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# EHR Association Recommendations for ARRA Meaningful User and EHR Certification Criteria for Eligible Professionals (Ambulatory)

## Meaningful EHR User – Eligible Professionals (Ambulatory)

ARRA incentives are available to health care professionals and hospitals that are "meaningful EHR users." *Meaningful user* has three components: (1) meaningful use of certified EHR technology, (2) information exchange, and (3) reporting on measures using an EHR. This document is the position of the HIMSS EHR Association (EHRA) on how these terms should be defined and implemented by the Secretary of Health and Human Services (HHS).

As an association, EHRA has been focused on advancing standards-based interoperability, standards-based quality measurement, clinical decision support, CPOE, and encouraging effective customer implementation of comprehensive EHRs. Based on this expertise and commitment, we stand ready to work with HHS and others to further develop and refine the definitions and implementation of *meaningful user*.

In implementing this provision, we urge the Secretary to be guided by the following goals:

- Improve the health and health care of Americans
- Improve the health delivery system and support health care reform
- Improve quality and patient safety and reduce costs
- Achieve a critical mass of clinicians and hospitals using interoperable, comprehensive EHRs
- Target high cost/high morbidity chronic disease
- Counter identified barriers to adoption
- Support collection of data to support biosurveillance and public health.

### *Overall Approach*

Beyond these broad goals, we urge the Secretary to operate from a few guiding principles, following closely the structure and priorities for *meaningful user* established in ARRA. The key objective of this provision should be to ensure that the clinician/hospital is actually using the EHR, especially for priority functions specified by ARRA.

To maximize adoption and ensure administrative simplicity, the number of criteria should be small in number, while consistent with the statute and overall goals. The criteria should be simple, and ease of reporting should be primary. Meaningful use criteria should be viewed as *indicators* of use of a comprehensive EHR; hence, there is no need for specific criteria for all or most EHR functions. Similarly, aspects of automation not directly related to EHR use, such as claims submission, should not be added to these criteria.

The primary initial goal should be to incentivize as much adoption and use as possible of comprehensive EHRs. It is also essential, therefore, to balance the need for accelerated adoption of interoperable, comprehensive EHRs with the need for clinicians and hospitals to implement these in a careful and non-disruptive fashion.

To this end, we urge that the Secretary set meaningful user criteria for the initial years, especially 2011 and 2012, at achievable levels, but with a roadmap for steady uplift over time in expected breadth and depth of use. Such uplift should be on a less than annual cycle, perhaps 24 months, to allow for predictability and effective provider adoption.

Certification criteria and product functionality should, however, anticipate and support projected increased levels of meaningful use. Thus, while we support an initially relatively simple approach to meaningful use, from the beginning providers should be encouraged to adopt EHRs that contain high levels of functionality.

In implementing the quality reporting provision, we urge HHS to build on applicable current programs in developing meaningful use criteria that can be created well before the end of 2009 and that can be adopted by providers using certified EHRs. At the same time we must learn from the successes and failures of previous programs and seek non-intrusive and low cost reporting options, such as using Medicare Part D data to track e-prescribing, using EHR data as the source for quality reporting, and using surveys and/or attestation in lieu of claim-based reporting for other dimensions of meaningful use.

Meaningful use criteria should support the movement toward standards-based interoperability. Interoperability from the beginning should only be measured using HITSP harmonized standards.

### *Specific Proposals*[1]

1. Meaningful Use: *Demonstrate to HHS that the provider is using certified EHR technology in a meaningful manner, including electronic prescribing.*
   Proposed criteria are:
   a. Using a certified, qualified EHR for encounter documentation in a way that supports quality reporting through the creation of structured data sufficient for such reporting
   b. Use of electronic prescribing
   c. Use of clinical decision support
   d. Sufficient discrete data capture to support interoperability

[1] Each heading paraphrases the ARRA provision

2. Information Exchange: *Certified EHR technology is connected in a manner that provides for electronic exchange of health information, in accordance with law and standards applicable to the exchange of information, to improve quality of health care such as promoting care coordination.* The overall requirement would be for connection for exchange of clinical summary data, using HITSP harmonized standards, with other clinicians, hospitals, patients, or other health care settings. We believe that professionals should be required to satisfy at least one of the following criteria to meet this provision in 2011, with increased requirements in out-years: exchange of patient summary data, directly or indirectly, with a hospital or other health care practice; exchange of patient summary data with a certified HIE; or import of standardized lab data.

