The Role of Analytics in Supporting Meaningful Use in the Era of ICD-10

Richard Nelli

SVP & CTO Streamline Health

Analytics has become critical to all industries; healthcare is no different

Analytics in Health Care is Not New

More Reports | 1 filter [reset] | Save Report

Denial Adjustments Analysis

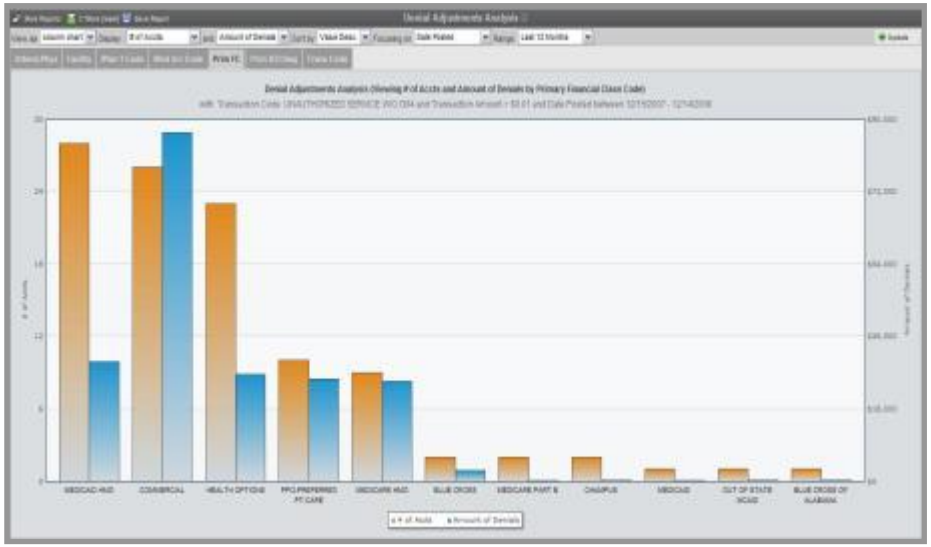
View as: spreadsheet

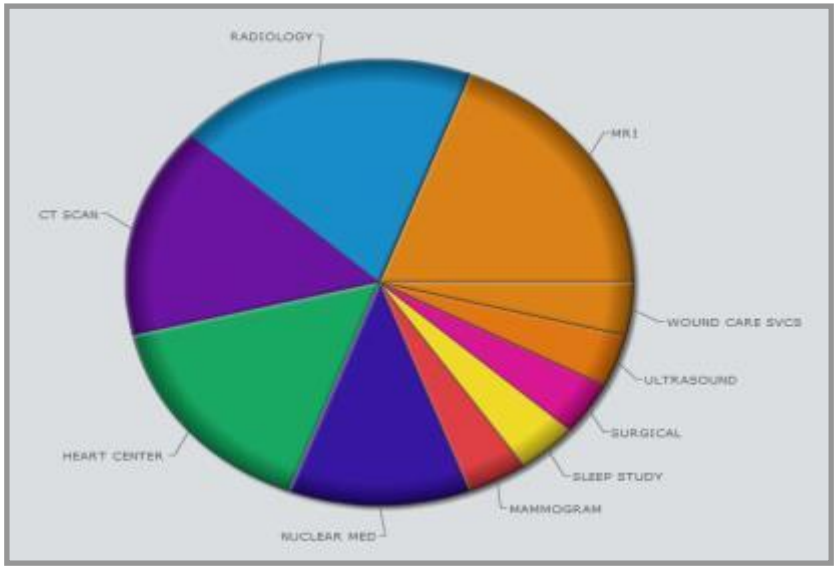
Focusing on: Date Posted | Range: Last 12 Months

