Definition of Meaningful Use
of Certified EHR Technology for Hospitals
Approved by the HIMSS Board of Directors April 24, 2009

Background:

The American Recovery & Reinvestment Act of 2009 (ARRA) calls for up to four years of Medicare incentive payments to hospitals who meet the requirements of "meaningful use" of "certified EHR technology" (an electronic health record). To be eligible for the incentive payments, hospitals must use the technology in a meaningful manner which includes exchanging electronic health information to improve the quality of care; and, submitting clinical quality measures – and other measures – as selected by the Secretary of Health & Human Services (HHS). Further, hospitals must meet the definition within a specified time frame, which as described in ARRA, must be made increasingly stringent over time by the Secretary.

HIMSS:

HIMSS (the Healthcare Information & Management Systems Society) is the healthcare industry's membership organization exclusively focused on providing global leadership for the optimal use of healthcare information technology (IT) and management systems for the betterment of healthcare. Founded in 1961, HIMSS represents over 20,000 individuals and 350 corporations. Seventy-three percent of HIMSS' individual membership consists of providers and healthcare IT professionals working in settings ranging from solo practitioner offices to community hospitals to public health settings to nationwide health-related services. HIMSS frames and leads healthcare public policy and industry practices through its government relations, educational and professional development initiatives designed to promote information and management systems' contributions to ensuring quality patient care.

How HIMSS Developed Its Recommendations:

Commencing in late March, HIMSS developed an initial draft of meaningful use of certified EHR technologies for hospitals. This initial draft was publicly posted with a discussion forum for a three-week period commencing April 1, 2009. The opportunity for public input to the draft was widely disseminated and all were encouraged to comment. Simultaneously, the draft was carefully reviewed by the HIMSS membership community, which consists of more than 3,000 volunteers organized into nearly 80 groups.

In the latter part of April, all input was incorporated into an updated draft and provided to the HIMSS Board of Directors for comment and approval. Final approval was granted by the Board on Friday, April 24, 2009.

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HIMSS' Definition of Meaningful Use of EHR Technologies by Hospitals:

HIMSS recognizes that defining meaningful use is a complex endeavor. In order for the nation to benefit from the spirit and intent of ARRA, and for hospitals to have a reasonable chance of achieving the definition, HIMSS asserts that the requirements must be introduced – and made increasingly stringent – in incremental stages. In the final phase, which must commence in FY15, HIMSS believes the mature definition of "meaningful use of certified EHR technology" includes at least four attributes:

A. A functional EHR certified by the Certification Commission for Healthcare Information Technology (CCHIT);

B. Electronic exchange of standardized patient data with clinical & administrative stakeholders using the Healthcare Information Technology Standards Panel's (HITSP) interoperability specifications and Integrating the Healthcare Enterprise's (IHE) frameworks;

C. Clinical decision support (CDS) providing clinicians with clinical knowledge and intelligently-filtered patient information to enhance patient care; and,

D. Capabilities to support process and care measurement that drive improvements in patient safety, quality outcomes, and cost reductions.

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Recommendation – Adopt CCHIT as the certifying body for EHRs

HIMSS urges the Secretary to name CCHIT as the certifying body for EHR technology. CCHIT has been in existence for several years; it has demonstrated long-term commitment to an open and transparent process; much of its development was made possible through tax-payer dollars; and, it has proven itself to be an effective and reputable certifying body.

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Recommendation – To achieve the incremental maturation, HIMSS recommends milestones be achieved in phases of not less than two years each, commencing in FY11.

As noted in the opening paragraph, ARRA requires the Secretary to make the definition of meaningful use more stringent over time. Using IEEE's definition of interoperability as the ability of two or more systems or components to exchange information and to use the information that has been exchanged,[1] interoperability of health information in the United States is currently very limited. On a parallel topic, HIMSS believes quality measures are a byproduct of the successful implementation of CCHIT-certified EHR technology, not separate initiatives. Using the above two statements, *HIMSS recommends HHS adopt metrics that can be reasonably captured and reported by hospitals beginning in FY11, then made increasingly stringent using intervals of not less than two years.* Such an interval allows healthcare organizations to effectively

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[1] Institute of Electrical and Electronics Engineers. IEEE Standard Computer Dictionary: A Compilation of IEEE Standard Computer Glossaries, New York, NY 1990.