3. Reporting of Measures: *Submit information to HHS on clinical quality measures and other measures (if HHS has capacity to accept electronically, which may be on a pilot basis).*

   Consistent with ARRA, the focus of this criterion should be primarily on a subset of existing NQF-endorsed measures that align with national quality and performance goals.

   Measures should be appropriate for the applicable specialty, with an initial approach that allows the professional some discretion in choosing which measures to report. The primary goal for the initial application of this criterion should be to establish a steady flow of performance measure reporting, with the goal of capturing data that is representative of the reporting period.

   There should be a priority for measures that support chronic disease management (Diabetes, Congestive Heart Failure, Hyperlipidemia, Hypertension) as well as measures applicable to the broad range of specialties and professions who will be reporting.

   For transport of quality measure information, we favor the use of HITSP standards as available or applicable. If some of the needed standards are still under development, with careful review, we could support the use of initial methods that are consistent with anticipated standards. We support allowing the submission of either patient-level data or population-level computed measures so long as the process for such computation is sufficiently specified and validated and the underlying data comes from the EHR. Finally, we support the submission of EHR quality data either directly from an EHR, a data registry or another intermediary.

## EHR Certification Criteria for Eligible Professionals (Ambulatory)

The HIMSS EHR Association proposes a progressive and feasible approach to ARRA Certification Criteria that will meet the goals of high EHR adoption and use, sophisticated levels of interoperability, enhanced quality of care, and reduction of overall health care system costs.

As ARRA Certification Criteria are finalized, key principles need to be considered. These principles are clarity, relevance to national goals, and sufficient lead time for development.

CCHIT 2008 certification criteria include comprehensive EHR functionality and should be the basis of functionality certification.

While much progress has been made on interoperability of EHRs in the last three years through the efforts of HITSP and CCHIT, there do remain significant areas where further progress is needed. Interoperability is recognized as a critical theme for additional 2010 certification criteria. Given the short timeframe, to be successful and to take advantage of existing ongoing product development investments, these criteria should be based on current HITSP standards and the CCHIT roadmap.

The result will be robust interoperability provided that HIE-to-EHR interfaces follow HITSP and IHE standards and are enforced at the HIE implementation level.

To support the quality reporting called for in the ARRA, finalization of standards and additional certification criteria will be needed.

Clinical decision support criteria, which are important to enhancing the quality of care and patient safety, should be added to, building on the existing robust clinical decision support in CCHIT 2008.

### ARRA Initial Ambulatory Certification Proposal

*Theme: CCHIT 2008 plus more interoperability, quality reporting and clinical decision support*

- CCHIT 2008 certification criteria
- CCHIT 2009 interoperability criteria
  - enhanced CCD export with structured meds, problems, allergies
  - document sharing with audit trail and encryption (XDS.b+ATNA+CT)
  - patient ID management (PIX and/or PDQ)
- Additional CCD: clinical reports/results (text with coded section titles)
- Lab document sharing (HITSP)
- Lab result message secured transport (HITSP)
- Immunization export to public health registries (HITSP/CDC standard)

- Quality reporting based on HITSP standards (when standardized quality reporting is available)
- Clinical decision support
  - drug dosage checking (CCHIT FN 08.03.02)

**ARRA Certification after 2010:**

- Extend CCD support by supporting additional sections, more terminology support
- Query immunizations from registries (HITSP/CDC standard)
- Biosurveillance using modified CCD
- Encounter quality support using modified CCD
- Additional quality reporting and registry support
- Additional clinical decision support criteria
- Support tracking of order completion
- Patient disclosure services to support the new rules on patient disclosure
- Additional audit and privacy services supported as required

**Certification cycles:**

We recommend that certification criteria be determined on a 24-month or longer cycle, so as to allow for vendor developmental cycles.

We recommend that ARRA certification be good for at least a two-year period to allow for customer deployment and update cycles. It may likely be necessary to make further adjustments to the duration of a certificate to accommodate situations where a large practice or Enterprise deploys an update late in the certification certificate lifespan.