with Transaction Amount > $0.01 and Date Posted between 12/15/2007 - 12/14/2008

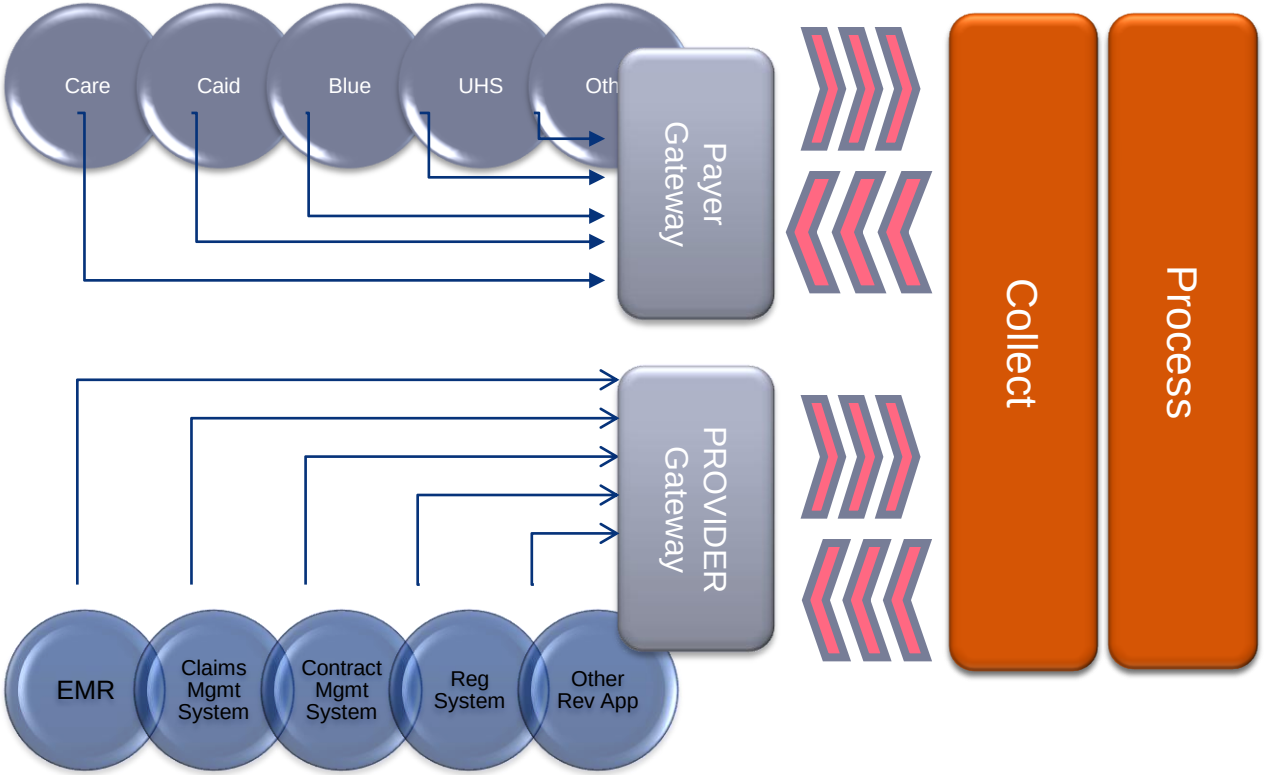
Attend.Phys | Facility | Plan 1 Code | Med Srv Code | Prim FC | Prim ICD Diag | Trans Code

