

## Advisor Live Executive Summary from June 30, 2010 program:

### *Healthcare Reform and the Impact of Electronic Health Records*

#### Speakers:

- **Bill Spooner**, senior vice president and CIO, Sharp HealthCare, *2010 CHIME-HIMSS "CIO of the Year"*
- **Eugene Kroch, Ph.D.**, vice president and chief scientist, Premier
- **Linda Rouse**, director of federal affairs, Premier

#### Summary of presentations:

##### Linda Rouse, director of federal affairs, Premier

###### What is ARRA?

- Also known as the "economic stimulus package"
- Signed into law by President Obama on February 17, 2009

###### What is HITECH?

- A portion of ARRA referred to as the Health Information Technology for Economic and Clinical Health (HITECH) Act
  - TITLE XIII—Health Information Technology
  - TITLE IV—Medicare and Medicaid Health Information Technology
- Contains numerous provisions related to Health Information Technology (HIT) and privacy with aggressive timelines for completion

###### \$38 billion to incentivize HIT in the stimulus package:

- Codifies and empowers HHS's Office of the National Coordinator for Health Information Technology (ONCHIT)
- Initial standards by the end of 2009
- \$2 B for low-interest guaranteed loans, state grants and integration of HIT into clinical education
- \$36 B (\$21B after projected savings & provider penalties) in direct spending to providers to incentivize HIT
  - Projected to save the government \$15 billion through quality improvement, care coordination and reduction of medical errors, in addition to provider penalties for non-adoption of HIT
- Requires "Meaningful user" of certified EHRs:  
Using "*certified EHR technology*" "*in a meaningful manner*" that is "*connected ...for electronic exchange of health information*" in the "*EHR Reporting Period*" applicable to the year for which the HIT incentive payment is made
- **Hospitals** - \$2 million base amount & potential for \$MMs more depending on inpatient discharges, Medicare share and charity care (\$11.6 million maximum)
  - 4 years of Medicare and Medicaid HIT incentive payments available for PPS hospitals that qualify as "meaningful EHR user"

- FY 2011 earliest payment year, with hospitals qualifying as meaningful EHR users after FY 2013 receiving reduced HIT incentive payments; Penalty (reduction in market-basket update) for non-qualifying hospitals starting in 2015
- **Physicians** – Maximum of \$44,000 in Medicare incentives and up to \$63,750 with Medicaid incentives over 5 years (10% more for physicians practicing in a HSPA)
  - 2011 earliest payment year, with phased-out payments through 2015; Penalties afterwards for non adopters face phased-in cut to SGR
  - “Hospital-based professionals” ineligible
- Federally qualified health centers, rural health clinics, children’s hospitals and others will be eligible for funding through the Medicaid program.

Eight technology priority areas for HIT in ARRA:

1. Privacy and security (the privacy debate that began with HIPAA has come back)
2. HIT Infrastructure
3. Certified health record
4. Disclosure audit
5. Improve quality
6. Individually Identifiable Health Information (IIHI) unusable
7. Demographic data
8. Needs of vulnerable (how can IT assist in reducing disparities?)

## Meaningful use

- 60 day comment period, starting 1/13/10
- Establishes Meaningful Use criteria only for 2011-12 (Stage 1)
- MU criteria generally are consistent with the HIT Policy Committee’s MU Matrix (but slightly more lenient)
- Two types of MU criteria:
  - HIT functionality measures; and
  - Clinical quality measures

For a provider’s *first* qualification year, compliance with MU criteria is only required for any 90 consecutive days

Most Stage 1 HIT functionality requirements do not require electronic exchange of information with other parties

EHRs must provide Stage 1 HIT functionality to be certified

For 2011, electronic reporting to CMS is not required (but electronic data capture and results calculation on quality measures is required)

## Meaningful use

“Hospital-based eligible professional” - defined broadly to include any EP whose services in a Payment Year are coded at least 90% of the time with a hospital place of service code (i.e., 21, 22 or 23)

Multi-campus hospitals - multiple inpatient facilities operating under one Medicare provider number will receive only one \$2M base payment per year

Reassignment of EHR incentives - An EP must execute a new reassignment agreement, unless the EP’s existing reassignment agreement is broad enough to cover EHR incentives