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# EHR Association Recommendations for ARRA Meaningful User and EHR Certification Criteria for Hospitals

## Meaningful User for Hospitals

ARRA incentives are available to health care professionals and hospitals that are "meaningful EHR users." *Meaningful user* has three components: (1) meaningful use of certified EHR technology, (2) information exchange, and (3) reporting on measures using an EHR. This document is the position of the HIMSS EHR Association (EHRA) on how these terms should be defined and implemented by the Secretary of Health and Human Services (HHS).

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- Counter identified barriers to adoption
- Support collection of data to support biosurveillance and public health

### *Overall Approach*

Beyond these broad goals, we urge the Secretary to operate from a few guiding principles, following closely the structure and priorities for *meaningful user* established in ARRA. The key objective of this provision should be to ensure that clinicians in hospital settings are using the EHR to deliver safe, cost-effective, and efficient care.

To maximize adoption and ensure administrative simplicity, the number of criteria should be small in number, while consistent with the statute and overall goals. The criteria should be simple, and ease of reporting should be primary and should reflect the differences between hospital departments. Meaningful use criteria should be viewed as *indicators* of use of a comprehensive EHR; hence, there is no need for specific criteria for all or most EHR functions. Similarly, aspects of automation not directly related to EHR use, such as claims submission, should not be added to these criteria.

The primary initial goal should be <u>to incentivize as much adoption and use as possible</u> of comprehensive EHRs. It is also essential, therefore, to balance the need for accelerated adoption of interoperable, comprehensive EHRs with the need for clinicians and hospitals to implement these in a careful and non-disruptive fashion.

To this end, we urge that the Secretary set meaningful user criteria for the initial years, especially 2011 and 2012, <u>at achievable levels, but with a roadmap for steady uplift over time</u> in expected breadth and depth of use. Such uplift should be on a less than annual cycle, perhaps 24 months, to allow for predictability and effective provider adoption.

Certification criteria and product functionality should, however, anticipate and support projected increased levels of meaningful use. Thus, while we support an initially relatively simple approach to meaningful use, <u>from the beginning providers should be encouraged to adopt EHRs that contain high levels of functionality</u>.

In implementing this provision, we urge HHS <u>to build on applicable current reporting programs</u> in developing meaningful use criteria that can be created well before the end of 2009 and that can be adopted by providers using certified EHRs. At the same time we must learn from the successes and failures of these programs and seek non-intrusive and low cost reporting options, such as reporting measures that are a byproduct of meaningful use of the EHR and/or using surveys and/or attestation in lieu of claim-based reporting for other dimensions of meaningful use.

Meaningful use criteria should support the movement toward <u>standards-based interoperability</u>. Interoperability from the beginning should only be measured using HITSP harmonized standards.

***Specific Proposals[1] for Initial Criteria***

1. Meaningful Use: *Demonstrate to HHS that the provider is using certified EHR technology in a meaningful manner*:

    a. Clinician view access to hospital clinical data
    b. Use of CPOE (% TBD) for medications, with broader use of CPOE in out-years
    c. Use (% TBD) of electronic medication administration, with bar coding in the out-years
    d. Use of clinical decision support to improve medication safety
    e. Sufficient discrete data capture to support interoperability and quality reporting.

2. Information Exchange: *Certified EHR technology is connected in a manner that provides for electronic exchange of health information, in accordance with law and standards applicable to the exchange of information, to improve quality of health care such as promoting care coordination.*

    The overall requirement would be for connection for exchange of clinical summary data, using HITSP harmonized standards, with other clinicians, hospitals, patients, or other health care settings. We believe that hospitals should be required to satisfy at least one of the following criteria to meet this provision in 2011, with increased requirements in out-years: exchange of patient summary data upon admission and discharge, directly or indirectly, with other health care practices or another hospital; or exchange of patient summary data with a certified HIE upon admission and discharge.

3. Reporting of Measures: *Submit information to HHS on clinical quality measures and other measures (if HHS has capacity to accept electronically, which may be on a pilot basis)*

    Consistent with ARRA, the focus of this criterion should be primarily on a subset of existing NQF-endorsed measures that align with national quality and performance goals.

    For transport of quality measure information, we favor the use of HITSP standards as available or applicable. If some of the needed standards are still under development, with careful review, we could support the use of initial methods that are consistent with anticipated standards. We support allowing the submission of either patient-level data or population-level computed measures so long as the process for such computation is sufficiently specified and validated and the underlying data comes from the EHR. Finally, we support the submission of EHR quality data either directly from an EHR, a data registry or another intermediary.