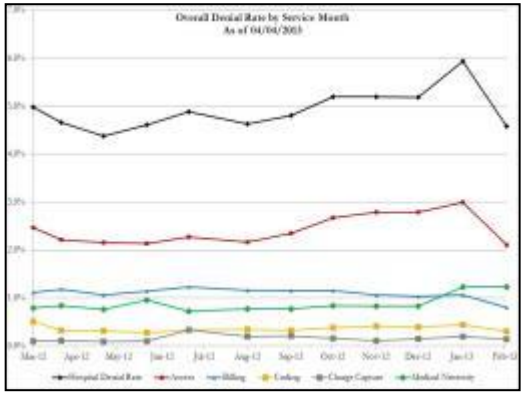
Transaction Code	# of Accts	# of Denial Trxns	Amount of Denials	% of # Denied	% of $ Denied
MCARE N/C MED NECESS LAB	1,213	1,238	$153.1K	66.2%	19.7%
MCARE N/C MED NECES OTHER DIAG	136	140	$99.9K	7.5%	12.9%
MCARE N/C MED NECESS CARDIOVT	108	107	$54.1K	5.7%	7.0%
UNAUTHORIZED SERVICE W/O B/I4	105	109	$197.1K	5.8%	25.4%
BC AL NON-COVERED ADJ	54	55	$5.0K	2.9%	0.7%
MEDICAID NON-COVERED ADJ	34	46	$25.4K	2.5%	3.3%
MEDICAID PAST FILING LIMIT	27	27	$76.6K	1.4%	9.9%
COMMERCIAL PAST FILING A1/A2	24	24	$23.0K	1.3%	3.0%
MEDICARE PAST FILING A1/A2	20	20	$13.0K	1.1%	1.7%
IP MEDICAL NECESSITY ADJ B/I4	20	24	$82.3K	1.3%	10.6%
ADM ADJ-PRE-CERT W-OFF B/I4	18	18	$7.9K	1.0%	1.0%
MCARE N/C MED NECESS RADIOLOGY	15	16	$14.6K	0.9%	1.9%
MEDICARE NON-COVERED ADJ	14	14	$1.3K	0.7%	0.2%
BC PPC PAST FILING	11	11	$11.2K	0.6%	1.4%
COMMERCIAL N/C W/O	10	10	$5.2K	0.5%	0.7%
UNITED HLTH PAST FILING A1/A2	5	5	$3.7K	0.3%	0.5%
BC OF FL PAST FILING A1/A2	3	3	$887.5	0.2%	0.1%
TRICARE N/C W/O	2	2	$345.2	0.1%	0.0%





