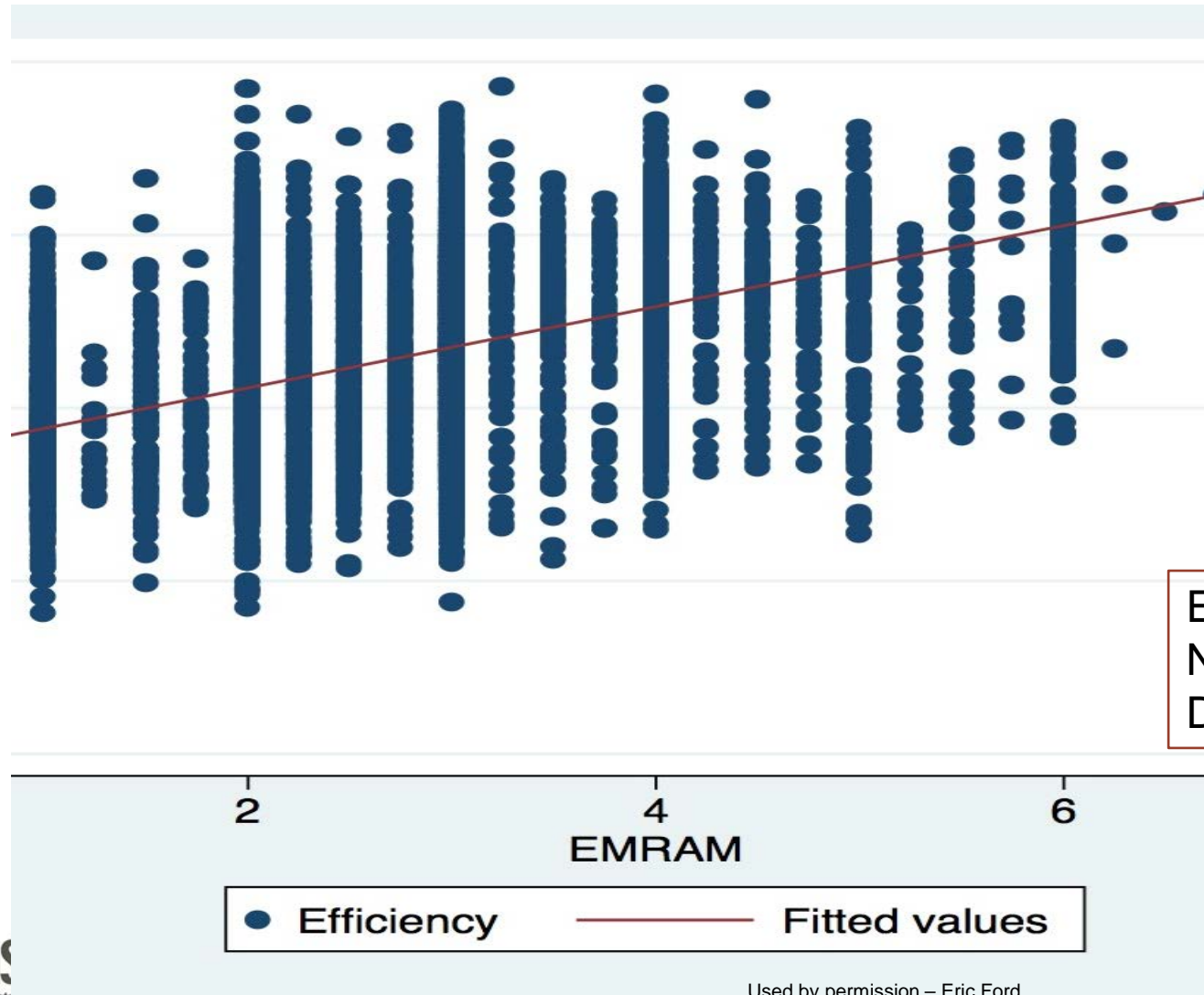
Joint Commission Top Performing Hospitals per EMRAM Stage