[1] Each heading paraphrases the ARRA provision

## EHR Certification Criteria for Hospitals

The HIMSS EHR Association proposes a progressive and feasible approach to ARRA Certification criteria that will meet the goals of high EHR adoption and use, sophisticated levels of interoperability, enhanced quality of care, and reduction of overall healthcare system costs.

As ARRA certification criteria are finalized, key principles need to be considered. The principles are clarity, relevance to national goals, and sufficient lead time for development. In addition, the certification process must recognize the existence of departmental systems from several different vendors at a single hospital (e.g. pharmacy).

CCHIT 2007 certification criteria include substantial, relevant EHR functionality including CPOE, clinical decision support, and closed loop medication administration and should be the basis of functionality certification.

While much progress has been made on interoperability of EHRs in the last three years through the efforts of HITSP and CCHIT, there do remain significant areas where further progress is needed. Interoperability is recognized as a critical theme for additional Initial Certification criteria. Given the short time frame, to be successful and to take advantage of existing ongoing product development investments, these criteria should be based on the CCHIT roadmap using current HITSP standards. The result will be robust interoperability provided that the HIE to EHR interfaces follow HITSP and IHE standards and are enforced at the HIE implementation level.

To support the quality reporting called for in the ARRA, finalization of standards and additional Certification criteria will be needed.

Clinical Decision Support criteria, which are important to enhancing the quality of care and patient safety, should be added to, building on the existing robust clinical decision support in CCHIT 2007.

### ARRA Initial Hospital Certification Proposal

*Theme: CCHIT 2007 plus more interoperability, quality reporting and clinical decision support*

- CCHIT 2007 Certification criteria
    - These include CPOE, clinical decision support, and closed loop medication administration - all of which support patient safety and evidence based care
- CCHIT 2009 Interoperability criteria as listed:
    - Send ePrescription, refill request, eligibility/formulary and query for med history

- CCD export with structured meds, problems, and allergies CCD display
- Document sharing with audit trail and encryption (XDS.b+ATNA+CT)
- Patient ID mgt (PIX and/or PDQ) [2]

- Additional CCD: clinical reports/results (text with coded section titles)
- Lab document sharing as per HITSP
- Quality Reporting based on widely accepted standards
- Clinical Decision Support criteria: bedside verification of medication administration

**ARRA Certification after 2010:**

- Extend CCD support by supporting additional sections, more terminology support
- Biosurveillance using modified CCD
- Additional standards-based quality reporting and registry support
- Additional clinical decision support criteria
- Support tracking of order completion
- Patient disclosure services to support the new rules on patient disclosure
- Additional audit and privacy services supported as required

## Certification cycles:

We recommend that certification criteria be determined on a 24-month or longer cycle, so as to allow for vendor developmental cycles.

We recommend that ARRA certification be good for at least a two year period (three years is preferable) to allow for customer deployment and update cycles. It may likely be necessary to make further adjustments to the duration of a certificate to accommodate situations where an Enterprise deploys an update late in the certification certificate lifespan.

[2] Based on CCHIT Basic and Advanced Interoperability Criteria released March 30th 2009

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# The Value of Electronic Health Records

The healthcare provider organizations listed in this booklet are customers of EHR Association member companies, and have installed electronic health records (EHR) solutions provided by those companies. These busy hospitals, clinics and physicians have documented results of their EHR implementations that demonstrate quality improvements and operational efficiencies as well as increased throughput and patient/staff satisfaction. For further information on any of these organizations and their EHR suppliers, please contact info@himssehra.org.