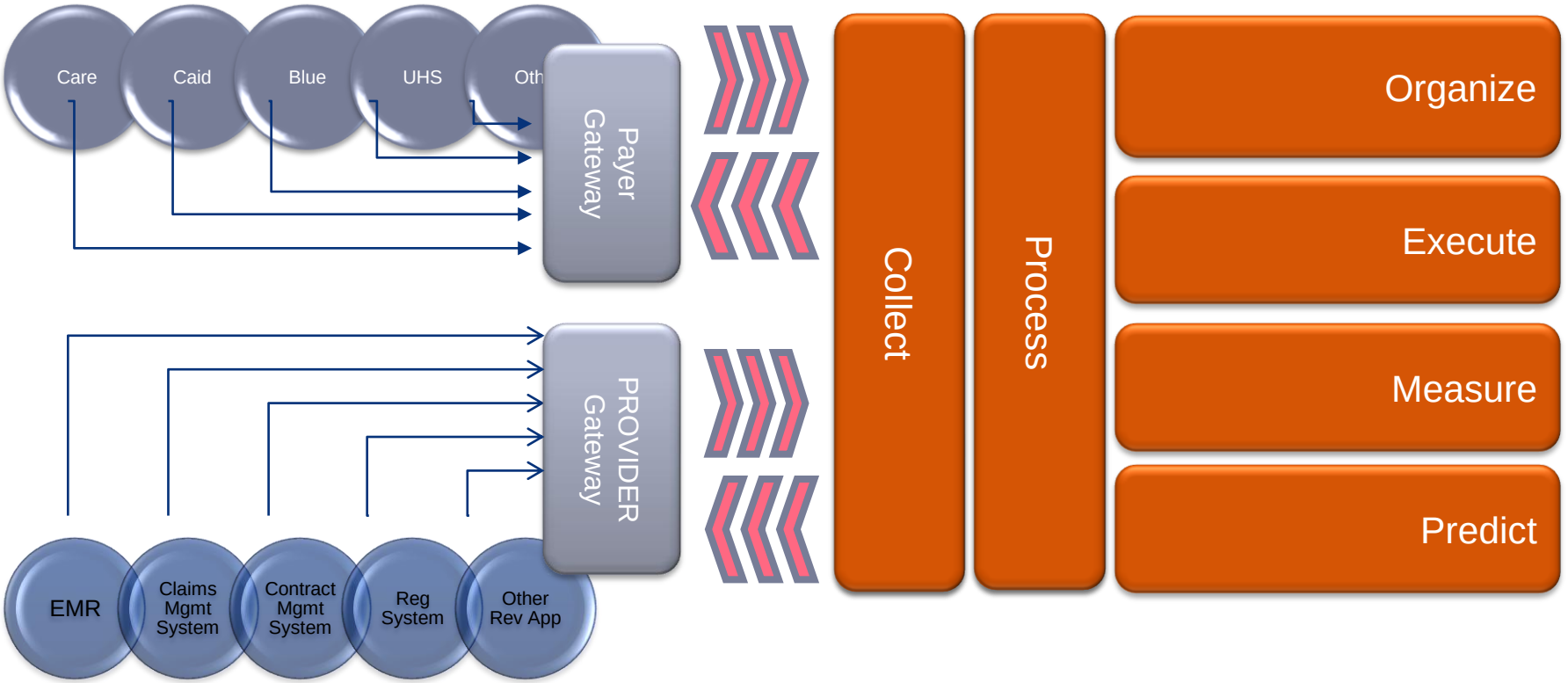
Analytics in Health Care is Not New





Major Changes in Reimbursement Models:
Next Generation Analytics go from "Nice-to-Have" to "Must Have"

New Generation "Advanced Analytics"



Growing Analytics Market

- Advanced Health Analytics penetration will increase from 10% in 2011 to 50% in 2016, a 37.9% growth rate (Frost & Sullivan)
- 55% of providers planning to buy Business Intelligence (BI) tools over next 3 Years (KLAS)
- If U.S. Healthcare System used Big Data efficiently, could create $300B of annual value (McKinsey)
- As of September 2012, there are 302 ACOs in 46 states. Estimated that each ACO will spend $1-4M in IT start-up costs ($500M) (Black Book Rankings)
- Only 15% of providers in the InformationWeek HCIT priority survey have implemented big data analytics initiatives (InformationWeek)

Motivation for Needing Meaningful Use of EHRs

Environmental Factors Leading to MU:

- Claims data was not getting it done…
- Reduction of waste was not happening fast enough
- Provider to provider variance proved to be much greater than anyone thought
- Payers saw that reducing provider variance brought huge returns
- Patient safety was not improving with manual methods
- Duplicate therapy and compliance are not easily tracked with exchange of real time data
- Adoption and effective use of analytics is not possible without data
- Consumer satisfaction with information continuity was low

In The End It Is About Fundamental Change

Care Collaboration Tools

Population Health / Disease Management Tools

Care Management

Patient Centric Accountable Care
Clinical Integration
Care Coordination
MU Stage 2 - 3

Health Information Exchange

BI / Analytics

MU S2 – EP Core Objectives

Core Objective	Measure
1. CPOE	Use CPOE for more than **60%** of medication, **30%** of laboratory, and **30%** of radiology
2. E-Rx	E-Rx for more than **50%**
3. Demographics	Record demographics for **more than 80%**
4. Vital Signs	Record vital signs for **more than 80%**
5. Smoking Status	Record smoking status for **more than 80%**
6. Interventions	Implement **5** clinical decision support interventions + drug/drug and drug/allergy
7. Labs	Incorporate lab results for **more than 55%**
8. Patient List	Generate patient list **by specific condition**
9. Preventive Reminders	Use EHR to identify and provide reminders for preventive/follow-up care for **more than 10%** of patients with two or more office visits in the last 2 years

MU S2 – EP Core Objectives

Core Objective	Measure
10. Patient Access	Provide online access to health information for **more than 50%** with **more than 5%** actually accessing
11. Visit Summaries	Provide office visit summaries for **more than 50%** of office visits
12. Education Resources	Use EHR to identify and provide education resources **more than 10%**
13. Secure Messages	**More than 5%** of patients send secure messages to their EP
14. Rx Reconciliation	Medication reconciliation at **more than 50%** of transitions of care
15. Summary of Care	Provide summary of care document for **more than 50%** of transitions of care and referrals **with 10% sent electronically** and **at least one sent to a recipient with a different EHR vendor or successfully testing with CMS test EHR**
16. Immunizations	Successful ongoing transmission of immunization data
17. Security Analysis	Conduct or review security analysis and incorporate in risk management process

MU S2 – EP Menu Objectives

Menu Objective	Measure
1. Imaging Results	More than **10%** of imaging results are accessible through Certified EHR Technology
2. Family History	Record family health history for more than **20%**
3. Syndromic Surveillance	Successful ongoing transmission of syndromic surveillance data
4. Cancer	Successful ongoing transmission of cancer case information
5. Specialized Registry	Successful ongoing transmission of data to a specialized registry
6. Progress Notes	Enter an electronic progress note for **more than 30%** of unique patients