87 prepare for and execute the mandates, and engage in effective change management
88 processes. The interval also allows health IT companies to make necessary modifications
89 to their products, including the rewrite of legacy enterprise EMRs as necessary. Any
90 shorter increment would require hospitals to be in a state of constant updates and
91 upgrades, with the possible unintended consequence of compromising the quality of
92 patient care.
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95 *Recommendation – Coordinate with HITSP and IHE to Create New*
96 *Harmonized Standards and Implementation Guides*
97 As hospitals move through the incremental phases, they require interoperability tools
98 that, as of this writing, do not yet exist. Specifically, HIMSS recommends that HHS
99 coordinate with HITSP and IHE to publish data standards for output of EMR data, along
100 with implementation guides. For Phase 2 interoperability requirements to be achieved,
101 such data standards and implementation guides must be in place for a minimum of 12
102 months before Phase 2 requirements go into effect.
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105 *Recommendation – Reconcile the gap between "Certified EHR*
106 *Technologies," "Open Source," and "Best of Breed"*
107 CCHIT certifies home-grown and vendor-produced EHRs using an identified set of
108 functionalities. Some hospitals, rather than purchasing one integrated system from
109 vendor, chose a different path – that of the "best of breed" and/or open source
110 technologies. Users of the best-of-breed approach believe it led to richer functionality
111 and greater user satisfaction. And, use of open source options can be cost-effective for
112 some hospitals. HIMSS urges HHS to collaborate with CCHIT to reconcile this gap so
113 that hospitals using best-of-breed and/or open source technologies are fairly evaluated in
114 their demonstration of meaningful use of certified EHR technologies.
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117 *Phase #1: For a minimum of two years commencing FY11, HIMSS*
118 *recommends HHS adopt the following functionality, interoperability, and*
119 *reporting measures:*
120 1. Major ancillary department information systems (lab, pharmacy, and radiology) and a
121   clinical data repository in use, and interfaced with the patient accounting system.
122   Such systems are vital as they create the diagnostic information that clinicians require
123   to understand the patient's status and make effective patient care decisions.
124 2. Discrete clinical observations electronically entered and available to clinicians
125   throughout the organization, and consistent across systems. Physician documentation
126   is desirable, but optional. Clinical documentation is a prerequisite for effective
127   computerized practitioner order entry (CPOE). For example, to make effective
128   patient care decisions, clinicians must have a patient's allergies, an accurate and
129   current problem list, vital signs, inputs and outputs, flow sheets, height/weight, and
130   medication list.

131 3. Adoption of a combination of compliance metrics and National Quality Forum-
132   endorsed quality measures that align with national quality and performance goals.
133   The hospital's EHR must be agile enough to capture/report relevant statistics without
134   manual intervention or manipulation. Such agility avoids the potential of "gaming
135   the results" or creating room for errors.
136   • Baseline reporting of percentage of medical orders entered electronically into the
137   EHR by physicians;
138   • Baseline electronic reporting of Joint Commission core measures;
139   • Baseline reporting of the Agency for Healthcare Research and Quality (AHRQ)
140   quality outcomes;
141   • Baseline reporting of re-admissions within 24 hours of discharge;
142   • Baseline reporting of duplicate diagnostic test orders; and,
143   • Baseline reporting of present-on-admission tests compliance (i.e. MRSA,
144   pneumonia).
145 4. Hospitals electronically exchange health information via scanned documents, text
146   documents, or XML transactions. This will initiate electronic communication outside
147   the hospital's walls that is needed for mature interoperability.
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150 *Phase #2: For a minimum of two years commencing FY13, HIMSS*
151 *recommends HHS adopt the following criteria:*
152 5. At least 51% of all medical orders are electronically entered by physicians via CPOE.
153   Such a requirement shows evidence of movement towards a critical mass of clinicians
154   utilizing EHRs. Until critical mass is achieved, a hospital is in the precarious
155   situation of – in essence – maintaining dual record-keeping systems; one on paper,
156   and other electronically.
157 6. Electronic prescribing beyond the bounds of the hospital to external pharmacies for
158   discharge medications.[2] Such a requirement builds upon an interoperability platform,
159   which allows hospitals to transmit information outside the walls of the facility.
160 7. Using the to-be-developed EHR output data standards and implementation guides
161   published by HITSP and IHE, hospitals electronically exchange patient information
162   with external entities such as, but not limited to, other hospitals, payers,
163   transitional/long-term care, physician practices, community pharmacies, patients'
164   personal health records, and health information exchanges. Such information could
165   include discrete data for demographics, emergency contact information, allergies,
166   medication summaries, problem list, reporting of diagnostic tests, the patient's
167   primary spoken language, race, and ethnicity.
168 8. Quality Reporting Metrics – Continuation of the FY11 recommendations, with
169   percentages of change (increase/reduction) identified[3], and some new metrics:

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[2] HIMSS notes that independent pharmacies across the United States are adopting electronic prescribing
technologies at a very slow pace, and that the broadband opportunities within ARRA must be realized
before many small and rural hospitals will be able to comply with this requirement. Therefore, this
requirement can be leveraged to support the achievement of widespread broadband roll-out.
[3] Based upon research performed by HIMSS Analytics, HIMSS notes that, from the outset, a handful of
hospitals in the US will be able to report optimally-desired levels of data capture (ex: 100% or 0%). For
these hospitals, the percentages year-over-year cannot increase/decrease because they have achieved