HIMSS Electronic Health Record Association

# The Value of Electronic Health Records

| Site Description | Patient Safety & Quality Improvements | Operational Efficiencies & Cost Savings | Improvements in Throughput and Patient/Staff Satisfaction |
|---|---|---|---|
| Cardiology Consultants of Philadelphia, PA<br>• 21 sites<br>• 79 cardiologists | | • Transcription costs reduced to under $100,000 from a pre-EHR cost of $800,000, a reduction of 88%<br>• Filing clerk positions cut in half, saving $350,000<br>• 3.5% reduction in malpractice insurance expense representing a $70,000 savings | |
| Central Utah Multi-Specialty Clinic, UT<br>59 physicians | | • $380,000 saved from reduced need for transcription services<br>• $221,692 saved from decreased labor and supply costs for chart maintenance and creation<br>• $248,000 saved due to reduced medical records storage space<br>• $103,059 in increased revenue from better E&M coding | |
| CentraState Medical Center, NJ<br>• 271 beds<br>• 450 physicians | • Reduced the occurrence of nosocomial pressure ulcers from 6.25% of patients to 1.80% in 2 years. (Benchmark rate of 4% is provided by the American Nurses Association National Database of Nursing Quality Indicators)<br>• Reduced peripheral IV infection rate from 2% to 0%, based on infections per 1000 peripheral IV days | | |
| Children's Hospital of Wisconsin, WI<br>• Inpatient services<br>• 70 specialty clinics<br>• Level 1 trauma center | • Calculated a statistically significant change in pharmacist interventions before and after CPOE<br>– Undesirable activities dropped from less than 23% to 15%<br>– Desirable activities increased from 5% to 10%<br>– Neutral activities also increased from 19% to 27% | | • Decreased time from order entry to delivery of medication to floor from 3+ hours to an estimated average of 90 minutes through CPOE |
| Chester County Hospital, PA<br>• 238 beds<br>• 18,048 discharges<br>• 69,499 patient days | • 100% compliance with CMS Core Measure for smoking cessation counseling (v. state-wide averages in the 80 %ile, and in the top 10% nationwide)<br>• 86% compliance with CMS Core Measure for pneumovac administration (v. state average of 74%)<br>• 23% reduction in MRSA cases<br>• Hospitalized congestive heart failure patients receiving discharge instructions more than tripled from 23% to 77% | | |
| Dekalb Medical Center, GA<br>• 627 beds<br>• 23,700 admissions<br>• 209,700 outpatient visits<br>• 110,761 ED visits | • 66% reduction in medication administration-related errors including wrong person, wrong drug and wrong route<br>• 89% reduction in medication-related errors such as duplicate medication orders and errors of omission<br>• 80% reduction in errors associated with delayed medication administration<br>• Quality of patient-specific information available increased 9% | Streamlined ordering and results notification improved turnaround times for STAT lab orders:<br>• 25% (97 minutes to 73 minutes) reduction in STAT HGM turnaround time<br>• 35% reduction in STAT HGM orders over 60 minutes- | Streamlined ordering and results notification improved turnaround times for STAT lab orders:<br>• 22% increase in patients discharged by noon<br>• Satisfaction with the ordering processes for medications, labs and imaging increased 11%<br>• Physicians report an 11% increase in satisfaction with the amount of time they are able to spend with patients |
| Denver Health and Hospital Authority, CO<br>• 477 beds<br>• Level 1 trauma center<br>• 8 family health clinics plus 12 school-based clinics | | | • 54% reduction in time between specimen collection and care delivery with laboratory results availability on-line<br>• 62% reduction in time between exam and care delivery with radiology results availability on-line<br>• 83% reduction in time between medication order and administration with e-prescribing |
| Eden Park Pediatric Associates, PA<br>• 4 pediatricians (DOs and MDs)<br>• 2 Certified Pediatric NPs<br>• 5 nurses<br>• 3 medical assistants<br>• 6 administrative staff | • Increased revenues from pay for performance, PQRI, HEDIS and quality incentives by more than $40,000 | • Saved an annualized $114,000, 10.4% of operating budget, by reducing administrative staff by 25%<br>• Replaced traditional transcription with electronic methods for documenting patient encounters and saved $28,533.59 in 2004 and an estimated $30,000 in 2005 on transcription fees | |

Special thanks go to the following vendors for contributing their customers' case studies to this document: Allscripts, Cerner, ChartCare, eClinicalWorks, NextGen, QuadraMed and Siemens Medical Solutions Eclipsys, Gateway Electronic Medical Management System (GEMMS), GE Healthcare Integrated IT Solutions, Greenway Medical Technologies, McKesson,