MU S2 – Hospital Core Objectives

Core Objective	Measure
1. CPOE	Use CPOE for **more than 60%** of medication, **30%** of laboratory, and **30%** of radiology
2. Demographics	Record demographics for **more than 80%**
3. Vital Signs	Record vital signs for **more than 80%**
4. Smoking Status	Record smoking status for **more than 80%**
5. Interventions	Implement **5** clinical decision support interventions + drug/drug and drug/allergy
6. Labs	Incorporate lab results for **more than 55%**
7. Patient List	Generate patient list by specific condition
8. eMAR	eMAR is implemented and used for more than **10%** of medication orders

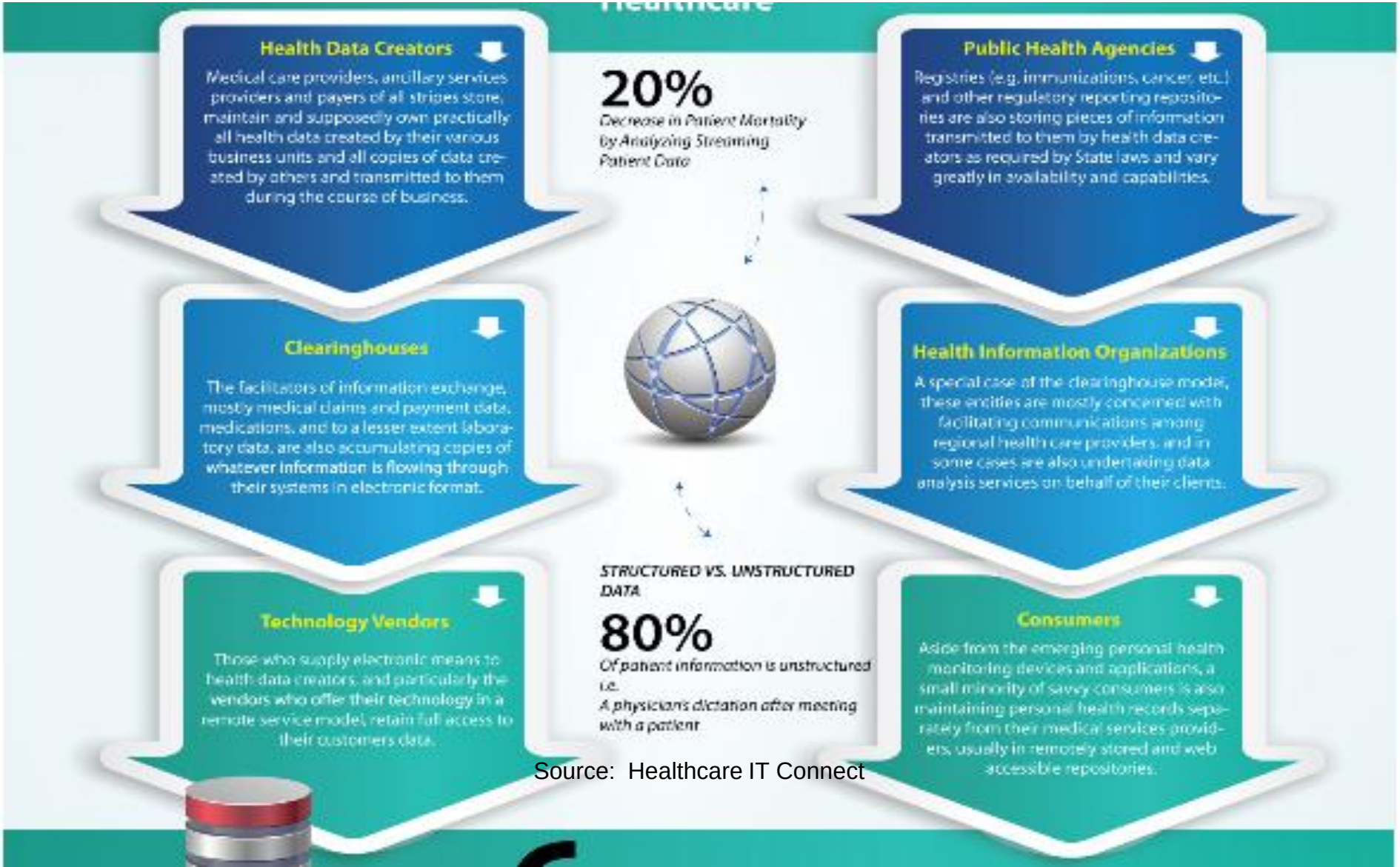
MU S2 – Hospital Core Objectives

Core Objective	Measure
9. Patient Access	Provide online access to health information for more than **50%** with more than **5%** actually accessing
10. Education Resources	Use EHR to identify and provide education resources more than **10%**
11. Rx Reconciliation	Medication reconciliation at more than **50%** of transitions of care