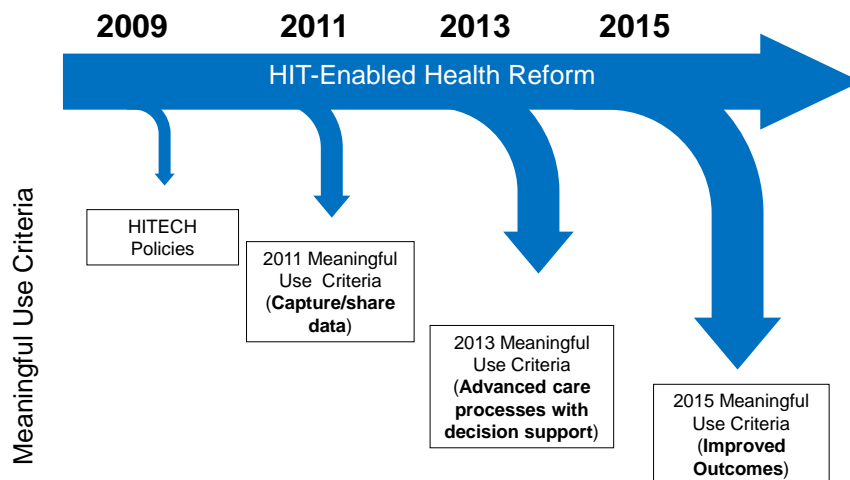
EPs in group practices - No alternative means for a group practice to satisfy the MU criteria, and receive direct payment of EHR incentives for the group’s EPs

State-specific MU criteria - CMS will consider proposals by a State to modify MU criteria for Medicaid EHR incentives to the State’s eligible providers

Future changes to quality measures - Clinical quality measures for subsequent Stages will be implemented by CMS without notice and comment rulemaking

## HIT-Enabled Health Reform

### Achieving Meaningful Use



## Proposed Quality Measure Requirements

- To demonstrate MU compliance hospitals will be required to submit quality measures
  - Phased approach for Quality measure submission requirements
  - Proposed 35 measures in Appendix
- 2011 attest that data and measures collected by EHR for 90 consecutive days in Fed FY2011
- 2012 begin actual data submission of numerator, denominator and excluded cases per measure
  - Data has to be collected for the entire year
- No duplicative reporting
  - Measure submitted for MU and also required for RHQDAPU will satisfy APU requirement

## Differences between RHQDAPU and MU

### RHQDAPU

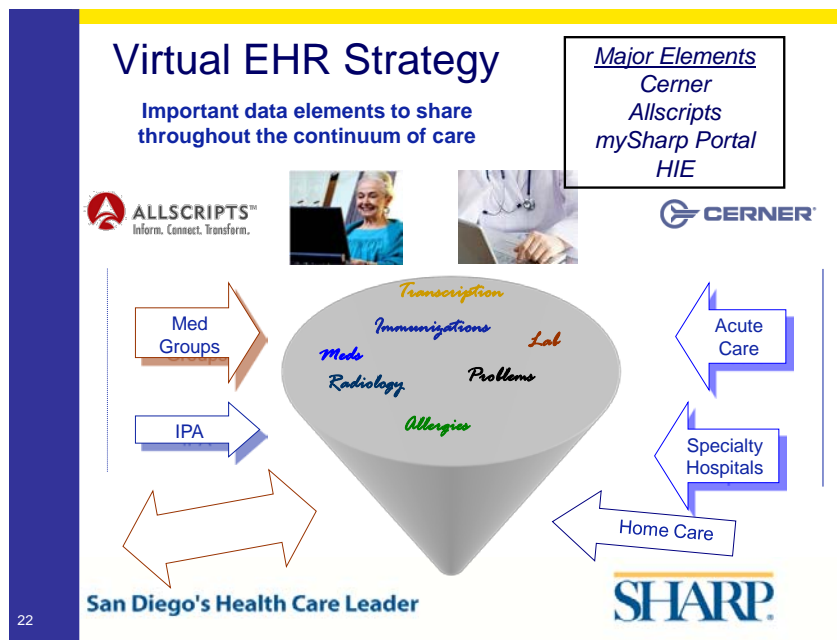
- Some possible electronic data feeds
- Manual abstraction
- Current definitions (that we know cannot be 100% calculated with electronic data)

### Meaningful Use

- All data electronically captured in EHR
- No manual abstraction
- New measure definitions (that can be calculated with available data)

**Bill Spooner, senior vice president and CIO, Sharp HealthCare**

In California, we do not employ any physicians except for administrative purposes. Therefore, EHR adoption has to be through motivation.