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| Site Description | Patient Safety & Quality Improvements | Operational Efficiencies & Cost Savings | Improvements in Throughput and Patient/Staff Satisfaction |
|---|---|---|---|
| Evans Medical Group, GA<br>• 4 physicians<br>• 1500+ patients/mo | | • Savings in staff time for pulling and re-filing charts and other efficiencies add up to ~$183,000 per year | |
| Family Medicine of Port Angeles, TX<br>• 7 physicians<br>• 3 NPs<br>• 5 nurses<br>• 4 medical assistants<br>• 13 administrative and support staff | • Went from exceeding 8 quality measures for diabetic care in June 2004 to exceeding 33 measures in June 2006<br>• Increased %age of hypertension patients whose blood pressure measure was controlled from 45.4% to 77.6%, twice the national average and well above benchmark | | |
| Hospital of Saint Raphael, CT<br>• 511 beds<br>• 26,579 annual inpatient visits<br>• 262,387annual outpatient visits | • Increased pharmacokinetic dosing conversion from 6% to 20% in first year | • Saved $200,000 by boosting the IV-to-oral medication conversion rate from 20% to 50% | • Reduced turnaround time for medications order to dispensing to less than 30 minutes, a 75% reduction<br>• Boosted patient satisfaction by reducing distribution time of pain medications from 2 hours to 20 minutes |
| Massachusetts Eye Research and Surgery Institute, MA | | • Saved $1,500 a month in transcription costs<br>• Saved $80,000 in staff costs for hiring 1 billing FTE and 1 front desk FTE | |
| MedCentral Health System, OH<br>• 351 beds<br>• 2600 employees | • Eliminated the pre-implementation practice of boarding patients – some intensive care unit patients – in the ED | • Eliminated radiology film costs for an annual savings of $450,000<br>• Reduced ED capacity from over 100% to ~90% | • Reduced radiology turn-around time from 24-48 hours to 6 hours<br>• Reduced triage-to-discharge time from more than 5 hours to 3.2 hours<br>• Reduced triage-to-admission time from almost 8 hours to 4.5 hours |
| Mid-Carolina Cardiology, NC<br>• 25 cardiologists<br>• 45,000 visits per year | | • Increased revenue by 35%<br>• Improved Medicare denial rate from 25-40% to less than 1%<br>• Reduced transcription costs by $72,000 in the first year<br>• Reduced postage costs by $20,000 | • Increased patient throughput by 25% with no increase in staff |
| M&M Orthopaedics, IL<br>• 19 physicians, 41 staff<br>• 77,000 annual visits | | • Reduced medical records staff by 3 FTEs<br>• Received 2% discount on malpractice insurance<br>• Converted medical records storage area to revenue-producing MRI unit | |
| North Fulton Family Medicine, P.C., GA<br>• 7 physicians, 1 nurse practitioner and 8 physicians' assistants<br>• 38 additional staff<br>• 51,000 annual visits | | • $775,000 saved by eliminating transcription costs<br>• $253,978 saved by eliminating paper chart tasks, automating referral letters and other administrative tasks | |
| Nevada Health Centers, Inc., NV<br>• 26 medical and dental centers | | • Eliminated commercial clearinghouse to save $42,000 a year<br>• Improved accounts receivable from 30-45 days to 9 days | |
| Oklahoma Arthritis Center, P.C., OK<br>• 3 physicians, 3 nurses and 2 physicians' assistants<br>• 23 additional staff<br>• 15,600 annual visits | | • $60,000 saved by eliminating chart pull FTE<br>• $21,700 saved by reducing or eliminating paper chart-related costs<br>• $154,000 increase in provider productivity in first 18 months post-activation | |
| Oswego County OB-GYN, NY<br>• 9 medical professionals<br>• 200 encounters/day<br>• 5 locations | | • Increased gross collection rate from 52.2% to 56.4% | • Lab results reviewed in ~3 hours vs. 36 hours, saving physicians 60 minutes/day, allowing them to see 24 more patients/week, increasing revenues by $56,000/year without working longer hours |

Special thanks go to the following vendors for contributing their customers' case studies to this document: Allscripts, Cerner, ChartCare, eClinicalWorks, Eclipsys, Gateway Electronic Medical Management System (GEMMS), GE Healthcare Integrated IT Solutions, Greenway Medical Technologies, McKesson, NextGen, QuadraMed and Siemens Medical Solutions