12. Summary of Care	Provide summary of care document for **more than 50%** of transitions of care and referrals **with 10% sent electronically** and **at least one sent to a recipient with a different EHR vendor or successfully testing with CMS test EHR**
13. Immunizations	Successful ongoing transmission of immunization data
14. Labs	Successful ongoing submission of reportable laboratory results
15. Syndromic Surveillance	Successful ongoing submission of electronic syndromic surveillance data
16. Security Analysis	Conduct or review security analysis and incorporate in risk management process

MU S2 – Hospital Menu Objectives

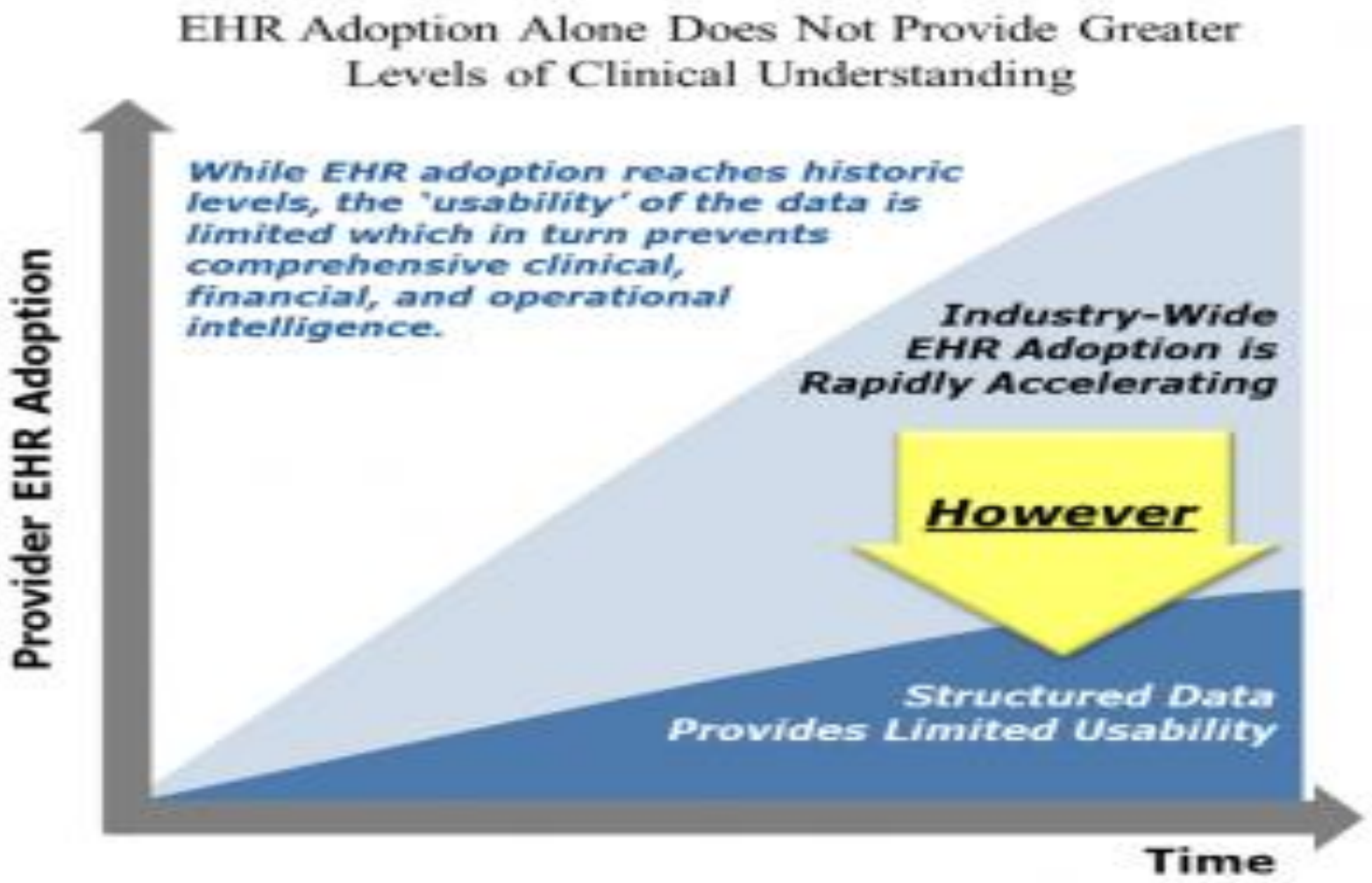
Menu Objective	Measure
1. Progress Notes	Enter an electronic progress note for **more than 30%** of unique patients
2. E-Rx	**More than 10%** electronic prescribing (eRx) of discharge medication orders
3. Imaging Results	**More than 10%** of imaging results are accessible through Certified EHR Technology
4. Family History	Record family health history for **more than 20%**
5. Advanced Directives	Record advanced directives for **more than 50%** of patients 65 years or older
6. Labs	Provide structured electronic lab results to EPs for **more than 20%**