**EHR Implementation lessons:**

- Enterprise View
- Executive sponsorship
- Physician leadership
- Structured implementation methodology
- Best and brightest as team members
- Workflow
- Training and support
- Nursing informatics (We have a system-wide leader.)
- Culture vs. Strategy

**Meaningful Use readiness:**

- Certified EHR
  - Cerner and Allscripts upgrades to certified releases
  - Site certification for portal and data warehouse?
  - Eligibility and claims submission TBD
- CPOE
  - Hospitals > 80%
  - Medical Group >70%
- Workflow changes for new indicators?
- Quality indicators

- Health Information Exchange
  - Enterprise/community mix – Beacon grant
- Independent physician education

#### Premier HIT Collaborative:

- Advocacy
  - Comment letters
  - ONC visit
- Education
  - Collaborative Community web site
  - Webcasts
  - Newsletters
- Best Practices Library
  - Next: IT for Health Reform

#### **Eugene Kroch, Ph.D., vice president and chief scientist, Premier**

Joint project on HIT and Performance with Premier and HIMSS Analytics™:

- Purpose: to examine the relationship between HIT adoption and indicators of hospital quality & efficiency
  - Data: About 500 Premier hospitals merged with the HIMSS EMRAM survey data
  - Time Frame: Spans the 3½-year time period from mid- 2006 though the end of 2009
- HIMSS Analytics EMR Adoption Model<sup>SM</sup> (EMRAM):
- HIMSS Analytics EMR Adoption Model (EMRAM) identifies the levels of EMR capabilities from limited ancillary department systems to paperless EMR environment
  - Created to provide peer comparisons for hospital organizations
  - Applied to over 5,000 hospitals in the U.S.
  - Survey conducted once per year on a rolling basis; with continuous updates as discovered

## EMR Adoption Model<sup>SM</sup> 2008 - 2009

		2008 Final	2009 Final
Stage 7	Complete EMR; CCD transactions to share data; Data warehousing; Data continuity with ED, ambulatory, OP	0.3%	0.7%
Stage 6	Physician documentation (structured templates), full CDSS (variance & compliance), full R-PACS	0.5%	1.6%
Stage 5	Closed loop medication administration	2.5%	3.8%
Stage 4	CPOE, Clinical Decision Support (clinical protocols)	2.5%	7.4%
Stage 3	Nursing/clinical documentation (flow sheets), CDSS (error checking), PACS available outside Radiology	35.7%	50.9%
Stage 2	CDR, Controlled Medical Vocabulary, CDS, may have Document Imaging; HIE capable	31.4%	16.9%
Stage 1	Ancillaries – Lab, Rad, Pharmacy – All Installed	11.5%	7.2%
Stage 0	All Three Ancillaries Not Installed	15.6%	11.5%

Data from HIMSS Analytics™ Database  
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N = 5168/5235 ©2009 HIMSS Analytics

Stage 0 means no progress. Stage 7 is the highest level of progress. Most hospitals are at stage 3.

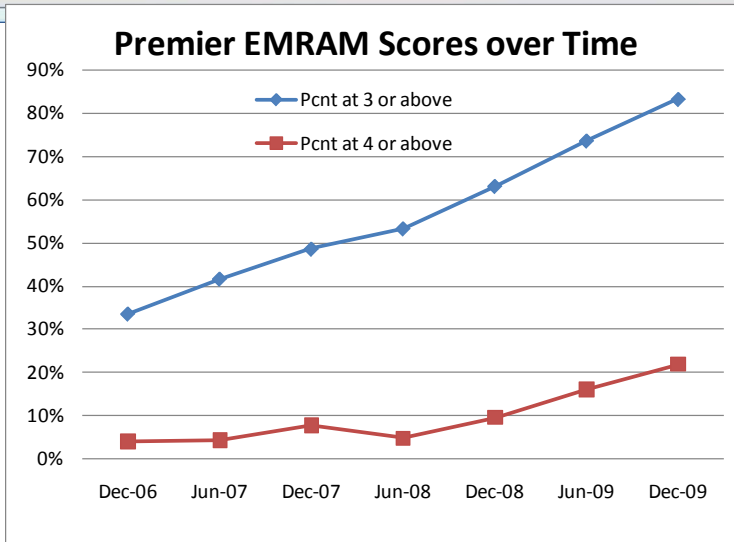
Premier risk-adjusted hospital performance measures:

- Mortality
- Morbidity
- Complications
- Length of Stay
- Cost
- Readmissions

Three analysis methods:

- Method 1: Static Correlation Analyses
  - Between EMRAM scores and hospital performance measures at each point and with time lags
- Method 2: Trend Correlation Analyses
  - Between estimated trend coefficients for each hospital performance measure and EMRAM score trend
- Method 3: Multivariate Analyses
  - Comprehensive models to relate variations in hospital performance (outcomes) to the EMRAM scores
  - Separately for each time period and pooled over the 7 time periods for each hospital outcome

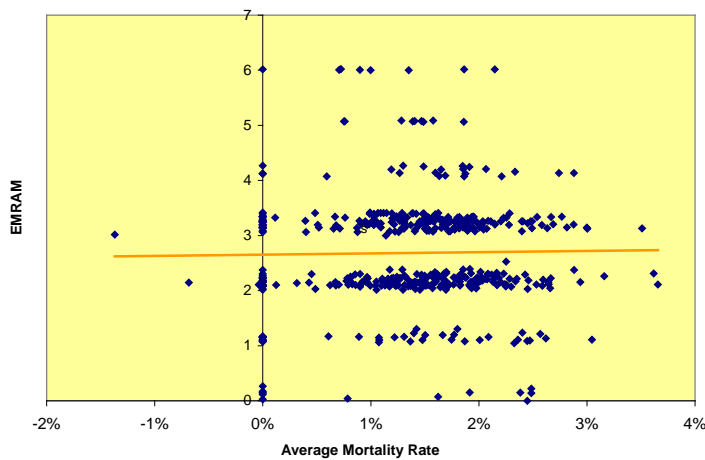
## EMRAM Scores Over Time



There has been substantial acceleration. Premier hospitals are ahead of the curve.

## Correlation – Lagged Lower Mortality

Mortality Rate in Time Period 5 and EMRAM in Time Period 3  
( $r = -0.09121$ ,  $p\text{-value} = 0.0588$ ,  $N = 430$ )



For mortality, there is a negative correlation, but it is just marginally significant. We can't easily conclude that hospitals with higher EMRAM scores (other things equal) experience lower mortality. The fruits won't be shown until more hospitals are at higher levels of meaningful use.

Method 3: Multivariate regression – Explanatory variables

1. EMRAM score
2. Facility bed size
3. Geographic region
4. Urban/rural status
5. Teaching status
6. Disproportionate share hospital (DSH)
7. Time period

## Regression Results

**show negative relationship between EMRAM scores and both readmissions and LOS**

	Dependent Mean	R-Sq	EMRAM Coefficient	P-Value (EMRAM)
Mortality (%)	1.8	0.25	-0.008	0.429
Morbidity (%)	10.2	0.46	-0.008	0.620
Complications (%)	41.2	0.25	0.119	0.012
<b>Readmissions (%)</b>	<b>5.5</b>	<b>0.24</b>	<b>-0.263</b>	<b>&lt;.0001</b>
<b>Length of Stay (days)</b>	<b>2.9</b>	<b>0.28</b>	<b>-0.019</b>	<b>0.0002</b>
Cost (dollars)	\$4,852	0.02	87.689	0.379

Conclusions:

Hospitals with higher EMRAM scores...

- Are associated with shorter patient stays (p<0.001).
- Are associated with fewer readmissions (p<0.001).

Hospital IT implementations should be further evaluated to better understand lags between implementation and performance.

**Resources:**

**Link to presentation and video recording:**

[www.premierinc.com/advisorlive](http://www.premierinc.com/advisorlive)

**Flash update (7/13/10):** [CMS releases final meaningful use regulation and final standard and certification rule](#)