HIMSS Electronic Health Record Association

# The Value of Electronic Health Records

| Site Description | Patient Safety & Quality Improvements | Operational Efficiencies & Cost Savings | Improvements in Throughput and Patient/Staff Satisfaction |
|---|---|---|---|
| Professional Park Medical Services, GA<br>• 89,000 encounters/year<br>• 4 MDs and 1 nurse practitioners<br>• 5 nurses and 1 medical assistant | | • Increased billed charges by 101.4%<br>• Decreased transcription costs by 96.5%<br>• Reduced chart supply costs by 100.0%<br>• Net benefit per provider per month = $38,489 | |
| Sarasota Memorial Health Care System, FL<br>• 25,863 admissions<br>• 77,085 ED visits<br>• 725 physicians<br>• 363,032 outpatient visits | • Decreased charts missing allergy information from 36% to 11% by creating an electronic reminder for prescribing clinicians<br>• Avoiding approximately 42 potential anti-coagulant overdoses per month by using an alert designed to notify clinicians of duplicate anticoagulant orders | • Increased annual savings of therapeutic inter-changes by $52,750 by automating existing manual processes<br>• Facilitated savings exceeding $100,000 by applying data-driven infection control benchmarking | • Quantified annual savings of $65,000 by increasing frequency of IV to PO switches during early stages of alert refinement<br>• Quantified $60,000 in annual savings from switching just 4 IV meds to PO (Cipro, Fluconazole, Levofloxacin and Metronidazole)<br>• Improved ICU utilization through the reduction in LRM admissions from 47% to 35% |
| Spartanburg Regional Medical Center, SC<br>• 486 beds<br>• 26,054 admissions | • Reduced overall ventilator days by 11% from 2007 to 2008<br>• Avoided 378 ventilator days and 375 patient days in the ICU among patients with sepsis disease | | • Decreased overall ICU patient days by 1,202 from September 2005 through December 2006 |
| Springhill Medical Center, AL<br>• 252 bed<br>• 31,000 ED visits per year | | | • Reduced patient wait times on average by 1 hour<br>• Reduce average time patients wait to be seen by a physician by 30 minutes<br>• Reduced overall length of stay per patient by an average 60 minutes<br>• Managed 100% increase in patient volume during Hurricane Katrina<br>• 15% increase daily patient throughput with evidence-based order sets |
| St. Mary's Medical Center, WV<br>• 358 beds<br>• 14,516 admissions | • Trauma population standardized mortality ratio (SMR) now 41% better than expected<br>• Low risk monitor (LRM) admissions among trauma population reduced from 20% to 8%<br>• 40% improvement in overall ICU ventilator utilization since 2005 | | • In 2008, ICU length of stay in trauma improved to 3% better than expected<br>• Aggregate LOS in the ICU for trauma patients improved from 677 ICU days to 45 ICU days |
| University Medical Center, AZ<br>• 355 beds<br>• 21,508 admissions | • Prescription errors decreased 88%<br>– Distribution-related errors decreased 60%<br>– Transcription-related errors decreased 35%<br>– Administration-related errors decreased 43%<br>• Overall prescriber-related ADEs on the 2 pediatric units, decreased from 7.3 per 1,000 patient days to 0.84 per 1,000 patient days | | |
| Urban Health Plan, Inc. (UHP), NY<br>• 31,000 patients<br>• 176,000 visits | • Increased the %age of HIV patients practicing safe behaviors from 39.1% to 88%<br>• Increased the %age of women age 42+ receiving mammograms from 24.5% to 49.4%<br>• Increased the %age of diabetic patients receiving flu vaccines from 8.6% to 28.5% | • Saved $28,620 in forms in the first year<br>• Saved $55,300 in medical records storage space | |
| 5 ambulatory offices within the University of Rochester Medical Center, NY (pilot project) | | • 79% reduction in chart pulls 6 months after implementation of the EHR and a 96% reduction at 2 years translates to an annual savings of $246,934 at 2 years<br>• Annual savings of $27,872 with the elimination of new patient paper chart creation<br>• 2.5 positions were avoided because of the increase in office efficiency avoiding salary expense of $91,000<br>• Reduced transcription costs for total annual savings of $30,560 | |
| 20 community-based family or general internal medicine practices in 14 states using the same electronic medical record | • Participating practices improved 22.4% (from 11.3% to 33.7%) in adherence to 21 quality indicators to improve cardiovascular care | | |

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