Understanding How Big Data Flows in Healthcare



Source: Healthcare IT Connect

…but what do we do with all this data ?



Source: Triple Tree research note, February 2012

…Must Turn it into Actionable Knowledge

Market Dynamics

ICD-10 Conversion

Meaningful Use Stage 2

Big Data generated through HIT Investment

At-Risk Reimbursement Models

E H R Adoption

Accountable Care

Natural language Processing

Mobile Devices

Business Implications

Ability to combine clinical, financial and administrative data becomes imperative for analytics solutions

Provider uncertainty of what the post ICD-10 world looks like

Desire to extract unstructured data from patient chart (EHR) and Clinical Narrative (NLP) to drive clinical analysis

Pressure mounts for providers to invest in CAC/CDI solutions in advance of ICD-10 conversion

Predictive analytics increase in importance to drive quality

Downward reimbursement pressure brings a renewed focus on cost control to providers

Rising patient liability and payer scrutiny increases the important of bad debt and denial management

Glossary of key terms in the appendix

Analytics Spectrum

Data Set Expansion

The HCIT Market possess a number of “Analytics” solutions

These solutions are largely financial in nature driven by KPIs that generally support the business decisions of the hospital

The first step toward Clinical Analytics would involve an expansion of the existing data sets, enabling certain KPIs around Diagnosis, Procedures, and other codified clinical markers

Consumer Enablement

Some in the HC industry envision Consumer Enablement within the business scope of clinical analytics

This would involve leveraging the back end analytics to enable the enterprise to engage their patients (as consumers) in an advanced “intelligent” manner

- Drive Market Share
- Prevent Referral Leakage
- Price / Cost Transparency
- Retain Capabilities

Visibility

As one gets broader across the Clinical Analytics Spectrum, actual engagement of the clinical staff becomes paramount

In this scenario, historical data is analyzed in order to provide added visibility into a certain clinical scenarios

Ex: Diabetic males, over the age of 50, undergoing full knee replacement for the 2nd time, on prior surgical site…”when managed clinically this way”…outcomes were x,y,z)