170	• Continued reporting of re-admissions within 24 hours of discharge;
171	• Continued reporting of compliance for present-on-admission tests (i.e. MRSA,
172	pneumonia);
173	• Discharge prescriptions are electronically sent to pharmacy of patient's choice
174	upon patient discharge;
175	• Baseline reporting of time between when the medication was ordered and when it
176	was actually administered to the patient; and,
177	• Baseline reporting of cardiac outcomes.
178	9. Hospitals' transmissions must be submitted in standardized, discrete data elements
179	and transactions via the Continuity of Care Document (CCD)[4] based upon HITSP
180	interoperability specifications as published in the *Federal Register.*[5]
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183	***Phase #3: For a minimum of two years commencing FY15, HIMSS***
184	***recommends HHS adopt the following criteria:***
185	10. 85% of all medical orders entered electronically by physicians. Exceptions will
186	always exist. Setting a requirement of 100% is both unrealistic and unachievable.
187	11. Closed-loop medication administration at the point of care, to assist users in
188	performing the "five rights"[6] checking and patient safety, using positive identification
189	such as bar-coding. The closed loop is a foundational piece of the EHR. Progress
190	towards increasingly-closed loops will incorporate the interoperability of diagnostic
191	and therapeutic medical devices with clinical information systems.
192	12. Demonstrated use of clinical decision support via evidence-based order sets and core
193	measures reminders. The intent is to prevent errors and adverse events, improve
194	compliance with care guidelines, and improve test ordering.
195	13. Support analysis of pharmacokinetic outcomes resulting from patient medication
196	interaction. Such analysis provides insights regarding patient safety and care
197	outcomes.
198	14. Using HITSP interoperability specifications and IHE frameworks, hospitals
199	electronically exchange information with public health entities and/or a local/regional
200	health information exchange, which are connected at least at the state level – if not at
201	the national level. As ARRA specifically states a goal of a nationwide health
202	information network, such a requirement promotes the maturation of existing HIEs
203	and creation of new HIEs in markets where none currently exist.

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optimal reporting levels. HHS must take this reality into account in creating incremental adjustments for Stages 2 and 3.

[4] HIMSS' existing position is that the right standard for exchange of electronic exchange of components of health information is HL7's Continuity of Care Document (CCD). The CCD summarizes a consumer's medical status for the purpose of information exchange. CCD content may contain administrative information such as registration, demographics, insurance, etc., as well as clinical information such as the problem list, medication list, allergies, test results, etc. Such information contributes to care coordination in that it can be included in registries, electronic medical records (EMRs), personal health records (PHRs), practice management applications (PMAs), payer-based medical records (PBMRs), and other systems.

[5] Federal Register Vol. 74, No. 12. January 21, 2009.

[6] Right person; right dose; right time; right medication; and, right method of delivery.

204 15. Quality Reporting Metrics – Continuation of the FY13 recommendations, with
205   percentages of change (increase/reduction) identified,[7] and:
206   - An increase in the percentage of prescriptions electronically sent to pharmacy of
207   the patient's choice upon patient discharge;
208   - An increase in quality outcomes for cardiac-related care; and,
209   - A reduction in time between the time a medication is ordered and when it is
210   actually administered to the patient.
211 16. Components of health information, as specified in the CCD standard, are
212   electronically exchanged as discrete data elements. This means that not only must the
213   information be transmitted via the CCD; it also means that receiving entities must be
214   able to use the CCD as a source of information to input and/or update information in
215   their version of the record.[8]
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218 *Conclusion*
219 HIMSS recognizes, and respects, the complex nature of healthcare and efforts to define
220 meaningful use of certified EHR technologies. To that end, HIMSS offers our content
221 expertise and our significant reach into IT professionals working within our great nation's
222 hospitals and health systems to achieve the spirit, intent, and benefit of ARRA. The law
223 has tremendous potential to improve the quality, safety, and cost-effectiveness of patient
224 care. To achieve ARRA's goals, HIMSS looks forward to working collaboratively with
225 public and private sector stakeholders to advance patient care through the best use of IT
226 and management systems.

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[7] Based upon research performed by HIMSS Analytics, we note that a handful of hospitals in the US will be able to report optimally-desired levels of data capture (ex: 100% or 0%). For these hospitals, the percentages year-over-year cannot increase/decrease because they have achieved optimal reporting levels. Therefore, HIMSS urges HHS to take this reality into account as increasingly stringent reporting levels are identified.

[8] Ibid.