US Hospitals with an "A" Leapfrog Hospital Safety Grade by EMRAM Stage



Hospital Cost Efficiencies BY EMRAM Stage



Early **DRAFT**
Not for
Distribution

Transformational Factor: IT as a Strategic Asset

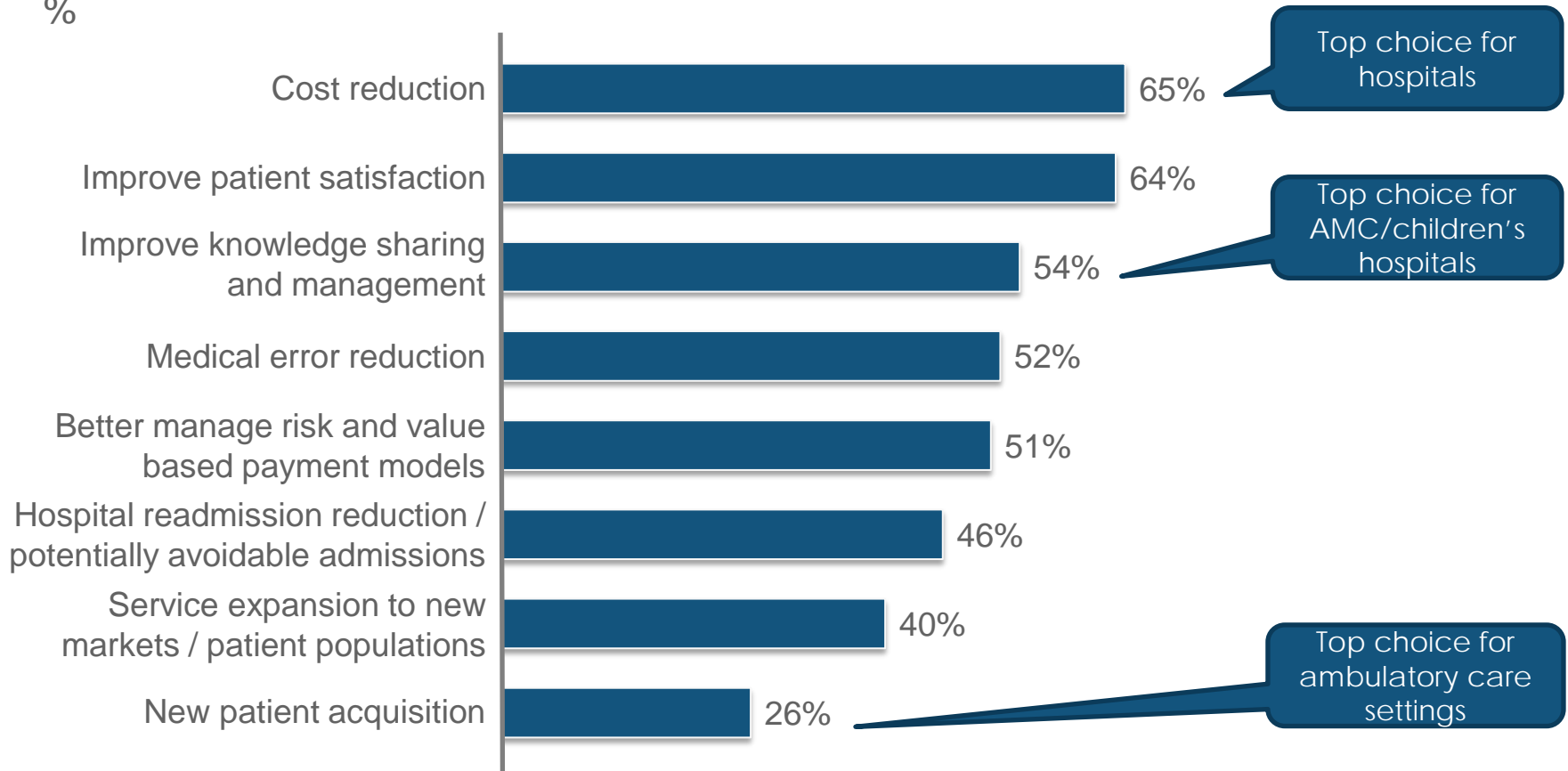
Strategic Relationships

- Health Authorities face challenges of limited resources, need to improve quality, and ensure access
- Strategic outcomes must be aligned with IT investments just as with other strategic investments (facilities, people, medical technology)
- Decide what you want to accomplish and what will get you there

Providers' innovation initiatives span multiple areas with cost reduction most important

Providers' primary innovation initiatives

%



Q10: What are the primary issues your organization is trying to solve through innovation initiatives? N=92 responses; (select all that apply)

REALIZING THE VALUE OF HEALTH IT

Health IT creates **five kinds of value** of benefit to patients, healthcare providers and communities.