Critical ACO Enabler to change clinician behavior

Workflow

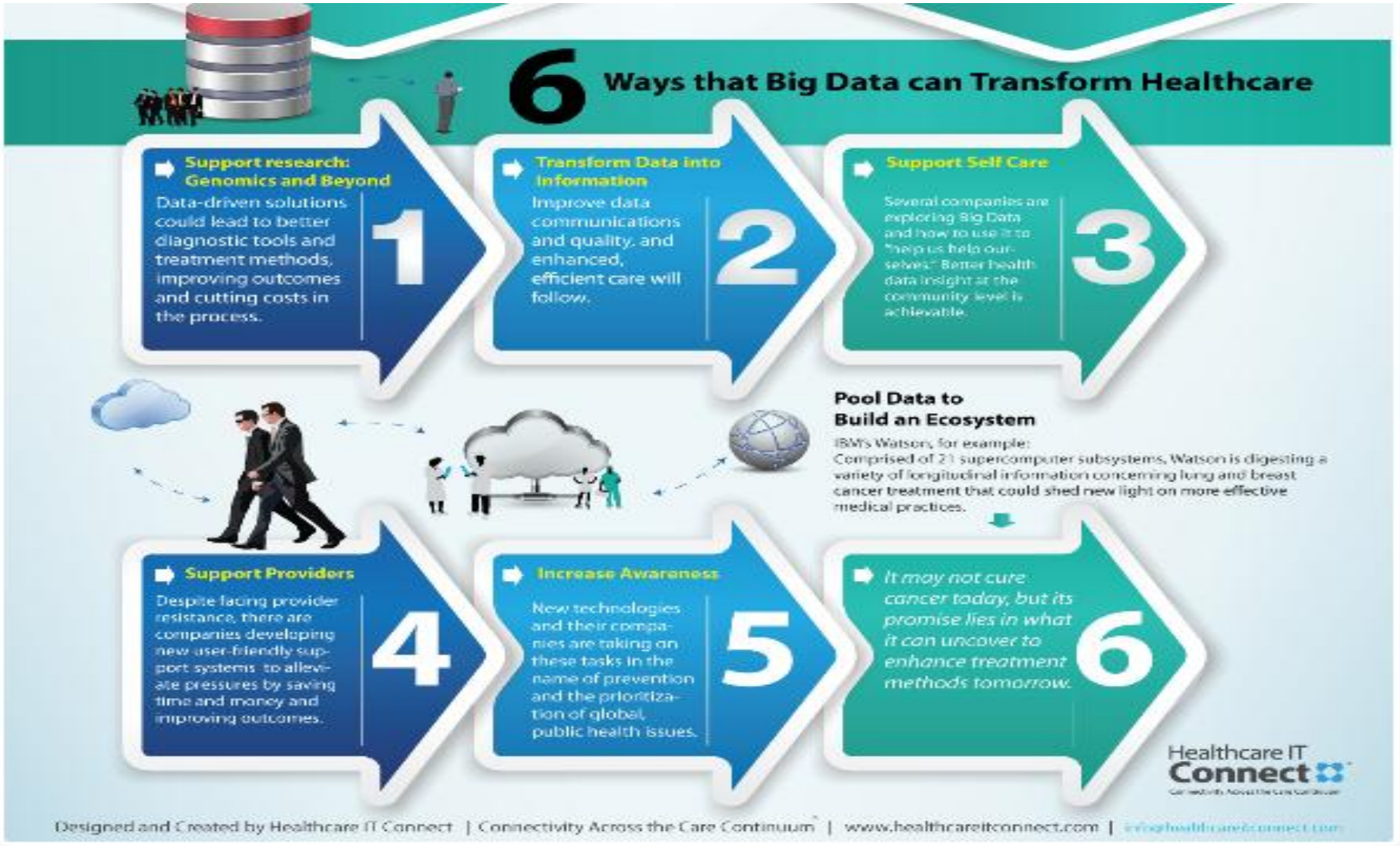
Goes beyond visibility to actual driving the actual clinician workflow.

Within a clinical process (Ex: Ordering) the historical data and clinical markers are leveraged in order to suggest clinician practice.

Requires deep clinical expertise and peer to peer engagement

Understanding How Big Data Flows in Healthcare

Source: Healthcare IT Connect



Created by Healthcare IT Connect

Summary

Meaningful use is not so much about getting stimulus payments in exchange for using an EMR…but setting the stage and changing behavior for value based purchasing and health care reform…it is all about the data and the information that is needed and will be used to improve healthcare.

Questions

Richard Nelli
SVP & CTO Streamline Health
Richard.Nelli@Streamlinehealth.net