Small primary care practice (<10 physicians)

Large primary care practice (>10 physicians)

Community hospital/health org

Healthcare system

S

SATISFACTION

118%
INCREASE IN PATIENT SATISFACTION
—Unity Health Care, Inc., 2012

90%
INCREASE IN STAFF RETENTION
—Hudson River Healthcare, Inc., 2011

T

TREATMENT/CLINICAL

52%
DECREASE IN 30-DAY READMISSION RATE
—Mount Sinai Medical Center, 2012

20%
INCREASE IN PHYSICIAN TIME SPENT WITH EACH PATIENT PER VISIT
—Jeremy Bradley, MD, FAAAP 2012

E

ELECTRONIC INFORMATION/DATA

\$500,000
ANNUAL DECREASE IN CLAIM DENIALS
—Sentara Health Care, 2012

P

PREVENTION/PATIENT EDUCATION

96%
COMPLIANCE RATE FOR PATIENT AND MEDICATION SCANS
—Sentara Health Care, 2012

191%
INCREASE IN IMMUNIZATIONS
—James Hoslinger, MD

150%
INCREASE IN PATIENTS MEETING DIABETES MANAGEMENT METRICS
—Hawaii Pacific Health, 2012

S

SAVINGS

\$9.7 MILLION
SAVINGS DUE TO ELIMINATION OF TRANSCRIPTION SERVICES
—Hawaii Pacific Health, 2012

\$3.1 MILLION
REDUCED LENGTH OF PATIENT STAYS
—Sentara Health Care, 2012

ROI TOTTALLING \$17.7 MILLION
—Coastal Medical Group, 2012

Transformational Factor: Changes in Care Trends

Focus on Patient not Episode

- Better care outcomes at lower consumption of resources
- Break down silos across care providers to achieve:
 - A dynamic interconnected community wide patient record supporting:
 - Health Information Exchange
 - Coordinated patient care
 - Patient engagement
 - Advanced analytics
- HIMSS has developed global model to provide comparative framework, gap analysis, and directional guidance

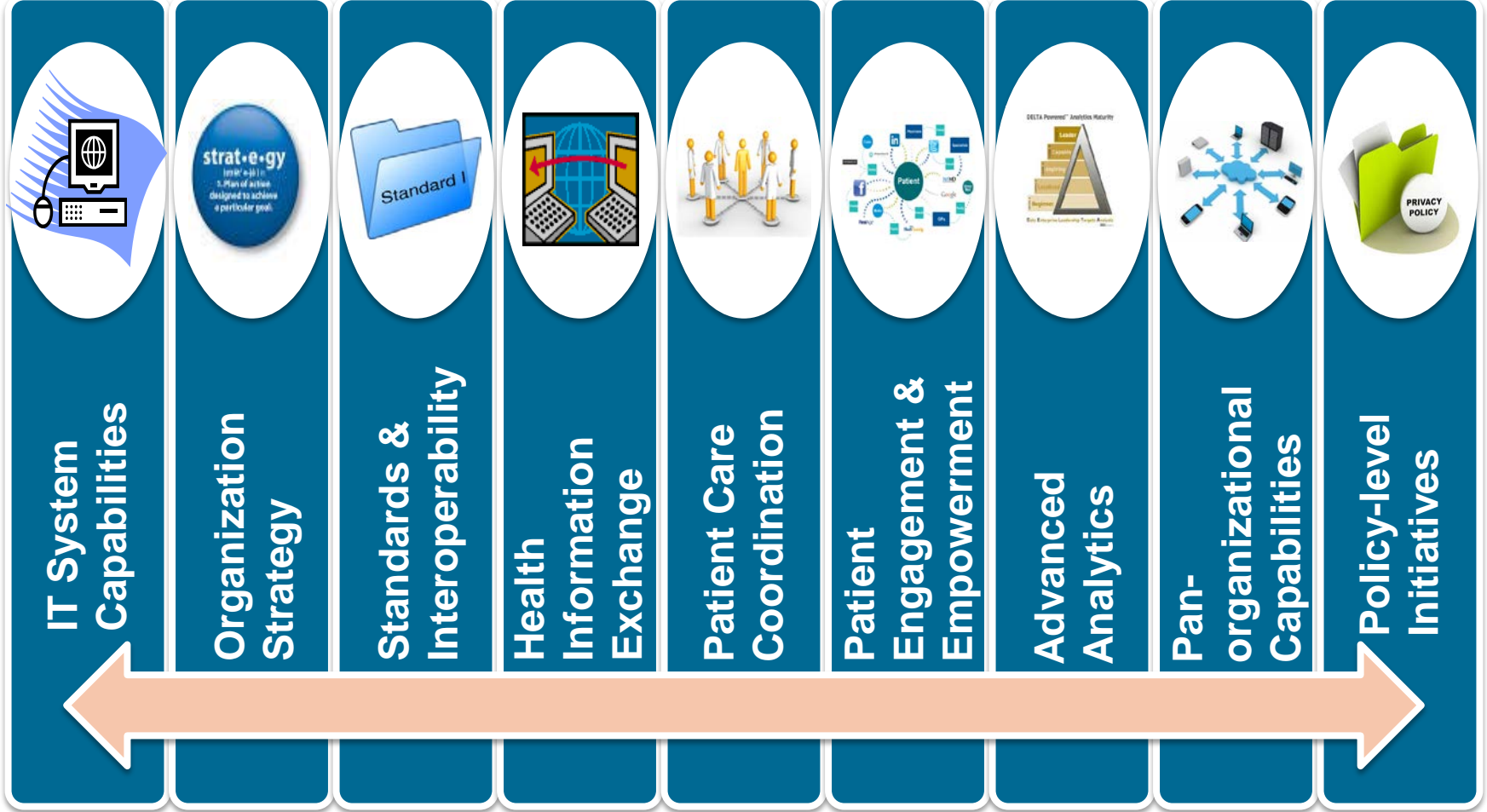
Model Methodology

- Collaboration across HIMSS Analytics' global team
- Follows existing HIMSS Analytics EMRAMSM methodology
 - Consists of 8 stages (0 – 7)
 - Set of required capabilities at each stage
- Model development included provider and vendor feedback
 - Pan-European and US review participants
 - Pan-European workgroup included reviewers from NL, ES and Nordic countries comprising representatives from regional and national health authorities, strategic planning organizations, CIOs of groups or regions, industry and HIMSS consultants
 - 3 rounds of external reviews combined with internal feedback resulted in development of questionnaire and algorithm

Model Audiences

- Global applicability
- Primary Target Audiences:
 - Regional & National Health Authorities/ MoH
 - Integrated Delivery Networks (IDN)
 - Health Management Organizations (HMOs) / Accountable Care Organizations (ACOs)
 - (Private) care chains

Model Scope



Model Review

himss Analytics[®] Continuity of Care Maturity Model

| | |
|----------------|--|
| STAGE 7 | Knowledge Driven Engagement for a Dynamic, Multi-vendor, Multi-organizational Interconnected Healthcare Delivery Model |
| STAGE 6 | Closed Loop Care Coordination Across Care Team Members |
| STAGE 5 | Community Wide Patient Record using Applied Information with Patient Engagement Focus |
| STAGE 4 | Care Coordination based on Actionable Data using a Semantic Interoperable Patient Record |
| STAGE 3 | Normalized Patient Record using Structural Interoperability |
| STAGE 2 | Patient Centered Clinical Data using Basic System-to-System Exchange |
| STAGE 1 | Basic Peer-to-Peer Data Exchange |
| STAGE 0 | Limited to No E-communication |

Different Stage Expectations

- Basic Health Information Exchange Focus
 - Stage 0 – Data Capture, Very Limited Data Exchange
 - Essentially no electronic exchange
 - Stage 1 – Basic Peer to Peer Data Exchange
 - View only portals, push pull on demand
 - Stage 2 – Basic System to System Exchange
 - Both structured and unstructured data
 - Patient access to administrative functions and education content
- Care Coordination
 - Stage 3 – Normalized Patient Record
 - Normalized data, agreed upon formats, de-duplication
 - Composite patient record taking shape, orders, results of participants
 - Stage 4 – Actionable Data
 - Standardized data, semantic interoperability
 - Event based actions fire across the multi-provider care team

Different Stage Expectations

- Patient Engagement
 - Stage 5 – Applied Information
 - Bi-directional real time or near real time data
 - Solid communal governance processes
 - Risk stratification begins
 - Patient & Consumer submitted data
- Advanced Analytics
 - Stage 6 – Closed Loop Care Coordination
 - Community wide record including paraclinical care team
 - Cross vendor, cross provider workflows & predictive alerting
 - Non sharing due to competition is out of the question
 - Stage 7 – Knowledge Driven Engagement
 - All provider types
 - Completely coordinated, including health maintenance and wellness
 - Patient control of PHR

Summary Considerations

- The Journey of Health Transformation
 - Few have it figured out as care changes unfold more rapidly than health care responds
 - You have to know where you are to know where you need to go (Assess → Plan → Act)
 - Government plays a critical role; issues bigger than a single setting
 - IT is a strategic assets just like facilities, medical staff, financial resources; use it that way

Thank You.

STEVE LIEBER
(SLIEBER@HIMSS.ORG)